



2022

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# PRODUCT CATALOG

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# INRCORE



# iNRCORE

iNRCORE, LLC is a world class manufacturer with 70 years experience supplying catalog and custom magnetic components to the military, commercial aerospace, manned and unmanned space, high reliability industrial, medical, transportation and power-grid infrastructure markets around the world. The company was originally founded as Technitrol in 1947 and products D.S.C.C. qualified products that are listed for MIL-PRF-21038, MIL-PRF-83531 & MIL-PRF-83532 magnetic devices.

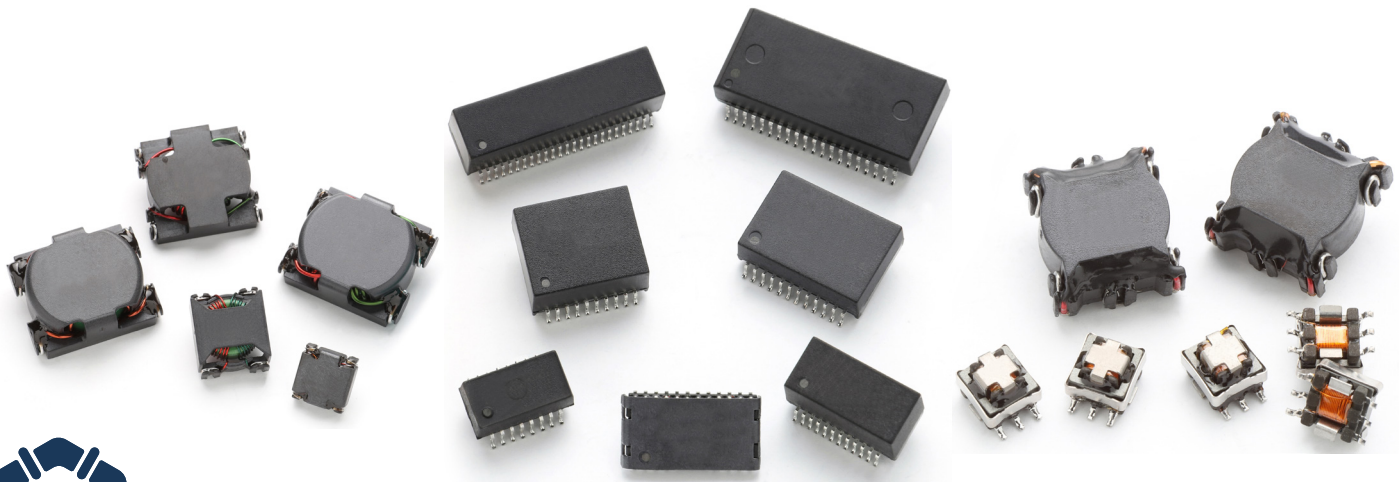
iNRCORE's experienced engineering teams offer cutting-edge technical solutions and manufacturing expertise which provide comprehensive production as AS9100D certified facilities located both domestically and off-shore. iNRCORE offers complete design support and qualification testing services to meet your demanding requirements. iNRCORE's award-winning quality and delivery services will help you meet your program's rugged demands - no matter the mission.

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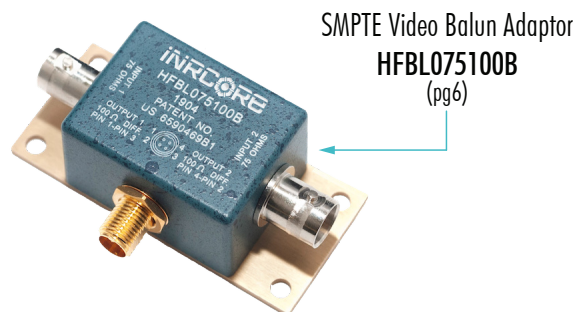
## MISSION STATEMENT

- To serve Defense, Aerospace, Space and High-Reliability industry customers with the highest level of service focusing on a relationship with mutual benefits.
- To design and manufacture magnetic solutions exceeding customers' satisfaction in terms of quality, reliability and delivery.
- To be competitive while remaining a world-class source for specialty solutions.



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# iNRCORE SIGNAL PRODUCTS

iNRCORE has a full line of High-Speed Transformers supporting Ethernet IEEE802.x, AFDX systems, SMPTE Serial Video, Fibre Channel and IEEE1394b applications. A unique line of Line Interface Transceivers supports a wide range of cable impedances and data rates up to 2.125 Gbps. iNRCORE's products have been utilized for a variety of applications, from Fighter Jets to Space programs. iNRCORE continues to offer tin/lead termination finishes for Military, Space and Aerospace applications requiring the highest grade of reliability.

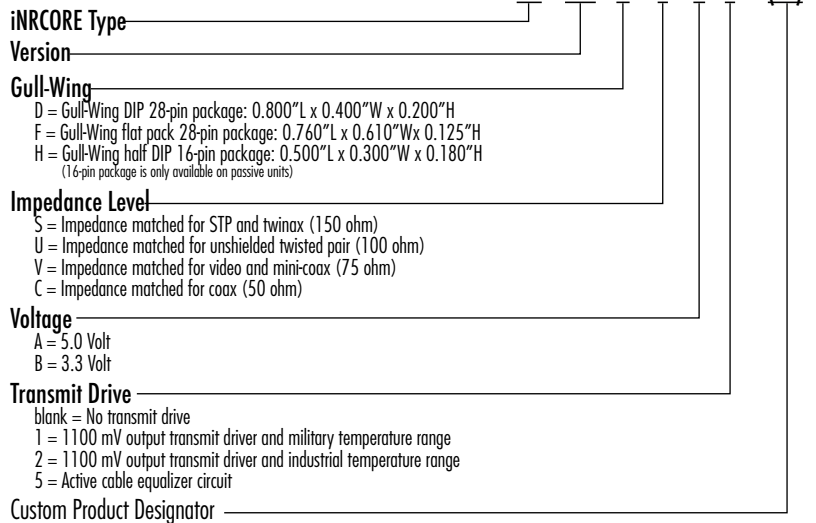
Parts can also be purchased with pure tin lead finishes where RoHS and REACH compliance are required. In addition to providing this full catalog of off-the-shelf products, more than 50% of iNRCORE's business is customizing parts to customer requirements. iNRCORE can provide custom design services, as well as perform specialized screening and qualification testing.

## COPPERHEAD™ SERIES TRANSCEIVER LINE INTERFACE MODULES - ACTIVE

### High Speed Data and Communications over 100+ Meters of Copper

- ⊗ Military Temperature Range: -55 °C to +125 °C
- ⊗ Low transmit/receive jitter
- ⊗ Low power dissipation; 450 mW typical
- ⊗ ECL or CML logic interface
- ⊗ 1500V Isolation Voltage
- ⊗ Surface Mount - pick-and-place compatible
- ⊗ Withstands infrared and vapor phase soldering 225 °C MAX Temperature

### Ordering Information



## IEEE 1394B FIREWIRE TRANSCEIVER LINE INTERFACE MODULES

| Part Number  | Transmitter/Receiver Data Rate (Mb/s) |      | Transmitter Differential Signal Level - V <sub>OUT</sub> (mV) |      |      | Total Power Dissipation (mW) TYP | Receive Turns Ratio TYP | Receive Primary Inductance - Lm (uH) MIN | Return Loss Insertion (dB) MAX | Transmit/Receive Return Loss (dB) MIN | Package L/W/H (in.) | Data Sheet* | IEEE 1394B Speed |
|--------------|---------------------------------------|------|---|------|------|----------------------------------|-------------------------|--|--------------------------------|---------------------------------------|---------------------|-------------|------------------|
|              | MIN                                   | MAX  | MIN   | TYP  | MAX  |                                  |                         |  |                                |                                       |                     |             |                  |
| TM1062TXDUA  | 246                                   | 1062 | 1350  | 1400 | 1500 | 232                              | 1:1                     | 4.5                                      | -2                             | -12                                   | 0.800/0.400/0.200   | M103        | S200-S800        |
| TM1062TXHUA  | 246                                   | 1062 | 1350  | 1400 | 1500 | 232                              | 1:1                     | 4.5                                      | -2                             | -12                                   | 0.510/0.300/0.140   | M103        | S200-S800        |
| TM1062TX3DUA | 246                                   | 1062 | 1350  | 1400 | 1500 | 700                              | 1:1                     | 4.5                                      | -2                             | -12                                   | 0.800/0.400/0.185   | M103        | S200-S800        |
| TM125TXHUA   | 98                                    | 246  | 1350  | 1400 | 1500 | 232                              | 1:1                     | 40                                       | -2                             | -12                                   | 0.510/0.300/0.140   | M186        | S100-S200        |
| TM1062DUXB   | 246                                   | 1062 | 1350  | 1400 | 1500 | 232                              | 1:1                     | 4.5                                      | -2                             | -12                                   | 0.800/0.400/0.200   | M186        | S200-S800        |
| TM1062HUXB   | 246                                   | 1062 | 1350  | 1400 | 1500 | 232                              | 1:1                     | 4.5                                      | -2                             | -12                                   | 0.510/0.300/0.140   | M186        | S200-S800        |
| TM1062DU3XB  | 246                                   | 1062 | 1350  | 1400 | 1500 | 700                              | 1:1                     | 4.5                                      | -2                             | -12                                   | 0.800/0.400/0.200   | M186        | S200-S800        |
| TM125TXHUA   | 98                                    | 246  | 1350  | 1400 | 1500 | 232                              | 1:1                     | 44                                       | -2                             | -12                                   | 0.510/0.300/0.140   | M186        | S100-S200        |

\* Parts listed on datasheet M103 are manufactured in the United States. Datasheet M186 contains equivalent parts manufactured in China.

### NOTES:

- Applications: Fibre Channel, Gigabit Ethernet, SONET, HDTV, IEEE 1394B, SMPTE.
- iNRCORE's standard lead finish is tin/lead (Sn63/Pb37). Parts can be ordered Non-lead by adding the suffix "NL" to the part number (i.e. TM1062DUXBNL).
- To order in Tape & Reel packaging, add the suffix "T" to the part number (i.e. TM1062DUXBT).





## COPPERHEAD™ HIGH SPEED DUAL TRANSFORMERS - PASSIVE

| Part Number | Package L/W/H (in.) | Turns Ratio (±5%) | Primary Inductance (µH) MIN | Rise Time (ps: MAX @20%-80%) | DC Resistance (Ω) MAX | HiPot (Vrms) MIN | Insertion Loss (dB) MAX | Application Nominal Bit Rate (Mbps) | Data Sheet |
|-------------|---------------------|-------------------|-----------------------------|------------------------------|-----------------------|------------------|-------------------------|-------------------------------------|------------|
| T-330SCT    | 0.500/0.435/0.180   | 1CT:1CT           | 26                          | 350                          | 0.20                  | 1500             | -1.5 (15 - 165 MHz)     | 265.6 (quarter speed)               | M105       |
| T-531SCT    | 0.500/0.375/0.235   | 1CT:1CT           | 7.5                         | 325                          | 0.20                  | 1500             | -2.0 (50 - 265 MHz)     | 531 (half speed)                    | M105       |
| T-1062SCT   | 0.500/0.435/0.180   | 1CT:1CT           | 3.75                        | 280                          | 0.20                  | 1500             | -2.0 (100 - 531 MHz)    | 1062.50 (full speed)                | M105       |
| T-1250SCT   | 0.500/0.435/0.180   | 1CT:1CT           | 3.75                        | 280                          | 0.20                  | 1500             | -2.0 (125 - 650 MHz)    | 1,250 (Gigabit Ethernet)            | M105       |
| T-1485SCT   | 0.500/0.435/0.180   | 1CT:1CT           | 3.75                        | 280                          | 0.20                  | 1500             | 1,485 (SMPTE)           | 1,485 (SMPTE)                       | M105       |
| T-3200SCT   | 0.500/0.375/0.235   | 1CT:1CT           | 0.70                        | 280                          | 0.20                  | 1500             | -4.5 (500 - 1600 MHz)   | 3,200                               | M105       |



## COPPERHEAD™ HIGH SPEED SINGLE TRANSFORMERS - PASSIVE

| Part Number | Package L/W/H (in.) | Turns Ratio (±5%) | Primary Inductance (µH) MIN | Rise Time (ps: MAX @20%-80%) | DC Resistance (Ω) MAX | HiPot (Vrms) MIN | Insertion Loss (dB) MAX | Application Nominal Bit Rate (Mbps) | Data Sheet |
|-------------|---------------------|-------------------|-----------------------------|------------------------------|-----------------------|------------------|-------------------------|-------------------------------------|------------|
| T-330ACT    | 0.230/0.265/0.215   | 1CT:1CT           | 26                          | 350                          | 0.20                  | 1500             | -1.5 (15 - 165 MHz)     | 265.5 (quarter speed)               | M131       |
| T-531ACT    | 0.230/0.265/0.215   | 1CT:1CT           | 7.5                         | 325                          | 0.20                  | 1500             | -2.0 (100 - 265 MHz)    | 531 (half speed)                    | M131       |
| T-1062ACT   | 0.230/0.265/0.215   | 1CT:1CT           | 3.75                        | 280                          | 0.20                  | 1500             | -2.0 (100 - 531 MHz)    | 1062.5 (full speed)                 | M131       |
| T-1250ACT   | 0.230/0.265/0.215   | 1CT:1CT           | 3.75                        | 280                          | 0.20                  | 1500             | -2.0 (200 - 620 MHz)    | 1,250 (Gigabit Ethernet)            | M131       |
| T-1485ACT   | 0.230/0.265/0.215   | 1CT:1CT           | 3.75                        | 280                          | 0.20                  | 1500             | -2.0 (200 - 742.5 MHz)  | 1,485 (SMPTE)                       | M131       |

### NOTES:

- Dual Transformers are designed specifically for Point-to-Point Communication using STP, QUADRAX or TWINAX cable (comparable with 50,75,100 & 150Ω cable)
- Applications: Fibre Channel, Gigabit Ethernet, SONET, HDTV, IEEE 1394B, SMPTE.
- INRCORE's standard lead finish is tin/lead (Sn63/Pb37). Parts can be ordered Non-Lead by adding "NL" to the part number (i.e. T-1250ACTNL).
- To order in Tape & Reel packaging, add the suffix "T" to the part number (i.e. T-330ACTT)



## HIGH-FREQUENCY SMT BALUNS

| Part Number | Impedance Unbalanced (Ω) | Impedance Balanced (Ω) | Insertion Loss 1.0 MHz - 1.485Gbps (dB) MAX | Insertion Loss 1.0 MHz - 1.485Gbps (dB) MIN | Data Sheet |
|-------------|--------------------------|------------------------|---|---|------------|
| T-050078    | 50                       | 78                     | -2  | 12  | M132       |
| T-050100    | 50                       | 100                    | -2  | 12  | M132       |
| T-050150    | 50                       | 150                    | -2  | 12  | M132       |
| T-075100    | 75                       | 100                    | -2  | 12  | M132       |

- Designed for standard test equipment with SMA connectors. Wide bandwidth: 1.0 MHz to 1.2 GHz.



## SMPTE DIGITAL VIDEO BALUNS – 3G AND STANDARD (1.485Gbps)

| Part Number | Package L/W/H (in.) | Data Rate (Gbps) | Impedance Unbalanced (Ω) | Impedance Balanced (Ω) | Insertion Loss @1.5GHz (dB) MAX | Return Loss @1.5GHz (dB) MIN | Data Sheet |
|-------------|---------------------|------------------|--------------------------|------------------------|---------------------------------|------------------------------|------------|
| TA-0751003G | 0.290/0.240/0.150   | 2.973            | 75                       | 100                    | -2.0                            | 12                           | M551       |
| TA-0751503G | 0.290/0.240/0.150   | 2.973            | 75                       | 150                    | -2.0                            | 10                           | M551       |
| TA-0501003G | 0.290/0.240/0.150   | 2.973            | 50                       | 100                    | -2.0                            | 10                           | M551       |
| TA-075100G  | 0.290/0.240/0.150   | 1.485            | 75                       | 100                    | -2.0                            | 12                           | M551       |
| TA-075150G  | 0.290/0.240/0.150   | 1.485            | 75                       | 150                    | -2.0                            | 10                           | M551       |
| TA-050100G  | 0.290/0.240/0.150   | 1.485            | 50                       | 100                    | -2.0                            | 10                           | M551       |



## SMPTE DIGITAL VIDEO ISOLATION TRANSFORMERS – 3G (2.973Gbps)

| Part Number | Package L/W/H (in.) | Data Rate (Gbps) | Impedance Unbalanced (Ω) | Impedance Balanced (Ω) | Insertion Loss @1.5GHz (dB) MAX | Isolation (Hi-Pot) (Vrms) MAX | Data Sheet |
|-------------|---------------------|------------------|--------------------------|------------------------|---------------------------------|-------------------------------|------------|
| TA-0750753G | 0.290/0.240/0.150   | 2.973            | 75                       | 75                     | -6.0                            | 1500                          | M558       |



## INSTRUMENTATION BALUN ADAPTERS

| Part Number | Impedance Unbalanced ( $\Omega$ ) | Impedance Balanced ( $\Omega$ ) | Insertion Loss (dB) | Return Loss 1.0MHz - 1.2GHz (dB) | Data Sheet |
|-------------|-----------------------------------|---------------------------------|---------------------|----------------------------------|------------|
|             |                                   |                                 | MAX                 | MIN                              |            |
| HFB050150   | 50                                | 150                             | -2                  | 15                               | M100       |
| HFB050100   | 50                                | 100                             | -2                  | 15                               | M100       |

- Transforms 150 $\Omega$  or 100 $\Omega$  balanced differential signal, to 50 $\Omega$  single-ended signal.
- Designed for standard test equipment with SMA connectors. Wide bandwidth: 1.0 MHz to 1.2 GHz.

## SMPT E VIDEO BALUN ADAPTORS - STANDARD (1.485Gbps)

| Part Number    | Impedance Unbalanced ( $\Omega$ ) | Impedance Balanced ( $\Omega$ ) | Insertion Loss (dB) | Jitter Dj (pSec) | Bracket | Data Sheet |
|----------------|-----------------------------------|---------------------------------|---------------------|------------------|---------|------------|
|                |                                   |                                 | MAX                 | MAX              |         |            |
| HFB075100A     | 75                                | 100                             | -2                  | 110              | No      | M146       |
| HFB075100B     | 75                                | 100                             | -2                  | 110              | No      | M146       |
| HFB075150A     | 75                                | 150                             | -2                  | 110              | No      | M146       |
| HFB075150B     | 75                                | 150                             | -2                  | 110              | No      | M146       |
| HFBLO75100A    | 75                                | 100                             | -2                  | 110              | Yes     | M146       |
| HFBLO75100B    | 75                                | 100                             | -2                  | 110              | Yes     | M146       |
| HFBLO75150A    | 75                                | 150                             | -2                  | 110              | Yes     | M146       |
| HFBLO75150B    | 75                                | 150                             | -2                  | 110              | Yes     | M146       |
| HFBM075100B    | 75                                | 100                             | -2                  | 110              | Yes     | M147       |
| HFBM075100C *  | 75                                | 100                             | -2                  | 110              | Yes     | M147       |
| HFBM075100S ** | 75                                | 100                             | -2                  | 110              | Yes     | M305       |
| HFBM075100L    | 75                                | 100                             | -2                  | 110              | Yes     | M265       |
| HFB075100D     | 75                                | 100                             | -2                  | 110              | Yes     | M283       |

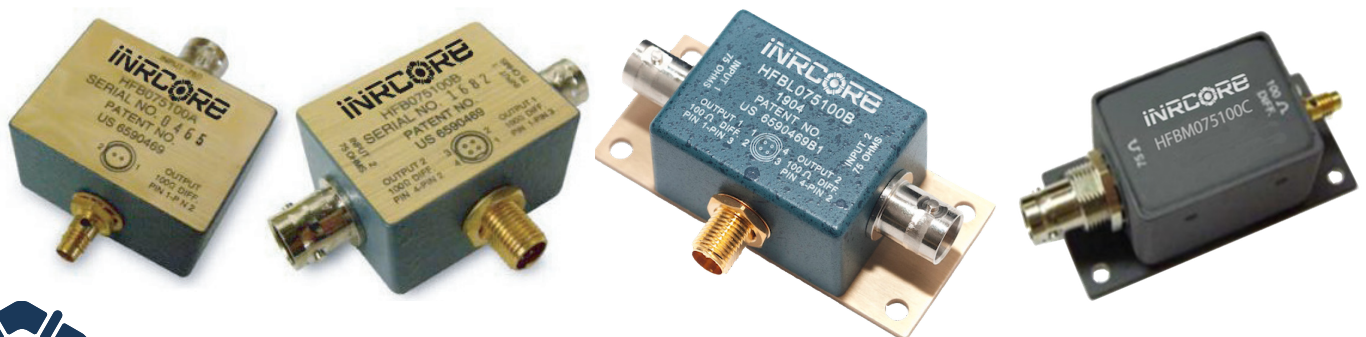
- Transforms 100 $\Omega$  or 150 $\Omega$  balanced differential signal to 75 $\Omega$ , grounded, unbalanced signal.
- Designed for SMPTE-292M. HDTV application at 1.485Gbps data rate.

\* HFBM075100C - 75 $\Omega$  Connectors: TriaxS2, Trompeter BJ770  
 \*\* HFBM075100S - 75 $\Omega$  Connectors: BNC

## SMPT E VIDEO BALUN ADAPTORS - 3G

| Part Number   | Impedance Unbalanced ( $\Omega$ ) | Impedance Balanced ( $\Omega$ ) | Insertion Loss (dB) | Jitter Dj (pSec) | Bracket | Data Sheet |
|---------------|-----------------------------------|---------------------------------|---------------------|------------------|---------|------------|
|               |                                   |                                 | MAX                 | MAX              |         |            |
| HFB3G075100A  | 75                                | 100                             | -6.50               | 65               | No      | M416       |
| HFB3G075100B  | 75                                | 100                             | -6.50               | 65               | No      | M416       |
| HFB3GLO75100A | 75                                | 100                             | -6.50               | 65               | Yes     | M416       |
| HFB3GLO75100B | 75                                | 100                             | -6.50               | 65               | Yes     | M416       |
| HFB3G075150A  | 75                                | 150                             | -6.50               | 65               | No      | M416       |
| HFB3G075150B  | 75                                | 150                             | -6.50               | 65               | No      | M416       |
| HFB3GLO75150A | 75                                | 150                             | -6.50               | 65               | Yes     | M416       |
| HFB3GLO75150B | 75                                | 150                             | -6.50               | 65               | Yes     | M416       |

- Transforms 100 $\Omega$  or 150 $\Omega$  balanced differential signal to 75 $\Omega$ , grounded, unbalanced signal.
- Designed for SMPTE-424M/425M, 2,973Gbps.

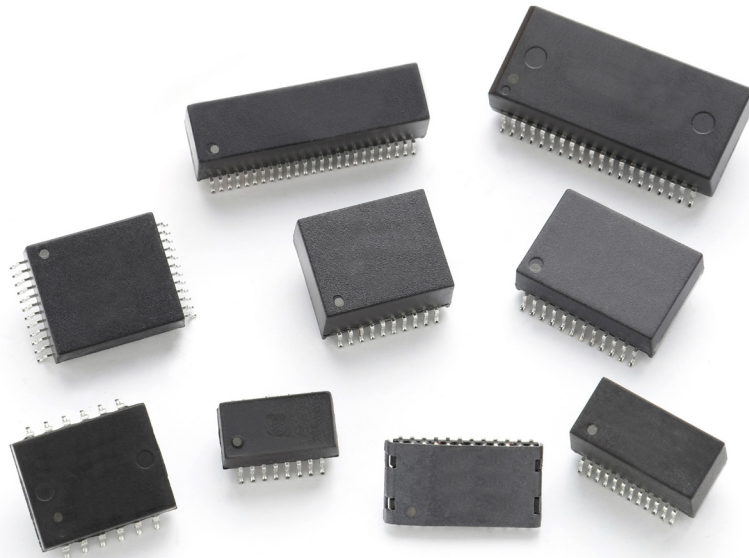




## ETHERNET / AFDX

| 10/100Base - TX |             |             |               |            |                   |                   |            |
|-----------------|-------------|-------------|---------------|------------|-------------------|-------------------|------------|
| Number of Ports | Part Number | Turns Ratio | Configuration |            | Package           |                   | Data Sheet |
|                 |             |             | RX            | TX         | Style             | Size L/W/H (in.)  |            |
| Single          | 100B-1001   | 1CT:1CT     | T, C          | T, C, S    | 12-pin SMT        | 0.630/0.470/0.200 | M101       |
|                 | 100B-1001X  | 1CT:1CT     | T, C          | T, C, S    | 12-pin SMT        | 0.630/0.470/0.200 | M101       |
|                 | 100B-1001F  | 1CT:1CT     | T, C          | T, C, S    | 12-pin SMT        | 0.630/0.470/0.200 | M101       |
|                 | 100B-1001FX | 1CT:1CT     | T, C          | T, C, S    | 12-pin SMT        | 0.630/0.470/0.200 | M101       |
|                 | 100B-1003   | 1CT:1CT     | T, C          | T, C       | 16-pin SMT        | 0.500/0.265/0.235 | M101       |
|                 | 100B-1003X  | 1CT:1CT     | T, C          | T, C       | 16-pin SMT        | 0.500/0.265/0.235 | M101       |
|                 | 100B-1018   | 1CT:1CT     | T, C          | T, C, S    | 12-pin SMT        | 0.583/0.470/0.180 | M189       |
|                 | 100B-1018X  | 1CT:1CT     | T, C          | T, C, S    | 12-pin SMT        | 0.583/0.470/0.180 | M189       |
|                 | 100B-1027   | 1CT:1CT     | T, C          | T, C, S    | 16-pin SMT        | 1.00/0.390/0.235  | M197       |
|                 | 100B-1027X  | 1CT:1CT     | T, C          | T, C, S    | 16-pin SMT        | 1.00/0.390/0.235  | M197       |
|                 | 100B-1035   | 1CT:1CT     | T, C          | T, C       | 12-pin SMT        | 0.500/0.347/0.088 | M316       |
|                 | 100B-1051   | 1CT:1CT     | T, C          | T, C       | 24-pin SMT        | 0.590/0.520/0.155 | M440       |
|                 | 100B-1054X  | 1CT:1CT     | T, C          | T, C       | 16-pin SMT        | 0.500/0.358/0.236 | M441       |
| Dual            | 100B-2002   | 1CT:1CT     | T, C          | T, C       | 24-pin SMT        | 0.518/0.595/0.241 | M110       |
|                 | 100B-2002X  | 1CT:1CT     | T, C          | T, C       | 24-pin SMT        | 0.518/0.595/0.241 | M110       |
|                 | 100B-2002F  | 1CT:1CT     | T, C          | T, C       | 24-pin SMT        | 0.518/0.595/0.241 | M110       |
|                 | 100B-2002FX | 1CT:1CT     | T, C          | T, C       | 24-pin SMT        | 0.518/0.595/0.241 | M110       |
| Quad            | 100B-4005   | 1CT:1CT     | T, C          | T, C       | 40-pin SMT        | 1.125/0.480/0.280 | M203       |
|                 | 100B-4005X  | 1CT:1CT     | T, C          | T, C       | 40-pin SMT        | 1.120/0.480/0.280 | M203       |
|                 | 100B-4005F  | 1CT:1CT     | T, C          | T, C       | 40-pin SMT        | 1.125/0.480/0.280 | M203       |
|                 | 100B-4005FX | 1CT:1CT     | T, C          | T, C       | 40-pin SMT        | 1.120/0.480/0.280 | M203       |
|                 | 100B-4009   | 1CT:1CT     | T, C          | T, C       | 40-pin SMT        | 1.125/0.480/0.280 | M190       |
|                 | 100B-4009X  | 1CT:1CT     | T, C          | T, C       | 40-pin SMT        | 1.125/0.480/0.280 | M190       |
|                 | 100B-4009F  | 1CT:1CT     | T, C          | T, C       | 40-pin SMT        | 1.125/0.480/0.280 | M190       |
|                 | 100B-4009FX | 1CT:1CT     | T, C          | T, C       | 40-pin SMT        | 1.125/0.480/0.280 | M190       |
|                 | 100B-4011   | 1CT:1CT     | T, C          | T, C       | 40-pin SMT        | 1.125/0.480/0.280 | M151       |
|                 | 100B-4011X  | 1CT:1CT     | T, C          | T, C       | 40-pin SMT        | 1.125/0.480/0.280 | M151       |
|                 | 100B-4011F  | 1CT:1CT     | T, C          | T, C       | 40-pin SMT        | 1.125/0.480/0.280 | M151       |
|                 | 100B-4011FX | 1CT:1CT     | T, C          | T, C       | 40-pin SMT        | 1.125/0.480/0.280 | M151       |
|                 | 100B-4018   | 1CT:1CT     | T, C          | T, C       | 40-pin SMT        | 1.110/0.630/0.225 | M448       |
|                 | 100B-4019   | 1CT:1CT     | T, C          | T, C       | 40-pin SMT        | 1.080/0.630/0.226 | M449       |
| 100B-4020       | 1CT:1CT     | C, T, C     | C, T, C       | 40-pin SMT | 1.090/0.360/0.236 | M307              |            |

- iNRCORE's standard lead finish is Tin/Lead (Sn63/Pb37). Parts can be ordered Non-Lead by adding "NL" to the part number (i.e. 100B-2002XNL).
- To order in Tape & Reel packaging, add the suffix "T" to the part number (i.e. 100B-4009FT)



| iNRCORE                |                   |             |               |         |               |                   |            |
|------------------------|-------------------|-------------|---------------|---------|---------------|-------------------|------------|
| ETHERNET / AFDX        |                   |             |               |         |               |                   |            |
| 1000Base-T / 10GBase-T |                   |             |               |         |               |                   |            |
| Number of Ports        | Part Number       | Turns Ratio | Configuration |         | Package Style | Size L/W/H (in.)  | Data Sheet |
|                        |                   |             | RX            | TX      |               |                   |            |
| Single                 | 1000B-5001        | 1CT:1CT     | T, C, S       | T, C, S | 24-pin SMT    | 0.695/0.635/0.230 | M1061      |
|                        | 1000B-5001X       | 1CT:1CT     | T, C, S       | T, C, S | 24-pin SMT    | 0.695/0.635/0.230 | M1061      |
|                        | 1000B-5001F       | 1CT:1CT     | T, C, S       | T, C, S | 24-pin SMT    | 0.695/0.635/0.230 | M1061      |
|                        | 1000B-5001FX      | 1CT:1CT     | T, C, S       | T, C, S | 24-pin SMT    | 0.695/0.635/0.230 | M1061      |
|                        | 1000B-5002        | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.695/0.635/0.230 | M106       |
|                        | 1000B-5002X       | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.695/0.635/0.230 | M106       |
|                        | 1000B-5002F       | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.695/0.635/0.230 | M106       |
|                        | 1000B-5002FX      | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.695/0.635/0.230 | M106       |
|                        | 1000B-5004        | 1CT:1CT     | T, C, S       | T, C, S | 24-pin SMT    | 0.705/0.490/0.190 | M428       |
|                        | 1000B-5009        | 1CT:1CT     | T             | T       | 24-pin SMT    | 0.600/0.430/0.340 | M160       |
|                        | 1000B-5009X       | 1CT:1CT     | T             | T       | 24-pin SMT    | 0.600/0.430/0.340 | M160       |
|                        | 1000B-5010 (PoE)  | 1CT:1CT     | T, C, S       | T, C, S | 24-pin SMT    | 0.690/0.480/0.225 | M290       |
|                        | 1000B-5010X (PoE) | 1CT:1CT     | T, C, S       | T, C, S | 24-pin SMT    | 0.690/0.480/0.225 | M290       |
|                        | 1000B-5012        | 1CT:1CT     | T             | T       | 24-pin SMT    | 0.735/0.518/0.241 | M160       |
|                        | 1000B-5012X       | 1CT:1CT     | T             | T       | 24-pin SMT    | 0.735/0.518/0.241 | M160       |
|                        | 1000B-5016        | 1CT:1CT     | T             | T       | 24-pin SMT    | 0.600/0.405/0.163 | M160       |
|                        | 1000B-5017        | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.715/0.480/0.260 | M429       |
|                        | 1000B-5017F       | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.715/0.480/0.260 | M429       |
|                        | 1000B-5026F       | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.705/0.480/0.180 | M430       |
|                        | 1000B-5027 (PoE)  | 1CT:1CT     | T, C, S       | T, C, S | 24-pin SMT    | 0.695/0.480/0.180 | M238       |
|                        | 1000B-5027X (PoE) | 1CT:1CT     | T, C, S       | T, C, S | 24-pin SMT    | 0.695/0.480/0.180 | M238       |
|                        | 1000B-5028X       | 1CT:1CT     | T             | T       | 24-pin SMT    | 0.600/0.300/0.163 | M431       |
|                        | 1000B-5028FX      | 1CT:1CT     | T             | T       | 24-pin SMT    | 0.600/0.300/0.163 | M431       |
|                        | 1000B-5029        | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.700/0.620/0.185 | M285       |
|                        | 1000B-5029X       | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.700/0.620/0.185 | M285       |
|                        | 1000B-5033        | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.600/0.430/0.340 | M433       |
|                        | 1000B-5033X       | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.600/0.430/0.340 | M433       |
|                        | 1000B-5035        | 1CT:1CT     | T, C, S       | T, C, S | 24-pin SMT    | 0.736/0.537/0.225 | M434       |
|                        | 1000B-5036 (PoE)  | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.725/0.490/0.265 | M435       |
|                        | 1000B-5037 (PoE)  | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.725/0.633/0.410 | M436       |
|                        | 1000B-5042        | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.510/0.520/0.155 | M437       |
|                        | 1000B-5045X       | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.725/0.490/0.265 | M438       |
|                        | 1000B-5046x       | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.725/0.490/0.265 | M439       |
|                        | 10GB-6001         | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.700/0.630/0.235 | M375       |
|                        | 10GB-6006         | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.700/0.630/0.235 | M555       |
|                        | 10GB-6007         | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.790/0.760/0.100 | M553       |
|                        | 10GB-6009         | 1CT:1CT     | T, C          | T, C    | 30-pin SMT    | 0.705/0.615/0.295 | M562       |
|                        | 10GB-6010         | 1CT:1CT     | C, T          | C, T    | 24-pin SMT    | 0.547/0.605/0.225 | M567       |
|                        | 10GB-6011 (POE)   | 1CT:1CT     | C, T          | C, T    | 24-pin SMT    | 0.725/0.630/0.265 | M564       |
|                        | 10GB-6012 (POE+)  | 1CT:1CT     | C, T          | C, T    | 24-pin SMT    | 0.725/0.643/0.410 | M565       |
|                        | 10GB-6013 (POE++) | 1CT:1CT     | C, T          | C, T    | 24-pin SMT    | 0.725/0.643/0.410 | M566       |
|                        | 10GB-6014         | 1CT:1CT     | T, C          | T, C    | 24-pin SMT    | 0.547/0.605/0.255 | M568       |
| Dual                   | 1000B-5003        | 1CT:1CT     | T, C          | T, C    | 50-pin SMT    | 1.100/0.430/0.340 | M106       |
|                        | 1000B-5003X       | 1CT:1CT     | T, C          | T, C    | 50-pin SMT    | 1.100/0.430/0.340 | M106       |
|                        | 1000B-5003F       | 1CT:1CT     | T, C          | T, C    | 50-pin SMT    | 1.100/0.430/0.340 | M106       |
|                        | 1000B-5003FX      | 1CT:1CT     | T, C          | T, C    | 50-pin SMT    | 1.100/0.430/0.340 | M106       |
|                        | 1000B-5014        | 1CT:1CT     | T, C, S       | T, C, S | 48-pin SMT    | 1.100/0.610/0.290 | M160       |
|                        | 1000B-5014X       | 1CT:1CT     | T, C, S       | T, C, S | 48-pin SMT    | 1.100/0.610/0.290 | M160       |
|                        | 1000B-5020        | 1CT:1CT     | T, C          | T, C    | 48-pin SMT    | 0.100/0.610/0.290 | M286       |
|                        | 1000B-5020X       | 1CT:1CT     | T, C          | T, C    | 48-pin SMT    | 0.100/0.610/0.290 | M286       |

- iNRCORE's standard lead finish is tin/lead (Sn63/Pb37). Parts can be ordered Non-Lead by adding "NL" to the part number (i.e. 1000B-5003NL).
- To order in Tape & Reel packaging, add the suffix "T" to the part number (i.e. 1000B-5002FXT)
- T = Transformer, C = Choke, S = Shunt inductor

- Standard Operating Temperature: -40°C to +85°C
- Extended Operating Temperature (suffix "X"): -55°C to +125°C
- Parts compliant to IEEE 802.3 standard
- PoE = Power over Ethernet Per IEEE 802.3af, 15 W  
PoE+ = 30W  
PoE++ = 60W







## ETHERNET / AFDX

10/100Base - TX

| Part Number | Insertion Loss (dB MAX) |        |        |         | Return Loss (dB MIN) |        |        |        |        |         | Crosstalk (dB MIN) |        |        |         | Differential to Common Mode Rejection (dB MIN) |        |         |         | Isolation (K VAC) | Data Sheet |
|-------------|-------------------------|--------|--------|---------|----------------------|--------|--------|--------|--------|---------|--------------------|--------|--------|---------|--|--------|---------|---------|-------------------|------------|
|             | 0.10 - 30 MHz           | 60 MHz | 80 MHz | 100 MHz | 5 MHz                | 30 MHz | 50 MHz | 60 MHz | 80 MHz | 100 MHz | 1 MHz              | 30 MHz | 60 MHz | 100 MHz | 30 MHz   | 60 MHz | 100 MHz | 200 MHz |                   |            |
| X-1644      | -1.00                   | -2.0   | -2.50  | -4.00   | -18                  | -9     | -5.50  | -4.50  | -3.00  | -2.0    | -45                | -30    | -27    | -25     | -36  | -32    | -30     | -25     | 10                | M215       |
| X-1697      | -1.50                   | -3.0   | -3.50  | -4.50   | -18                  | -8     | -5.50  | -4.50  | -3.30  | -2.0    | -45                | -30    | -27    | -25     | -36  | -32    | -30     | -25     | 10                | M514       |
| 100B-1014   | -1.10                   | -1.0   |        | -1.40   | -20                  | -13    | -10    | -9     | -7     |         | -50                | -40    | -40    | -35     | -42  | -37    | -35     | -35     | 6                 | M510       |
| 100B-1021   | -1.00                   | -2.0   | -3.00  | -4.00   | -18                  | -9     | -5.50  | -4.50  | -3     | -2.0    | -45                | -30    | -27    | -25     | -36  | -32    | -30     | -25     | 8                 | M511       |
| 100B-1044   | -1.00                   | -1.0   | -1.00  | -1.00   | -12                  | -12    | -12    | -12    | -10    | -8.0    | -45                | -30    | -27    | -25     | -36  | -32    | -30     | -25     | 6                 | M512       |

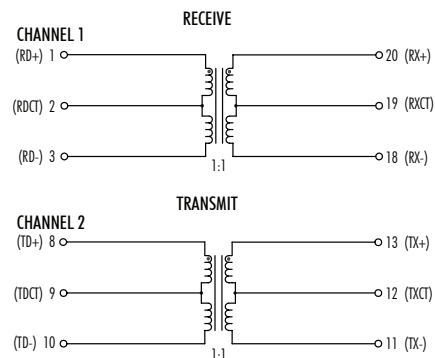
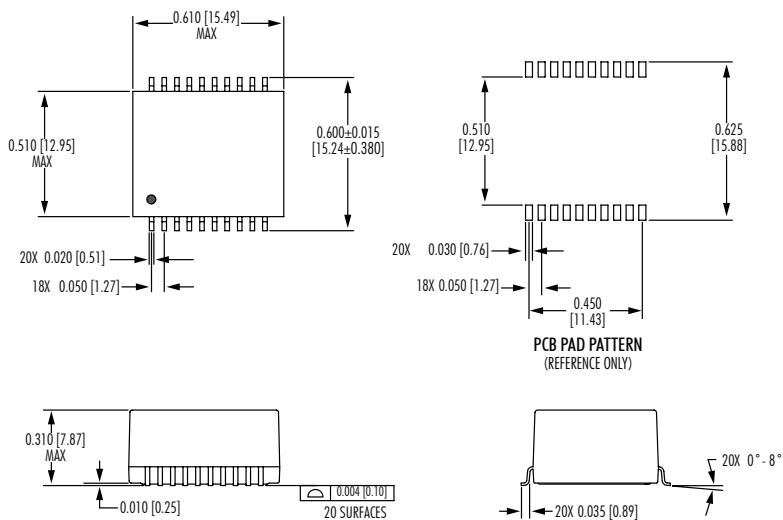
- INRCORE's standard lead finish is tin/lead (Sn63/Pb37). Parts can be ordered Non-Lead by adding "NL" to the part number (i.e. 100B-1014NL).
- To order in Tape & Reel packaging, add the suffix "T" to the part number (i.e. 100B-1014T).

### Mechanicals

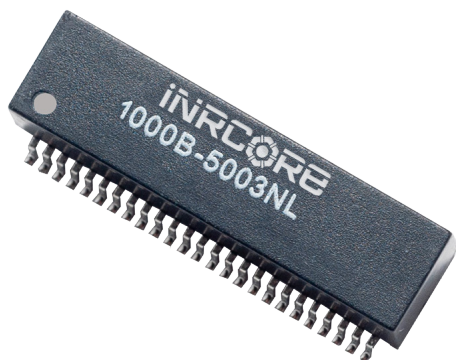
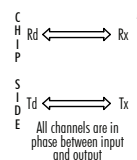
### Electrical Schematics

X-1644

Dimensions: inch [mm]  
Tolerance (unless otherwise specified): ±0.010 [0.25]



#### LEGEND



## MIL-STD-1553 INTERFACE TRANSFORMERS

Non-QPL

| Part Number | Turns Ratio (±3%)     | Impedance MIN (W) | Package Size L/W/H (in.) | Data Sheet | Part Number  | Turns Ratio (±3%) | Impedance MIN (W) | Package Size L/W/H (in.) | Data Sheet |
|-------------|-----------------------|-------------------|--------------------------|------------|--------------|-------------------|-------------------|--------------------------|------------|
| FL1553-1    | 1CT:1CT/1CT:0.707CT   | 4000              | 0.630/0.630/0.155        | M227       | STQ1553-3    | 1.25:1/1.66:1     | 4000              | 0.630/0.630/0.340        | M230       |
| GL1553-1    | 1CT:1CT/1CT:0.707CT   | 4000              | 0.630/0.630/0.155        | M227       | STQ1553-5    | 1:2.12/1:1.50     | 4000              | 0.630/0.630/0.340        | M230       |
| TL1553-1    | 1CT:1CT/1CT:0.707CT   | 4000              | 0.630/0.630/0.155        | M226       | STQ1553-45   | 1.50/1:1.79       | 4000              | 0.630/0.630/0.340        | M230       |
| FL1553-2    | 1.40CT:1CT/2CT:1CT    | 7200              | 0.630/0.630/0.155        | M227       | SFQ1553-1    | 1:1/1:0.707       | 4000              | 0.630/0.630/0.340        | M231       |
| GL1553-2    | 1.40CT:1CT/2CT:1CT    | 7200              | 0.630/0.630/0.155        | M227       | SGQ1553-1    | 1:1/1:0.707       | 4000              | 0.630/0.630/0.340        | M231       |
| TL1553-2    | 1.40CT:1CT/2CT:1CT    | 7200              | 0.630/0.630/0.155        | M226       | SFQ1553-2    | 1.40:1/2:1        | 7200              | 0.630/0.630/0.340        | M231       |
| FL1553-3    | 1.25CT:1CT/1.66CT/1CT | 4000              | 0.630/0.630/0.155        | M227       | SGQ1553-2    | 1.40:1/2:1        | 7200              | 0.630/0.630/0.340        | M231       |
| GL1553-3    | 1.25CT:1CT/1.66CT/1CT | 4000              | 0.630/0.630/0.155        | M227       | SFQ1553-3    | 1.25:1/1.66:1     | 4000              | 0.630/0.630/0.340        | M231       |
| TL1553-3    | 1.25CT:1CT/1.66CT/1CT | 4000              | 0.630/0.630/0.155        | M226       | SGQ1553-3    | 1.25:1/1.66:1     | 4000              | 0.630/0.630/0.340        | M231       |
| FL1553-5    | 1CT:2.12CT/1CT:1.50CT | 4000              | 0.630/0.630/0.155        | M227       | SFQ1553-5    | 1:2.12/1:1.50     | 4000              | 0.630/0.630/0.340        | M231       |
| GL1553-5    | 1CT:2.12CT/1CT:1.50CT | 4000              | 0.630/0.630/0.155        | M227       | SGQ1553-5    | 1:2.12/1:1.50     | 4000              | 0.630/0.630/0.340        | M231       |
| TL1553-5    | 1CT:2.12CT/1CT:1.50CT | 4000              | 0.630/0.630/0.155        | M226       | SFQ1553-45   | 1:2.50/1:1.79     | 4000              | 0.630/0.630/0.340        | M231       |
| FL1553-45   | 1CT:2.50CT/1CT:1.79CT | 4000              | 0.630/0.630/0.155        | M227       | SGQ1553-45   | 1:2.50/1:1.79     | 4000              | 0.630/0.630/0.340        | M231       |
| GL1553-45   | 1CT:2.50CT/1CT:1.79CT | 4000              | 0.630/0.630/0.155        | M227       | SLQF1553-1   | 1:1/1.40:1        | 4000              | 0.630/0.630/0.280        | M234       |
| TL1553-45   | 1CT:2.50CT/1CT:1.79CT | 4000              | 0.630/0.630/0.155        | M226       | SLQF1553-2   | 1.40:1/2:1        | 7200              | 0.630/0.630/0.280        | M234       |
| DFL1553-1   | 1CT:1CT/1CT:0.707CT   | 4000              | 0.930/0.630/0.155        | M229       | SLQF1553-3   | 1.25:1/1.66:1     | 4000              | 0.630/0.630/0.280        | M234       |
| DGL1553-1   | 1CT:1CT/1CT:0.707CT   | 4000              | 0.930/0.630/0.155        | M229       | SLQF1553-5   | 1:2.12/1:1.50     | 4000              | 0.630/0.630/0.280        | M234       |
| DTL1553-1   | 1CT:1CT/1CT:0.707CT   | 4000              | 0.930/0.630/0.155        | M228       | SLQF1553-45  | 1:2.5/1:1.79      | 4000              | 0.630/0.630/0.280        | M234       |
| DFL1553-2   | 1.40CT:1CT/2CT:1CT    | 7200              | 0.930/0.630/0.155        | M229       | SLQG1553-1   | 1:1/1.4:1         | 4000              | 0.630/0.630/0.280        | M234       |
| DGL1553-2   | 1.40CT:1CT/2CT:1CT    | 7200              | 0.930/0.630/0.155        | M229       | SLQG1553-2   | 1.4:1/2:1         | 7200              | 0.630/0.630/0.280        | M234       |
| DTL1553-2   | 1.40CT:1CT/2CT:1CT    | 7200              | 0.930/0.630/0.155        | M228       | SLQG1553-3   | 1.25:1/1.66:1     | 4000              | 0.630/0.630/0.280        | M234       |
| DFL1553-3   | 1.25CT:1CT/1.66CT:1CT | 4000              | 0.930/0.630/0.155        | M229       | SLQG1553-5   | 1:2.12/1:1.50     | 4000              | 0.630/0.630/0.280        | M234       |
| DGL1553-3   | 1.25CT:1CT/1.66CT:1CT | 4000              | 0.930/0.630/0.155        | M229       | SLQG1553-45  | 1:2.50/1:1.79     | 4000              | 0.630/0.630/0.280        | M234       |
| DTL1553-3   | 1.25CT:1CT/1.66CT:1CT | 4000              | 0.930/0.630/0.155        | M228       | SLQT1553-1   | 1:1/1.4:1         | 4000              | 0.630/0.630/0.280        | M234       |
| DFL1553-5   | 1CT:2.12CT/1CT:1.50CT | 4000              | 0.930/0.630/0.155        | M229       | SLQT1553-2   | 1.4:1/2:1         | 7200              | 0.630/0.630/0.280        | M234       |
| DGL1553-5   | 1CT:2.12CT/1CT:1.50CT | 4000              | 0.930/0.630/0.155        | M229       | SLQT1553-3   | 1.25:1/1.66:1     | 4000              | 0.630/0.630/0.280        | M234       |
| DTL1553-5   | 1CT:2.12CT/1CT:1.50CT | 4000              | 0.930/0.630/0.155        | M228       | SLQT1553-5   | 1:2.12/1:1.50     | 4000              | 0.630/0.630/0.280        | M234       |
| DFL1553-45  | 1CT:2.50CT/1CT:1.79CT | 4000              | 0.930/0.630/0.155        | M229       | SLQT1553-45  | 1:2.50/1:1.79     | 4000              | 0.630/0.630/0.280        | M234       |
| DGL1553-45  | 1CT:2.50CT/1CT:1.79CT | 4000              | 0.930/0.630/0.155        | M229       | X-1584       | 1:1.79            | 3000              | 0.500/0.350/0.172        | M157       |
| DTL1553-45  | 1CT:2.50CT/1CT:1.79CT | 4000              | 0.930/0.630/0.155        | M228       | X-1596       | 1:2.50            | 3000              | 0.500/0.350/0.172        | M157       |
| STQ1553-1   | 1CT:1CT/1CT:0.707CT   | 4000              | 0.630/0.630/0.340        | M230       | Q1553-71**   | 1:3/1:2.15        | 4000              | 0.625/0.625/0.250        | M128       |
| STQ1553-2   | 1.40CT:1CT/2CT:1CT    | 7200              | 0.630/0.630/0.340        | M230       | SMQ1553-70** | 1:3/1:2.15        | 4000              | 0.625/0.625/0.250        | M128       |

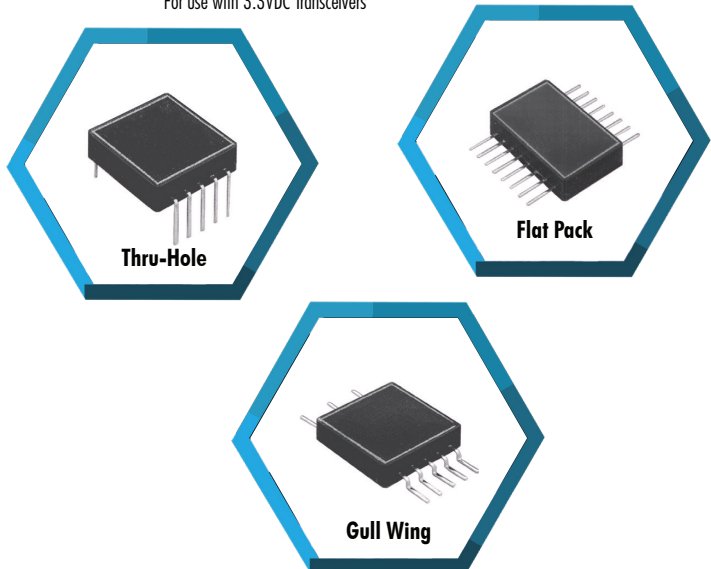
**\* Choose 1 of 3 Operating Temperature Ranges:**

| Operating Temperature | Flat Pack Prefix | Gull Wing Prefix | Thru-Hole Prefix |
|-----------------------|------------------|------------------|------------------|
| 0°C to +70°C          | FLC              | GLC              | TLC              |
| -40°C to +85°C        | FLN              | GLN              | TLN              |
| -55°C to +125°C       | FL               | GL               | TL               |

| Part Number Prefix - Package Types |  |
|------------------------------------|--|
| FL                                 | Flat Pack Package  |
| GL                                 | Gull Wing Package  |
| TL                                 | Thru-Hole Package  |
| DFL                                | Dual-Ratio, Dual Interface, Flat Pack Package                      |
| DGL                                | Dual-Ratio, Dual Interface, Gull Wing Package                      |
| DTL                                | Dual-Ratio, Dual Interface, Thru-Hole Package                      |
| SFQ                                | Stacked Dual-Ratio, Dual Interface, Flat Pack Package              |
| SGQ                                | Stacked Dual-Ratio, Dual Interface, Gull Wing Package              |
| STQ                                | Stacked Dual-Ratio, Dual Interface, Thru-Hole Package              |
| SLQF                               | Stacked/Low Profile, Dual-Ratio, Dual Interface, Flat Pack Package |
| SLQG                               | Stacked/Low Profile, Dual-Ratio, Dual Interface, Gull Wing Package |
| SLQT                               | Stacked/Low Profile, Dual-Ratio, Dual Interface, Thru-Hole Package |

- Designed and built to conform with MIL-PRF-21038/27 requirements.
- Custom capabilities are available - See Temperature Range options
- Parts can be built and screened to Space NASA EEE-INST-002 requirements.

\*\*For use with 3.3VDC Transceivers



## MIL-STD-1553 INTERFACE TRANSFORMERS (continued)

| Interface Transformers - COTS Series |                           |                   |                          |            |
|--------------------------------------|---------------------------|-------------------|--------------------------|------------|
| Part Number                          | Turns Ratio ( $\pm 3\%$ ) | Impedance MIN (W) | Package Size L/W/H (in.) | Data Sheet |
| X1553-1                              | 1:1/1:0.707               | 4000              | 0.625/0.625/0.250        | M233       |
| X1553-2                              | 1.40:1/2:1                | 7200              | 0.625/0.625/0.250        | M233       |
| X1553-3                              | 1.25:1/1.66:1             | 4000              | 0.625/0.625/0.250        | M233       |
| X1553-5                              | 1:2.12/1.5:1              | 4000              | 0.625/0.625/0.250        | M233       |
| X1553-45                             | 1:2.50/1:1.79             | 4000              | 0.625/0.625/0.250        | M233       |

- Designed and built to conform with MIL-PRF-21038/27 requirements.
- To purchase, select desired operating temperature range and add prefix listed below.

**\* Choose 1 of 3 Operating Temperature Ranges:**

| Part Number Prefix | Operating Temperature |
|--------------------|-----------------------|
| C                  | 0°C to +70°C          |
| N                  | -40°C to +85°C        |
| TQ                 | -55°C to +125°C       |

| Single Interface Transformers - COTS Low Profile Miniature Series |                           |                   |                          |            |
|---|---------------------------|-------------------|--------------------------|------------|
| Part Number   | Turns Ratio ( $\pm 3\%$ ) | Impedance MIN (W) | Package Size L/W/H (in.) | Data Sheet |
| SMG1553-60  | 1.25:1                    | 4000              | 0.400/0.400/0.185        | M112       |
| SMG1553-61  | 1.66:1                    | 4000              | 0.400/0.400/0.185        | M112       |
| SMG1553-65  | 1:2.50                    | 4000              | 0.400/0.400/0.185        | M112       |
| SMG1553-66  | 1:1.79                    | 4000              | 0.400/0.400/0.185        | M112       |
| SMG1553-67  | 1:2.70                    | 4000              | 0.400/0.400/0.185        | M112       |
| SMG1553-68  | 1:3.75                    | 4000              | 0.400/0.400/0.185        | M112       |

- Designed and built to conform with MIL-PRF-21038/27 requirements.

| Dual Interface Transformers - COTS Low Profile Miniature Series |                           |                   |                          |            |
|---|---------------------------|-------------------|--------------------------|------------|
| Part Number   | Turns Ratio ( $\pm 3\%$ ) | Impedance MIN (W) | Package Size L/W/H (in.) | Data Sheet |
| DKG1553-45  | 1:2.50/1:1.79             | 4000              | 0.675/0.400/0.185        | M322       |
| DKG1553-70  | 1:3/1:2.15                | 4000              | 0.675/0.400/0.185        | M322       |
| DKG1553-71  | 1:3.54/1:2.70             | 4000              | 0.675/0.400/0.185        | M322       |
| DKG1553-72  | 1:2.65/1:2.07             | 4000              | 0.675/0.400/0.185        | M322       |
| DKG1553-75  | 1:2.50/1:1.79             | 4000              | 0.675/0.400/0.185        | M322       |

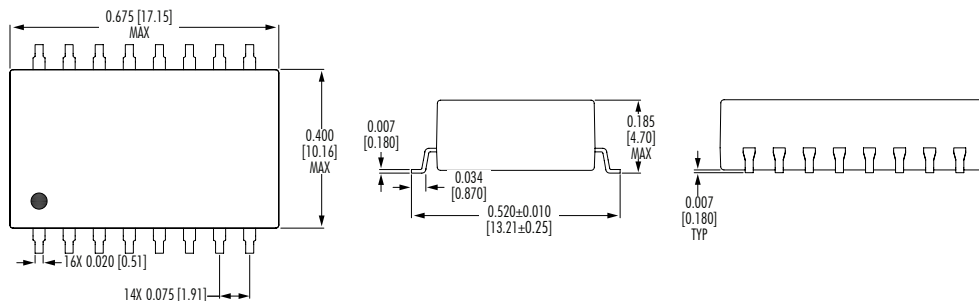
- Designed and built to conform with MIL-PRF-21038/27 requirements.



### Mechanicals

#### DKG1553-XX

Dimensions: inch [mm]  
Tolerance (unless otherwise specified):  $\pm 0.010$  [0.25]



| QPL Series - Qualified to MIL-PRF-21038/27 |                             |                           |                   |                          |            |
|--|-----------------------------|---------------------------|-------------------|--------------------------|------------|
| Part Number                                | Military Designation Number | Turns Ratio ( $\pm 3\%$ ) | Impedance MIN (W) | Package Size L/W/H (in.) | Data Sheet |
| Q(X)1553-20                                | M21038/27-05                | 1:1.41                    | 3000              | 0.500/0.350/0.250        | M223       |
| Q(X)1553-21                                | M21038/27-06                | 1:1                       | 3000              | 0.500/0.350/0.250        | M223       |
| Q(X)1553-22                                | M21038/27-07                | 1:1.41                    | 3000              | 0.500/0.350/0.250        | M223       |
| Q(X)1553-23                                | M21038/27-08                | 1:1.66                    | 3000              | 0.500/0.350/0.250        | M223       |
| Q(X)1553-24                                | M21038/27-09                | 1:2                       | 3000              | 0.500/0.350/0.250        | M223       |
| Q(X)1553-25                                | M21038/27-28                | 1:1.50                    | 3000              | 0.500/0.350/0.250        | M223       |
| Q(X)1553-51                                | M21038/27-29                | 1:1.79                    | 3000              | 0.500/0.350/0.250        | M223       |
| Q(X)1553-52                                | M21038/27-30                | 1:2.50                    | 3000              | 0.500/0.350/0.250        | M223       |
| Q(X)1553-1                                 | M21038/27-01                | 1:1/1:0.707               | 4000              | 0.625/0.625/0.250        | M224       |
| Q(X)1553-2                                 | M21038/27-02                | 1.40:1/2:1                | 7200              | 0.625/0.625/0.250        | M224       |
| Q(X)1553-3                                 | M21038/27-03                | 1.25:1/1.66:1             | 4000              | 0.625/0.625/0.250        | M224       |
| Q(X)1553-5                                 | M21038/27-10                | 1:2.12/1:1.50             | 4000              | 0.625/0.625/0.250        | M224       |
| Q(X)1553-45                                | M21038/27-26                | 1:2.50/1:1.79             | 4000              | 0.625/0.625/0.250        | M224       |
| Q(X)1553-81                                | M21038/27-21                | 1:1/1:0.707               | 4000              | 0.625/0.625/0.275        | M224       |
| Q(X)1553-82                                | M21038/27-22                | 1.40:1/2:1                | 7200              | 0.625/0.625/0.275        | M224       |
| Q(X)1553-83                                | M21038/27-23                | 1.25:1/1.66:1             | 4000              | 0.625/0.625/0.275        | M224       |
| Q(X)1553-84                                | M21038/27-24                | 1:2.12/1:1.50             | 4000              | 0.625/0.625/0.275        | M224       |
| Q(X)1553-85                                | M21038/27-25                | 1:2.50/1:1.79             | 4000              | 0.625/0.625/0.275        | M224       |
| FPQ(X)1553-6                               | M21038/27-16                | 1:1/1:0.707               | 4000              | 0.625/0.625/0.250        | M225       |
| SMQ(X)1553-6                               | M21038/27-11                | 1:1/1:0.707               | 4000              | 0.625/0.625/0.250        | M225       |
| FPQ(X)1553-7                               | M21038/27-17                | 1.40:1/2:1                | 7200              | 0.625/0.625/0.250        | M225       |
| SMQ(X)1553-7                               | M21038/27-12                | 1.40:1/2:1                | 7200              | 0.625/0.625/0.250        | M225       |
| FPQ(X)1553-8                               | M21038/27-18                | 1.25:1/1.66:1             | 4000              | 0.625/0.625/0.250        | M225       |
| SMQ(X)1553-8                               | M21038/27-13                | 1.25:1/1.66:1             | 4000              | 0.625/0.625/0.250        | M225       |
| FPQ(X)1553-10                              | M21038/27-20                | 1:2.12/1:1.50             | 4000              | 0.625/0.625/0.250        | M225       |
| SMQ(X)1553-10                              | M21038/27-15                | 1:2.12/1:1.50             | 4000              | 0.625/0.625/0.250        | M225       |
| FPQ(X)1553-45                              | M21038/27-31                | 1:2.50/1:1.79             | 4000              | 0.625/0.625/0.250        | M225       |
| SMQ(X)1553-45                              | M21038/27-27                | 1:2.50/1:1.79             | 4000              | 0.625/0.625/0.250        | M225       |

- Designed and built to conform with MIL-PRF-21038/27 requirements.
- To purchase, select desired Product Level and choose corresponding Part Number.

**\* Choose 1 of 3 Product Levels**

| Part Number Variation | Product Level  |
|-----------------------|--|
| Q1553-20              | Level M: for general purpose military applications               |
| QC1553-20             | Level C: for high reliability commercial/industrial applications |
| QT1553-20             | Level T: for high reliability critical military applications     |

- Each Product Level utilizes a different degree of Inspection, Sampling and Testing. For specific information, please view the Data Sheets listed in the table above.
- To order in Tape & Reel packaging, add the Suffix "T" to the part number (i.e. Q1553-20T).



| GENERAL PURPOSE PULSE TRANSFORMERS |                                       |                                   |                        |               |                                       |                                   |            |
|------------------------------------|---------------------------------------|-----------------------------------|------------------------|---------------|---------------------------------------|-----------------------------------|------------|
| Part Number                        | Turns Ratio (1,5):(6,2) ( $\pm 2\%$ ) | Primary Inductance (1-5) MIN (mH) | DCR (1-5, 6-2) MAX (W) | ET MIN (V-us) | Insulation Resistance @250Vdc (KMohm) | Leakage Inductance MAX ( $\mu$ H) | Data Sheet |
| IZUHD                              | 1:1                                   | 5                                 | 1.25                   | 20            | 10                                    | 2.25                              | M480       |
| IZUHE                              | 1:1                                   | 3                                 | 1.25                   | 10            | 10                                    | 2.70                              | M481       |

| LOW-SPEED DATA TRANSFORMERS          |                                   |                  |              |                 |              |                          |            |
|--------------------------------------|-----------------------------------|------------------|--------------|-----------------|--------------|--------------------------|------------|
| T1/E1/CEPT/ISDN-PRI SMT Transformers |                                   |                  |              |                 |              |                          |            |
| Part Number                          | Turns Ratio Pri:Sec ( $\pm 2\%$ ) | OCL Pri MIN (mH) | Cww MAX (pf) | DCR Pri MAX (W) | Primary Pins | Package Size L/W/H (in.) | Data Sheet |
| X-1707                               | 1:1                               | 1.0              | 25           | 0.80            | 1-3          | 0.360/0.405/0.270        | M487       |
| PL1374                               | 1:1                               | 1.2              | 35           | 0.80            | 1-3          | 0.300/0.275/0.250        | M119       |
| X-1688                               | 1:1                               | 1.2              | 35           | 0.80            | 1-3          | 0.300/0.275/0.275        | M486       |

| LOW-SPEED DATA COMMON MODE CHOKE |       |                                  |         |         |                                       |                      |            |
|----------------------------------|-------|----------------------------------|---------|---------|---------------------------------------|----------------------|------------|
| Part Number                      | 1 MHz | Common Mode Attenuation (dB MIN) |         |         | Primary Inductance OCL MIN ( $\mu$ H) | DCR MAX ( $\Omega$ ) | Data Sheet |
|                                  |       | 10 MHz                           | 100 MHz | 500 MHz |                                       |                      |            |
| PL1930                           | -10.0 | -15.0                            | -12.0   | -5.0    | 35                                    | 0.15                 | M218       |

| LOW-SPEED DATA TRANSFORMERS   |                                   |                             |                                   |                 |                           |                          |            |
|-------------------------------|-----------------------------------|-----------------------------|-----------------------------------|-----------------|---------------------------|--------------------------|------------|
| 64kbps Isolation Transformers |                                   |                             |                                   |                 |                           |                          |            |
| Part Number                   | Turns Ratio Pri:Sec ( $\pm 2\%$ ) | Primary Inductance MIN (mH) | Leakage Inductance MAX ( $\mu$ H) | DCR Pri MAX (W) | Inter-Winding Capacitance | Package Size L/W/H (in.) | Data Sheet |
| X-1703                        | 2:1                               | 1.0                         | 24                                | 3.00            | 36                        | 0.940/0.775/0.810        | M489       |
| X-1709                        | 1:2                               | 2.0                         | 5.0                               | 2.65            | 130                       | 0.448/0.335/0.400        | M483       |

| HIGH-SPEED DATA TRANSFORMERS |                                   |                                   |              |                 |                   |                          |            |
|------------------------------|-----------------------------------|-----------------------------------|--------------|-----------------|-------------------|--------------------------|------------|
| Fibre Channel Isolation      |                                   |                                   |              |                 |                   |                          |            |
| Part Number                  | Turns Ratio Pri:Sec ( $\pm 2\%$ ) | Primary Inductance MIN ( $\mu$ H) | Cww MAX (pf) | DCR Pri MAX (W) | Hi-Pot MIN (Vrms) | Package Size L/W/H (in.) | Data Sheet |
| X-1704                       | 1:1                               | 7.5                               | 5            | 0.20            | 2000              | 0.500/0.270/0.200        | M482       |
| X-1710                       | 1:1                               | 15                                | 5            | 0.20            | 150               | 0.495/0.280/0.200        | M485       |

| CAN BUS (COMMON MODE CHOKES) |                                   |  |                                   |                        |                        |                          |            |
|------------------------------|-----------------------------------|--|-----------------------------------|------------------------|------------------------|--------------------------|------------|
| 80 VDC - 500 Vrms            |                                   |  |                                   |                        |                        |                          |            |
| Part Number                  | Turns Ratio Pri:Sec ( $\pm 2\%$ ) | Inductance (100 kHz) +50% - 30% ( $\mu$ H) | Leakage Inductance MAX ( $\mu$ H) | DCR Resistance MAX (W) | Current Rating (mA DC) | Package Size L/W/H (in.) | Data Sheet |
| X-1711                       | 1:1                               | 11   | 0.16                              | 0.12                   | 800                    | 0.310/0.260/0.250        | M488       |
| X-1712                       | 1:1                               | 25   | 0.24                              | 0.12                   | 800                    | 0.310/0.260/0.250        | M488       |
| X-1713                       | 1:1                               | 51   | 0.22                              | 0.20                   | 800                    | 0.310/0.260/0.250        | M488       |
| X-1714                       | 1:1                               | 100  | 0.16                              | 0.24                   | 800                    | 0.310/0.260/0.250        | M488       |
| X-1715                       | 1:1                               | 471  | 0.27                              | 0.30                   | 700                    | 0.310/0.260/0.250        | M488       |
| X-1716                       | 1:1                               | 1000                                       | 0.43                              | 0.40                   | 700                    | 0.310/0.260/0.250        | M488       |

- iNRCORE's standard lead finish is tin/lead (Sn63/Pb37). Parts can be ordered Non-Lead by adding "NL" to the part number (i.e. X-1704NL).
- To order in Tape & Reel packaging, add the suffix "T" to the part number (i.e. X-1709T).



iNRCORE offers custom and catalog power magnetics ruggedized for Military, MIL-PRF-27, MIL-STD-981 and high reliability applications. iNRCORE has a full line of “Off-the-Shelf” inductors for military and aerospace power applications in SLED, SLIC and POGO series packaging. The SLED, SLIC and POGO series use ruggedized high temperature headers suitable for surface mounting to Printed Circuit Board assemblies. Cores are securely bonded to the headers allowing parts to meet MIL-PRF-27 environmental requirements.

iNRCORE offers **Shielded Drum Core Inductors** and **High Frequency Planar Transformers** incorporating ruggedized PCB mounting clips that have superior performance in applications with shock and vibration requirements. iNRCORE also offers catalog **Gate Drive Transformers** with high isolation, miniature **Current Sense Transformers**, and **Common Mode Chokes** with ruggedized construction to meet MIL-PRF-27 Grade 6 requirements.

iNRCORE continues to offer tin/lead termination finishes for Military, Space and Aerospace applications requiring the highest reliability. Parts can also be purchased with tin/lead finishes where RoHS and REACH compliance are required. iNRCORE offers complete design support, qualification test services and global AS9100 manufacturing capabilities.

| Toroid Power Inductors - SLED Series |                              |                         |              |                  |                          |            | SMT Common Mode Chokes - SLIC Series |             |                         |              |                          |            |
|--------------------------------------|------------------------------|-------------------------|--------------|------------------|--------------------------|------------|--------------------------------------|-------------|-------------------------|--------------|--------------------------|------------|
| Part Number                          | @I <sub>RATED</sub> TYP (μH) | @I <sub>RATED</sub> (A) | DCR MAX (mW) | L @0Adc TYP (μH) | Package Size L/W/H (in.) | Data Sheet | Part Number                          | L ±35% (mH) | @I <sub>RATED</sub> (A) | DCR MAX (mW) | Package Size L/W/H (in.) | Data Sheet |
| <b>SLED 20</b>                       |                              |                         |              |                  |                          |            | <b>SLIC Series</b>                   |             |                         |              |                          |            |
| PL8100                               | 1.01                         | 3.40                    | 11           | 1.10             | 0.400/0.345/0.250        | M107       | PL8200                               | 0.47        | 14                      | 8            | 1.22/1.00/0.500          | M108       |
| PL8101                               | 6.20                         | 1.40                    | 70           | 7.00             | 0.400/0.345/0.250        | M107       | PL8201                               | 0.63        | 11.6                    | 10           | 1.22/1.00/0.500          | M108       |
| PL8102                               | 17.60                        | 1.00                    | 125          | 22.70            | 0.400/0.345/0.250        | M107       | PL8202                               | 0.81        | 9.70                    | 14           | 1.22/1.00/0.500          | M108       |
| <b>SLED 30</b>                       |                              |                         |              |                  |                          |            | PL8203                               | 0.53        | 7.20                    | 15           | 1.11/1.00/0.500          | M108       |
| PL8110                               | 3.80                         | 4.80                    | 17.3         | 5.20             | 0.625/0.525/0.400        | M107       | PL8204                               | 0.59        | 5.60                    | 21           | 0.770/0.670/0.390        | M108       |
| PL8111                               | 9.40                         | 2.80                    | 43.4         | 12.30            | 0.625/0.525/0.400        | M107       | PL8205                               | 0.77        | 4.70                    | 40           | 0.770/0.670/0.390        | M108       |
| PL8112                               | 29.70                        | 1.40                    | 166          | 35.30            | 0.625/0.525/0.400        | M107       | PL8206                               | 0.22        | 3.30                    | 60           | 0.770/0.670/0.390        | M108       |
| PL8113                               | 114                          | 0.94                    | 380          | 167              | 0.625/0.525/0.400        | M107       | PL8207                               | 1.32        | 3.30                    | 60           | 0.770/0.670/0.390        | M108       |
| <b>SLED 40</b>                       |                              |                         |              |                  |                          |            | PL8208                               | 1.47        | 2.80                    | 80           | 0.770/0.670/0.390        | M108       |
| PL8120                               | 2.50                         | 8.00                    | 8.30         | 3.80             | 0.725/0.575/0.410        | M107       | PL8209                               | 0.88        | 1.63                    | 110          | 0.500/0.500/0.215        | M108       |
| PL8121                               | 5.10                         | 5.40                    | 17.70        | 7.50             | 0.725/0.575/0.410        | M107       | PL8210                               | 1.17        | 1.22                    | 200          | 0.500/0.500/0.215        | M108       |
| PL8122                               | 16.2                         | 2.70                    | 72           | 21.90            | 0.725/0.575/0.410        | M107       | PL8211                               | 10.15       | 1.40                    | 210          | 0.770/0.670/0.395        | M108       |
| PL8123                               | 58.1                         | 1.30                    | 290          | 73               | 0.725/0.575/0.410        | M107       | PL8212                               | 1.125       | 1.80                    | 55           | 0.500/0.519/0.200        | M108       |
| PL8124                               | 192                          | 0.90                    | 560          | 292              | 0.725/0.575/0.410        | M107       | PL8213                               | 0.80        | 3.00                    | 27           | 0.511/0.511/0.338        | M108       |
| PL8125                               | 383                          | 0.72                    | 862          | 672              | 0.725/0.575/0.410        | M107       | PL8214                               | 0.383       | 3.30                    | 18           | 0.511/0.511/0.220        | M108       |
| PL8130                               | 4.90                         | 7.80                    | 12.40        | 7.90             | 0.725/0.575/0.410        | M107       | PL8215                               | 0.536       | 3.80                    | 17.1         | 0.645/0.560/0.350        | M108       |
| PL8131                               | 9.00                         | 5.50                    | 28           | 14               | 0.725/0.575/0.410        | M107       | PL8216                               | 0.280       | 4.00                    | 13.2         | 0.511/0.511/0.220        | M108       |
| PL8132                               | 29.1                         | 2.70                    | 100          | 40.50            | 0.725/0.575/0.410        | M107       | PL8217                               | 0.486       | 4.20                    | 16           | 0.716/0.590/0.299        | M108       |
| PL8133                               | 645                          | 0.74                    | 1250         | 1134             | 0.725/0.575/0.410        | M107       | PL8218                               | 0.130       | 5.0                     | 6.75         | 0.519/0.519/0.200        | M108       |
| PL8150                               | 0.81                         | 14.30                   | 2.50         | 1.25             | 0.725/0.575/0.410        | M107       | PL8219                               | 0.096       | 6.0                     | 4.30         | 0.519/0.519/0.200        | M108       |
| PL8151                               | 1.32                         | 11.50                   | 4.00         | 2.10             | 0.725/0.575/0.410        | M107       | PL8220                               | 0.400       | 6.0                     | 9.40         | 0.716/0.590/0.393        | M108       |
| <b>SLED 50</b>                       |                              |                         |              |                  |                          |            | PL8221                               | 0.061       | 7.0                     | 2.90         | 0.531/0.531/0.220        | M108       |
| PL8140                               | 9.30                         | 7.20                    | 18.7         | 16               | 0.900/0.690/0.520        | M107       | PL8222                               | 4.84        | 8.0                     | 7.70         | 0.770/0.670/0.395        | M108       |
| PL8141                               | 16.10                        | 5.10                    | 32           | 25.9             | 0.900/0.690/0.520        | M107       | PL8223                               | 1.22        | 9.0                     | 9.75         | 1.22/1.00/0.500          | M108       |
| PL8142                               | 50                           | 2.60                    | 133          | 72.9             | 0.900/0.690/0.520        | M107       | PL8224                               | 0.215       | 10                      | 3.75         | 0.830/0.751/0.441        | M108       |
| PL8143                               | 1070                         | 0.71                    | 1700         | 1950             | 0.900/0.690/0.520        | M107       | PL8225                               | 0.095       | 12.5                    | 3.0          | 0.770/0.670/0.395        | M108       |
| PL8160                               | 1.68                         | 13.9                    | 3.60         | 2.80             | 0.900/0.690/0.520        | M107       | PL8226                               | 0.117       | 14                      | 1.90         | 0.830/0.751/0.441        | M108       |
| PL8161                               | 2.50                         | 11.4                    | 5.40         | 4.20             | 0.900/0.690/0.520        | M107       | PL8227                               | 0.500       | 16                      | 4.25         | 1.22/1.00/0.500          | M108       |
| PL8170                               | 3.50                         | 12.4                    | 6.60         | 6.50             | 0.900/0.690/0.520        | M107       | PL8228                               | 0.380       | 20                      | 4.10         | 1.22/1.00/0.500          | M108       |
| PL8171                               | 4.70                         | 10.4                    | 8.30         | 8.40             | 0.900/0.690/0.520        | M107       |                                      |             |                         |              |                          |            |
| <b>SLED 60</b>                       |                              |                         |              |                  |                          |            |                                      |             |                         |              |                          |            |
| PL8180                               | 5.20                         | 15.4                    | 5.27         | 10.5             | 1.275/1.065/0.510        | M107       |                                      |             |                         |              |                          |            |
| PL8181                               | 9.40                         | 10.9                    | 10.50        | 17.6             | 1.275/1.065/0.510        | M107       |                                      |             |                         |              |                          |            |

- iNRCORE's standard lead finish is tin/lead (Sn63/Pb37). Parts can be ordered Non-Lead by added "NL" to the part number (i.e. PL8222NL).
- To order in Tape & Reel packaging, add the Suffix "T" to the part number (i.e. PL8225T).



## POWER INDUCTORS & CHOKES

| SMT Power Inductors - SLIC (HCCI-80) Series |                              |                         |              |                  |                          |            |
|---|------------------------------|-------------------------|--------------|------------------|--------------------------|------------|
| Part Number <sup>1</sup>                    | @I <sub>RATED</sub> TYP (μH) | @I <sub>RATED</sub> (A) | DCR MAX (mW) | L @0Adc TYP (μH) | Package Size L/W/H (in.) | Data Sheet |
| <b>SLIC (HCCI)</b>                          |                              |                         |              |                  |                          |            |
| PL8300 <sup>P</sup>                         | 4.52                         | 19                      | 4.80         | 9.50             | 1.22/1.00/0.50           | M109       |
| PL8300 <sup>S</sup>                         | 18.1                         | 9.50                    | 19.3         | 38               | 1.22/1.00/0.50           | M109       |
| PL8301 <sup>P</sup>                         | 3.20                         | 24                      | 3.50         | 7.20             | 1.22/1.00/0.50           | M109       |
| PL8301 <sup>S</sup>                         | 12.8                         | 12                      | 13.8         | 7.20             | 1.22/1.00/0.50           | M109       |
| PL8302 <sup>P</sup>                         | 2.45                         | 27                      | 2.50         | 5.10             | 1.22/1.00/0.50           | M109       |
| PL8302 <sup>S</sup>                         | 9.80                         | 13.5                    | 10.1         | 20.4             | 1.22/1.00/0.50           | M109       |
| PL8303 <sup>P</sup>                         | 1.60                         | 34                      | 1.60         | 3.50             | 1.22/1.00/0.50           | M109       |
| PL8303 <sup>S</sup>                         | 6.40                         | 17                      | 6.40         | 13.8             | 1.22/1.00/0.50           | M109       |
| PL8304 <sup>P</sup>                         | 1.10                         | 38                      | 1.30         | 2.10             | 1.22/1.00/0.50           | M109       |
| PL8304 <sup>S</sup>                         | 18.1                         | 9.50                    | 19.3         | 38               | 1.22/1.00/0.50           | M109       |

| SMT Power Inductors - Toroid, SLED Series |                              |                         |              |                  |                          |            |
|---|------------------------------|-------------------------|--------------|------------------|--------------------------|------------|
| Part Number                               | @I <sub>RATED</sub> TYP (μH) | @I <sub>RATED</sub> (A) | DCR MAX (mW) | L @0Adc TYP (μH) | Package Size L/W/H (in.) | Data Sheet |
| <b>SLED 25</b>                            |                              |                         |              |                  |                          |            |
| PL8500                                    | 9.40                         | 3.80                    | 32           | 10.4             | 0.625/0.525/0.310        | M113       |
| PL8501                                    | 13.3                         | 3.20                    | 46           | 14.6             | 0.625/0.525/0.310        | M113       |
| PL8502                                    | 23                           | 2.40                    | 74           | 25               | 0.625/0.525/0.310        | M113       |
| PL8503                                    | 50                           | 1.60                    | 132          | 56               | 0.625/0.525/0.310        | M113       |
| PL8504                                    | 75                           | 1.30                    | 220          | 83               | 0.625/0.525/0.310        | M113       |
| PL8505                                    | 90                           | 1.20                    | 285          | 100              | 0.625/0.525/0.310        | M113       |
| PL8506                                    | 137                          | 1.00                    | 425          | 152              | 0.625/0.525/0.310        | M113       |
| PL8507                                    | 200                          | 0.82                    | 673          | 220              | 0.625/0.525/0.310        | M113       |
| PL8508                                    | 305                          | 0.66                    | 972          | 331              | 0.625/0.525/0.310        | M113       |
| PL8509                                    | 439                          | 0.56                    | 1520         | 472              | 0.625/0.525/0.310        | M113       |

| SMT Power Inductors - POGO Series |                              |                         |              |                  |                          |            |
|-----------------------------------|------------------------------|-------------------------|--------------|------------------|--------------------------|------------|
| Part Number <sup>1</sup>          | @I <sub>RATED</sub> TYP (μH) | @I <sub>RATED</sub> (A) | DCR MAX (mW) | L @0Adc TYP (μH) | Package Size L/W/H (in.) | Data Sheet |
| <b>POGO 40</b>                    |                              |                         |              |                  |                          |            |
| PL8400 <sup>S</sup>               | 43.6                         | 1.10                    | 309          | 247.2            | 0.725/0.575/0.310        | M111       |
| <b>POGO 50</b>                    |                              |                         |              |                  |                          |            |
| PL8401 <sup>S</sup>               | 21.9                         | 2.70                    | 90.5         | 72.4             | 0.910/0.700/0.400        | M111       |
| PL8402 <sup>S</sup>               | 4.025                        | 6.40                    | 23           | 18.4             | 0.910/0.700/0.400        | M111       |
| PL8403 <sup>P</sup>               | 0.53                         | 23.8                    | 3.00         | 1.00             | 0.910/0.700/0.400        | M111       |
| PL8304 <sup>P</sup>               | 1.10                         | 21                      | 2.50         | 1.70             | 0.910/0.700/0.400        | M111       |
| <b>POGO 50</b>                    |                              |                         |              |                  |                          |            |
| PL8305 <sup>P</sup>               | 2.10                         | 22.4                    | 3.40         | 2.50             | 1.280/1.070/0.400        | M111       |

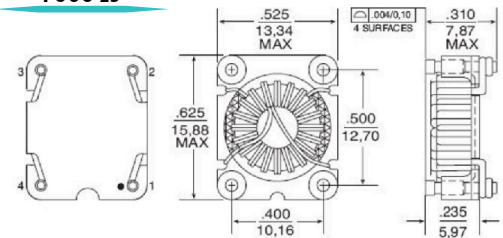
| SMT Power Inductors - POGO Series (continued) |                              |                         |              |                  |                          |            |
|---|------------------------------|-------------------------|--------------|------------------|--------------------------|------------|
| Part Number                                   | @I <sub>RATED</sub> TYP (μH) | @I <sub>RATED</sub> (A) | DCR MAX (mW) | L @0Adc TYP (μH) | Package Size L/W/H (in.) | Data Sheet |
| <b>POGO 25</b>                                |                              |                         |              |                  |                          |            |
| PL8600 <sup>P</sup>                           | 2.00                         | 8.30                    | 8.0          | 2.20             | 0.625/0.525/0.310        | M114       |
| PL8600 <sup>S</sup>                           | 7.00                         | 4.16                    | 16           | 8.75             | 0.625/0.525/0.310        | M114       |
| PL8601 <sup>P</sup>                           | 2.40                         | 7.20                    | 10.9         | 2.60             | 0.625/0.525/0.310        | M114       |
| PL8601 <sup>S</sup>                           | 8.40                         | 3.78                    | 21.8         | 10.4             | 0.625/0.525/0.310        | M114       |
| PL8602 <sup>P</sup>                           | 5.00                         | 5.20                    | 19           | 5.50             | 0.625/0.525/0.310        | M114       |
| PL8602 <sup>S</sup>                           | 17.9                         | 2.60                    | 38           | 22.45            | 0.625/0.525/0.310        | M114       |
| PL8603 <sup>P</sup>                           | 9.30                         | 3.80                    | 30           | 10.4             | 0.625/0.525/0.310        | M114       |
| PL8603 <sup>S</sup>                           | 33.8                         | 1.89                    | 60           | 41.7             | 0.625/0.525/0.310        | M114       |
| PL8604 <sup>P</sup>                           | 14.1                         | 3.10                    | 45.5         | 15.7             | 0.625/0.525/0.310        | M114       |
| PL8604 <sup>S</sup>                           | 50.9                         | 1.54                    | 91           | 62.8             | 0.625/0.525/0.310        | M114       |
| PL8605 <sup>P</sup>                           | 19.8                         | 2.60                    | 66.5         | 22.1             | 0.625/0.525/0.310        | M114       |
| PL8605 <sup>S</sup>                           | 29.3                         | 2.20                    | 101          | 32.8             | 0.625/0.525/0.310        | M114       |
| PL8606 <sup>P</sup>                           | 29.3                         | 2.20                    | 101          | 32.8             | 0.625/0.525/0.310        | M114       |
| PL8606 <sup>S</sup>                           | 106.1                        | 1.07                    | 202          | 131              | 0.625/0.525/0.310        | M114       |
| PL8607 <sup>P</sup>                           | 42.6                         | 1.80                    | 151          | 47.6             | 0.625/0.525/0.310        | M114       |

<sup>1</sup> Connection: P = Parallel, S = Series

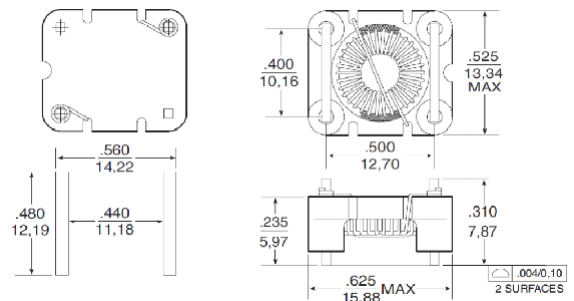
- iNRCORE's standard lead finish is tin/lead (Sn63/Pb37). Parts can be ordered Non-Lead by adding "NL" to the part number (i.e. PL8400NL).
- To order in Tape & Reel packaging, add the suffix "T" to the part number (i.e. PL8400T).
- The rated current as listed is either the saturation current or the heating current.



**POGO 25**



**SLED 25**





## POWER INDUCTORS & CHOKES

### SMT Power Inductors - POGO Series (continued)

| Part Number <sup>1</sup> | @I <sub>RATED</sub> TYP (μH) | @I <sub>RATED</sub> (A) | DCR MAX (mW) | L @0Adc TYP (μH) | Package Size L/W/H (in.) | Data Sheet |
|--------------------------|------------------------------|-------------------------|--------------|------------------|--------------------------|------------|
| <b>POGO 25</b>           |                              |                         |              |                  |                          |            |
| PL8607 <sup>S</sup>      | 154.2                        | 0.89                    | 302          | 190.3            | 0.625/0.525/0.310        | M114       |
| PL8608 <sup>P</sup>      | 61.3                         | 1.50                    | 222          | 67.5             | 0.625/0.525/0.310        | M114       |
| PL8608 <sup>S</sup>      | 218.9                        | 0.74                    | 444          | 270.2            | 0.625/0.525/0.310        | M114       |
| PL8309 <sup>P</sup>      | 84.2                         | 1.30                    | 318          | 91               | 0.625/0.525/0.310        | M114       |
| PL8609 <sup>S</sup>      | 295                          | 0.64                    | 636          | 364              | 0.625/0.525/0.310        | M114       |
| <b>POGO 40</b>           |                              |                         |              |                  |                          |            |
| PL8700 <sup>P</sup>      | 1.50                         | 14.4                    | 4.41         | 2.20             | 0.725/0.575/0.380        | M115       |
| PL8701 <sup>P</sup>      | 2.40                         | 9.40                    | 6.54         | 3.50             | 0.725/0.575/0.380        | M115       |
| PL8701 <sup>S</sup>      | 9.70                         | 5.60                    | 26.2         | 14               | 0.725/0.575/0.380        | M115       |
| PL8702 <sup>P</sup>      | 4.20                         | 8.10                    | 10.47        | 5.90             | 0.725/0.575/0.380        | M115       |
| PL8702 <sup>S</sup>      | 17                           | 4.10                    | 41.9         | 23.7             | 0.725/0.575/0.380        | M115       |
| PL8703 <sup>P</sup>      | 5.80                         | 6.80                    | 14.94        | 7.90             | 0.725/0.575/0.380        | M115       |
| PL8703 <sup>S</sup>      | 23.1                         | 3.40                    | 59.7         | 31.5             | 0.725/0.575/0.380        | M115       |
| PL8704 <sup>P</sup>      | 7.60                         | 5.70                    | 20.99        | 10.1             | 0.725/0.575/0.380        | M115       |
| PL8704 <sup>S</sup>      | 30.6                         | 2.85                    | 84           | 40.5             | 0.725/0.575/0.380        | M115       |
| PL8705 <sup>P</sup>      | 12.1                         | 5.20                    | 23.24        | 18.5             | 0.725/0.575/0.380        | M115       |
| PL8705 <sup>S</sup>      | 48.5                         | 2.70                    | 93           | 74.1             | 0.725/0.575/0.380        | M115       |
| PL8706 <sup>P</sup>      | 18                           | 4.20                    | 38.15        | 27.4             | 0.725/0.575/0.380        | M115       |
| PL8706 <sup>S</sup>      | 72                           | 2.20                    | 152.6        | 109.8            | 0.725/0.575/0.380        | M115       |
| PL8707 <sup>P</sup>      | 27                           | 3.30                    | 53.21        | 40.5             | 0.725/0.575/0.380        | M115       |
| PL8707 <sup>S</sup>      | 108                          | 1.77                    | 212.8        | 161.8            | 0.725/0.575/0.380        | M115       |
| PL8708 <sup>P</sup>      | 34.8                         | 2.30                    | 73.89        | 50.5             | 0.725/0.575/0.380        | M115       |
| PL8708 <sup>S</sup>      | 139.1                        | 150                     | 295.60       | 202.2            | 0.725/0.575/0.380        | M115       |

### SMT Power Inductors - Shielded Drum Core

| Part Number | @I <sub>RATED</sub> TYP (μH) | @I <sub>RATED</sub> (A) | DCR MAX (mW) | L @0Adc TYP (μH) <sup>2</sup> | Saturation Current @25°C | Package Size L/W/H (in.) | Data Sheet |
|-------------|------------------------------|-------------------------|--------------|-------------------------------|--------------------------|--------------------------|------------|
| PL8901      | 0.80                         | 11                      | 4.0          | 1.0 <sup>2</sup>              | 14                       | 0.413/0.413/0.280        | M117       |
| PL8902      | 1.20                         | 10                      | 6.0          | 1.5 <sup>2</sup>              | 13                       | 0.413/0.413/0.280        | M117       |
| PL8903      | 2.10                         | 9.0                     | 7.3          | 2.7 <sup>2</sup>              | 11                       | 0.413/0.413/0.280        | M117       |
| PL8904      | 2.90                         | 8.0                     | 8.5          | 3.7 <sup>2</sup>              | 9.2                      | 0.413/0.413/0.280        | M117       |
| PL8905      | 3.70                         | 7.3                     | 9.5          | 4.7 <sup>2</sup>              | 8.2                      | 0.413/0.413/0.280        | M117       |
| PL8906      | 4.80                         | 6.0                     | 16.5         | 6.0 <sup>2</sup>              | 6.9                      | 0.413/0.413/0.280        | M117       |
| PL8907      | 6.00                         | 5.5                     | 18.5         | 7.6 <sup>2</sup>              | 6.2                      | 0.413/0.413/0.280        | M117       |
| PL8908      | 8.00                         | 5.0                     | 21.8         | 10                            | 5.5                      | 0.413/0.413/0.280        | M117       |
| PL8909      | 9.60                         | 4.5                     | 29           | 12                            | 5.1                      | 0.413/0.413/0.280        | M117       |
| PL8910      | 12                           | 4.1                     | 35.4         | 15                            | 4.4                      | 0.413/0.413/0.280        | M117       |
| PL8911      | 14.4                         | 4.0                     | 37           | 18                            | 4.3                      | 0.413/0.413/0.280        | M117       |
| PL8912      | 17.6                         | 3.8                     | 42           | 22                            | 3.8                      | 0.413/0.413/0.280        | M117       |
| PL8913      | 21.6                         | 3.4                     | 45.9         | 27                            | 3.4                      | 0.413/0.413/0.280        | M117       |
| PL8914      | 26.4                         | 3.0                     | 64.8         | 33                            | 3.0                      | 0.413/0.413/0.280        | M117       |
| PL8915      | 31.2                         | 2.7                     | 81.5         | 39                            | 2.8                      | 0.413/0.413/0.280        | M117       |
| PL8916      | 37.6                         | 2.6                     | 89           | 47                            | 2.6                      | 0.413/0.413/0.280        | M117       |
| PL8917      | 54.4                         | 2.1                     | 135          | 68                            | 2.1                      | 0.413/0.413/0.280        | M117       |
| PL9101      | 0.96                         | 10.5                    | 4.5          | 1.0 <sup>2</sup>              | 12.7                     | 0.413/0.413/0.248        | M121       |
| PL9102      | 1.52                         | 9.5                     | 5.5          | 1.8 <sup>2</sup>              | 10.1                     | 0.413/0.413/0.248        | M121       |
| PL9103      | 2.34                         | 7.8                     | 7.8          | 2.7 <sup>2</sup>              | 8.4                      | 0.413/0.413/0.248        | M121       |
| PL9104      | 3.27                         | 6.7                     | 11           | 3.9 <sup>2</sup>              | 7.2                      | 0.413/0.413/0.248        | M121       |
| PL9105      | 4.39                         | 5.6                     | 15.6         | 5.1 <sup>2</sup>              | 6.3                      | 0.413/0.413/0.248        | M121       |
| PL9106      | 5.54                         | 5.2                     | 18           | 6.8 <sup>2</sup>              | 5.6                      | 0.413/0.413/0.248        | M121       |
| PL9107      | 6.73                         | 5.0                     | 20           | 8.2 <sup>2</sup>              | 5.1                      | 0.413/0.413/0.248        | M121       |
| PL9108      | 8.19                         | 4.6                     | 22           | 10                            | 4.6                      | 0.413/0.413/0.248        | M121       |
| PL9109      | 9.90                         | 4.2                     | 27           | 12                            | 4.2                      | 0.413/0.413/0.248        | M121       |
| PL9110      | 13.4                         | 3.6                     | 30           | 15                            | 3.6                      | 0.413/0.413/0.248        | M121       |
| PL9111      | 15.4                         | 3.4                     | 40           | 18                            | 3.4                      | 0.413/0.413/0.248        | M121       |
| PL9112      | 17.6                         | 3.2                     | 45           | 22                            | 3.2                      | 0.413/0.413/0.248        | M121       |
| PL9113      | 22.5                         | 2.8                     | 62           | 27                            | 2.8                      | 0.413/0.413/0.248        | M121       |
| PL9114      | 28.5                         | 2.5                     | 70           | 33                            | 2.5                      | 0.413/0.413/0.248        | M121       |
| PL9115      | 31.4                         | 2.4                     | 75           | 39                            | 2.4                      | 0.413/0.413/0.248        | M121       |
| PL9116      | 38.4                         | 2.2                     | 100          | 47                            | 2.2                      | 0.413/0.413/0.248        | M121       |
| PL9117      | 48.3                         | 1.9                     | 110          | 56                            | 1.9                      | 0.413/0.413/0.248        | M121       |
| PL9118      | 55.9                         | 1.8                     | 120          | 68                            | 1.8                      | 0.413/0.413/0.248        | M121       |
| PL9119      | 67.6                         | 1.7                     | 178          | 82                            | 1.7                      | 0.413/0.413/0.248        | M121       |
| PL9120      | 86.1                         | 1.4                     | 230          | 100                           | 1.4                      | 0.413/0.413/0.248        | M121       |
| PL9121      | 103                          | 1.3                     | 253          | 120                           | 1.3                      | 0.413/0.413/0.248        | M121       |
| PL9122      | 121                          | 1.2                     | 280          | 150                           | 1.2                      | 0.413/0.413/0.248        | M121       |
| PL9123      | 149                          | 1.1                     | 310          | 180                           | 1.1                      | 0.413/0.413/0.248        | M121       |
| PL9124      | 186                          | 1.0                     | 400          | 220                           | 1.0                      | 0.413/0.413/0.248        | M121       |
| PL9125      | 224                          | 0.91                    | 460          | 270                           | 0.91                     | 0.413/0.413/0.248        | M121       |
| PL9126      | 279                          | 0.82                    | 690          | 330                           | 0.82                     | 0.413/0.413/0.248        | M121       |
| PL9127      | 335                          | 0.72                    | 760          | 390                           | 0.72                     | 0.413/0.413/0.248        | M121       |
| PL9128      | 398                          | 0.68                    | 850          | 470                           | 0.68                     | 0.413/0.413/0.248        | M121       |
| PL9129      | 464                          | 0.63                    | 1060         | 560                           | 0.63                     | 0.413/0.413/0.248        | M121       |
| PL9130      | 563                          | 0.57                    | 1200         | 680                           | 0.57                     | 0.413/0.413/0.248        | M121       |
| PL9131      | 681                          | 0.52                    | 1550         | 820                           | 0.52                     | 0.413/0.413/0.248        | M121       |

### SMT Common Mode Inductors - Toroid, POGO Series

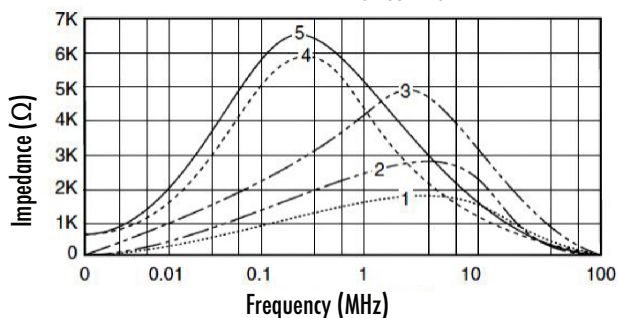
| Part Number <sup>1</sup> | @I <sub>RATED</sub> TYP (μH) | @I <sub>RATED</sub> (A) | DCR MAX (mW) | L @0Adc TYP (μH) | Package Size L/W/H (in.) | Data Sheet |
|--------------------------|------------------------------|-------------------------|--------------|------------------|--------------------------|------------|
| <b>POGO 40</b>           |                              |                         |              |                  |                          |            |
| PL8801                   | 1.50                         | 1.50                    | 60           | 2.00             | 0.725/0.575/0.380        | M116       |
| PL8803                   | 10                           | 1.00                    | 450          | 0.50             | 0.725/0.575/0.380        | M116       |
| PL8804                   | 22                           | 0.50                    | 850          | 0.30             | 0.725/0.575/0.380        | M116       |
| <b>POGO 50</b>           |                              |                         |              |                  |                          |            |
| PL8800                   | 1.0                          | 3.60                    | 50           | 4.00             | 0.910/0.700/0.510        | M116       |
| PL8802                   | 3.0                          | 2.50                    | 80           | 2.20             | 0.910/0.700/0.510        | M116       |

<sup>1</sup> Connection: P = Parallel, S = Series

<sup>2</sup> Inductance at OADC tolerance is ±30%. The tolerance is ±20% on all other parts.

- iNRCORE's standard lead finish is tin/lead (Sn63/Pb37). Parts can be ordered Non-Lead by adding "NL" to the part number (i.e. PL8400NL).
- To order in Tape & Reel packaging, add the suffix "T" to the part number (i.e. PL8400T).

\* IMPEDANCE CURVES



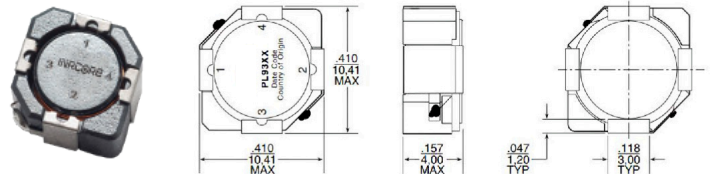
## POWER INDUCTORS

### SMT Power Inductors - Shielded Drum Core (continued)

| Part Number | @ $I_{RATED}$ TYP ( $\mu$ H) | $I_{RATED}$ (A) | DCR MAX (mW) | L @0Adc TYP ( $\mu$ H) | Saturation Current @25°C | Package Size L/W/H (in.) | Data Sheet | Part Number | @ $I_{RATED}$ TYP ( $\mu$ H) | $I_{RATED}$ (A) | DCR MAX (mW) | L @0Adc TYP ( $\mu$ H) | Saturation Current @25°C | Package Size L/W/H (in.) | Data Sheet |
|-------------|------------------------------|-----------------|--------------|------------------------|--------------------------|--------------------------|------------|-------------|------------------------------|-----------------|--------------|------------------------|--------------------------|--------------------------|------------|
| PL9201      | 0.95                         | 8.70            | 5.70         | 1.0                    | 11                       | 0.413/0.413/0.201        | M122       | PL9401      | 0.67                         | 7.00            | 4.40         | 0.68                   | 7.0                      | 0.410/0.410/0.132        | M123       |
| PL9202      | 1.55                         | 7.40            | 7.90         | 1.6                    | 8.8                      | 0.413/0.413/0.201        | M122       | PL9402      | 1.30                         | 6.10            | 6.40         | 1.50                   | 6.10                     | 0.410/0.410/0.132        | M123       |
| PL9203      | 2.32                         | 6.60            | 10           | 2.7                    | 7.3                      | 0.413/0.413/0.201        | M122       | PL9403      | 2.10                         | 5.70            | 10.4         | 2.20                   | 5.70                     | 0.410/0.410/0.132        | M123       |
| PL9204      | 3.24                         | 5.50            | 4.50         | 3.6                    | 6.3                      | 0.413/0.413/0.201        | M122       | PL9404      | 3.10                         | 4.80            | 15.6         | 3.30                   | 4.80                     | 0.410/0.410/0.132        | M123       |
| PL9205      | 4.26                         | 5.10            | 16.5         | 4.5                    | 5.5                      | 0.413/0.413/0.201        | M122       | PL9405      | 4.50                         | 4.10            | 21.2         | 4.70                   | 4.10                     | 0.410/0.410/0.132        | M123       |
| PL9206      | 5.64                         | 4.40            | 22           | 6.0                    | 4.9                      | 0.413/0.413/0.201        | M122       | PL9406      | 5.80                         | 3.60            | 25.2         | 6.20                   | 3.60                     | 0.410/0.410/0.132        | M123       |
| PL9207      | 7.17                         | 4.20            | 25           | 7.6                    | 4.4                      | 0.413/0.413/0.201        | M122       | PL9407      | 7.00                         | 3.30            | 27.8         | 6.80                   | 3.30                     | 0.410/0.410/0.132        | M123       |
| PL9208      | 9.30                         | 3.60            | 35           | 10                     | 4.0                      | 0.413/0.413/0.201        | M122       | PL9408      | 9.40                         | 3.00            | 39.5         | 8.20                   | 3.00                     | 0.410/0.410/0.132        | M123       |
| PL9209      | 10.8                         | 3.30            | 37           | 12                     | 3.7                      | 0.413/0.413/0.201        | M122       | PL9409      | 11                           | 2.70            | 42.9         | 10                     | 2.70                     | 0.410/0.410/0.132        | M123       |
| PL9210      | 13.4                         | 3.00            | 47           | 15                     | 3.4                      | 0.413/0.413/0.201        | M122       | PL9410      | 12                           | 2.40            | 50.0         | 12                     | 2.40                     | 0.410/0.410/0.132        | M123       |
| PL9211      | 17.5                         | 2.70            | 58           | 18                     | 2.9                      | 0.413/0.413/0.201        | M122       | PL9411      | 15                           | 2.25            | 65.2         | 15                     | 2.25                     | 0.410/0.410/0.132        | M123       |
| PL9212      | 19.4                         | 2.60            | 67           | 22                     | 2.8                      | 0.413/0.413/0.201        | M122       | PL9412      | 24                           | 1.85            | 86.1         | 22                     | 1.85                     | 0.410/0.410/0.132        | M123       |
| PL9213      | 24.2                         | 2.20            | 79           | 27                     | 2.4                      | 0.413/0.413/0.201        | M122       | PL9413      | 35                           | 1.40            | 126          | 33                     | 1.40                     | 0.410/0.410/0.132        | M123       |
| PL9214      | 30.6                         | 2.10            | 94           | 33                     | 2.2                      | 0.413/0.413/0.201        | M122       | PL9414      | 48                           | 1.25            | 188          | 47                     | 1.25                     | 0.410/0.410/0.132        | M123       |
| PL9215      | 38.5                         | 1.80            | 126          | 39                     | 2.0                      | 0.413/0.413/0.201        | M122       | PL9415      | 55                           | 1.15            | 208          | 56                     | 1.15                     | 0.410/0.410/0.132        | M123       |
| PL9216      | 46.1                         | 1.70            | 140          | 47                     | 1.8                      | 0.413/0.413/0.201        | M122       | PL9416      | 64                           | 1.05            | 279          | 68                     | 1.05                     | 0.410/0.410/0.132        | M123       |
| PL9217      | 53.2                         | 1.60            | 157          | 56                     | 1.7                      | 0.413/0.413/0.201        | M122       | PL9417      | 88                           | 0.94            | 317          | 82                     | 0.94                     | 0.410/0.410/0.132        | M123       |
| PL9218      | 63.1                         | 1.45            | 202          | 68                     | 1.6                      | 0.413/0.413/0.201        | M122       | PL9418      | 106                          | 0.88            | 358          | 100                    | 0.88                     | 0.410/0.410/0.132        | M123       |
| PL9219      | 76.6                         | 1.36            | 232          | 82                     | 1.4                      | 0.413/0.413/0.201        | M122       | PL9419      | 129                          | 0.80            | 478          | 120                    | 0.80                     | 0.410/0.410/0.132        | M123       |
| PL9220      | 88                           | 1.29            | 270          | 100                    | 1.3                      | 0.413/0.413/0.201        | M122       | PL9420      | 157                          | 0.70            | 545          | 150                    | 0.70                     | 0.410/0.410/0.132        | M123       |
| PL9221      | 112                          | 1.07            | 316          | 120                    | 1.2                      | 0.413/0.413/0.201        | M122       | PL9421      | 238                          | 0.58            | 837          | 220                    | 0.58                     | 0.410/0.410/0.132        | M123       |
| PL9222      | 135                          | 1.02            | 456          | 150                    | 1.05                     | 0.413/0.413/0.201        | M122       | PL9422      | 325                          | 0.45            | 1199         | 330                    | 0.45                     | 0.410/0.410/0.132        | M123       |
| PL9223      | 132                          | 0.87            | 497          | 180                    | 0.96                     | 0.413/0.413/0.201        | M122       | PL9501      | 2.15                         | 2.60            | 17.6         | 2.50                   | 2.60                     | 0.256/0.256/0.122        | M124       |
| PL9224      | 198                          | 0.82            | 681          | 220                    | 0.86                     | 0.413/0.413/0.201        | M122       | PL9502      | 2.58                         | 2.30            | 20.3         | 3.30                   | 2.30                     | 0.256/0.256/0.122        | M124       |
| PL9225      | 237                          | 0.78            | 775          | 270                    | 0.79                     | 0.413/0.413/0.201        | M122       | PL9503      | 3.43                         | 2.10            | 27           | 4                      | 2.10                     | 0.256/0.256/0.122        | M124       |
| PL9226      | 296                          | 0.66            | 955          | 330                    | 0.71                     | 0.413/0.413/0.201        | M122       | PL9504      | 4.63                         | 1.85            | 31.1         | 5                      | 1.85                     | 0.256/0.256/0.122        | M124       |
| PL9227      | 355                          | 0.58            | 1087         | 390                    | 0.66                     | 0.413/0.413/0.201        | M122       | PL9505      | 5.22                         | 1.70            | 41.9         | 6                      | 1.70                     | 0.256/0.256/0.122        | M124       |
| PL9228      | 445                          | 0.54            | 1403         | 470                    | 0.59                     | 0.413/0.413/0.201        | M122       | PL9506      | 6.57                         | 1.50            | 49.9         | 8                      | 1.50                     | 0.256/0.256/0.122        | M124       |
| PL9229      | 495                          | 0.53            | 1623         | 560                    | 0.54                     | 0.413/0.413/0.201        | M122       | PL9507      | 8.65                         | 1.30            | 54           | 10                     | 1.30                     | 0.256/0.256/0.122        | M124       |
| PL9230      | 610                          | 0.49            | 1824         | 680                    | 0.49                     | 0.413/0.413/0.201        | M122       | PL9508      | 9.78                         | 1.20            | 72           | 12                     | 1.20                     | 0.256/0.256/0.122        | M124       |
| PL9231      | 702                          | 0.43            | 2355         | 820                    | 0.45                     | 0.413/0.413/0.201        | M122       | PL9509      | 12.13                        | 1.10            | 82           | 15                     | 1.10                     | 0.256/0.256/0.122        | M124       |
| PL9232      | 890                          | 0.40            | 2850         | 1000                   | 0.41                     | 0.413/0.413/0.201        | M122       | PL9510      | 15.23                        | 1.05            | 102          | 18                     | 1.05                     | 0.256/0.256/0.122        | M124       |
| PL9301      | 0.62                         | 7.60            | 5.50         | 0.68                   | 10                       | 0.410/0.410/0.157        | M120       | PL9511      | 18.70                        | 0.95            | 119          | 22                     | 0.95                     | 0.256/0.256/0.122        | M124       |
| PL9302      | 1.20                         | 7.10            | 7.30         | 1.30                   | 8                        | 0.410/0.410/0.157        | M120       | PL9512      | 21.54                        | 0.85            | 146          | 27                     | 0.85                     | 0.256/0.256/0.122        | M124       |
| PL9303      | 1.90                         | 5.80            | 10.9         | 2.2                    | 6.15                     | 0.410/0.410/0.157        | M120       | PL9513      | 27.71                        | 0.76            | 183          | 33                     | 0.76                     | 0.256/0.256/0.122        | M124       |
| PL9304      | 2.80                         | 5.20            | 13.3         | 3.3                    | 5.80                     | 0.410/0.410/0.157        | M120       | PL9514      | 33.57                        | 0.68            | 210          | 39                     | 0.68                     | 0.256/0.256/0.122        | M124       |
| PL9305      | 4.00                         | 4.70            | 19.6         | 4.7                    | 5.40                     | 0.410/0.410/0.157        | M120       | PL9515      | 40.15                        | 0.60            | 230          | 47                     | 0.60                     | 0.256/0.256/0.122        | M124       |
| PL9306      | 5.40                         | 3.70            | 27           | 6.0                    | 4.50                     | 0.410/0.410/0.157        | M120       | PL9516      | 49.68                        | 0.55            | 305          | 56                     | 0.55                     | 0.256/0.256/0.122        | M124       |
| PL9307      | 6.90                         | 3.50            | 30.8         | 7.6                    | 4                        | 0.410/0.410/0.157        | M120       | PL9517      | 60.66                        | 0.48            | 351          | 68                     | 0.48                     | 0.256/0.256/0.122        | M124       |
| PL9308      | 8.00                         | 3.40            | 33.2         | 10                     | 3.80                     | 0.410/0.410/0.157        | M120       | PL9518      | 74.71                        | 0.45            | 419          | 82                     | 0.45                     | 0.256/0.256/0.122        | M124       |
| PL9309      | 11                           | 3.00            | 45.2         | 12                     | 3.40                     | 0.410/0.410/0.157        | M120       | PL9519      | 85.39                        | 0.40            | 520          | 100                    | 0.40                     | 0.256/0.256/0.122        | M124       |
| PL9310      | 12                           | 2.80            | 49.4         | 15                     | 3.10                     | 0.410/0.410/0.157        | M120       |             |                              |                 |              |                        |                          |                          |            |
| PL9311      | 19                           | 2.30            | 77           | 22                     | 2.80                     | 0.410/0.410/0.157        | M120       |             |                              |                 |              |                        |                          |                          |            |
| PL9312      | 25                           | 2.10            | 89           | 27                     | 2.30                     | 0.410/0.410/0.157        | M120       |             |                              |                 |              |                        |                          |                          |            |
| PL9313      | 38                           | 1.65            | 142          | 47                     | 2.10                     | 0.410/0.410/0.157        | M120       |             |                              |                 |              |                        |                          |                          |            |
| PL9314      | 55                           | 1.32            | 212          | 68                     | 1.50                     | 0.410/0.410/0.157        | M120       |             |                              |                 |              |                        |                          |                          |            |
| PL9315      | 83                           | 1.10            | 328          | 100                    | 1.35                     | 0.410/0.410/0.157        | M120       |             |                              |                 |              |                        |                          |                          |            |
| PL9316      | 123                          | 0.88            | 500          | 150                    | 1.15                     | 0.410/0.410/0.157        | M120       |             |                              |                 |              |                        |                          |                          |            |
| PL9317      | 178                          | 0.73            | 739          | 220                    | 0.92                     | 0.410/0.410/0.157        | M120       |             |                              |                 |              |                        |                          |                          |            |
| PL9318      | 278                          | 0.60            | 1133         | 330                    | 0.70                     | 0.410/0.410/0.157        | M120       |             |                              |                 |              |                        |                          |                          |            |

<sup>1</sup> The rated current as listed is either the saturation current or the heating current depending on which value is lower.

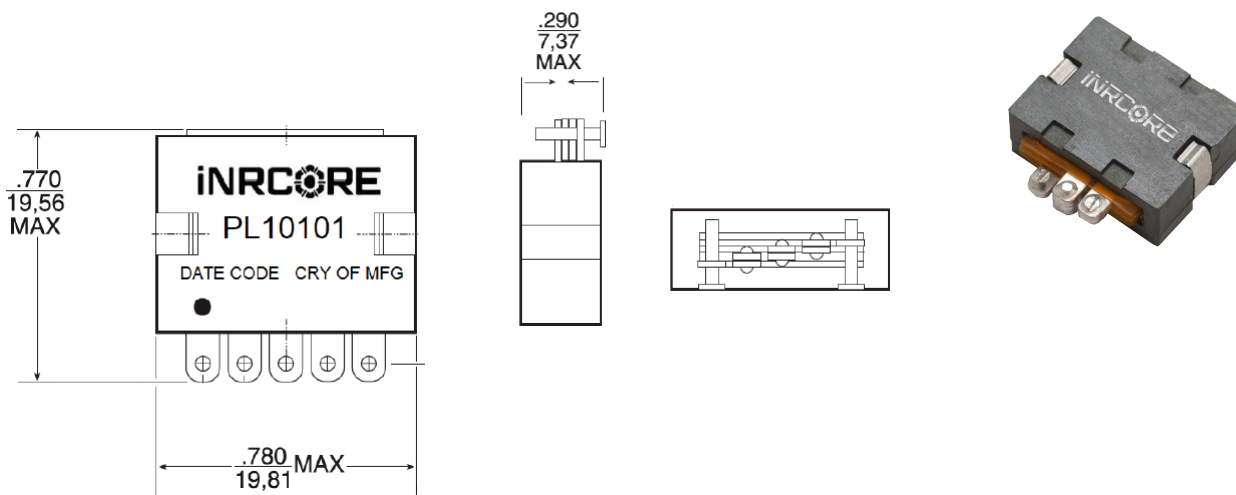
- iNRCORE's standard lead finish is tin/lead (Sn63/Pb37). Parts can be ordered Non-Lead by adding "NL" to the part number (i.e. PL9515NL).
- To order in Tape & Reel packaging, add the suffix "T" to the part number (i.e. PL9515T).





| PLANAR POWER INDUCTORS  |                                      |  |                    |                    |                        |                             |       |                           |               |
|---|--------------------------------------|--|--------------------|--------------------|------------------------|-----------------------------|-------|---------------------------|---------------|
| Electrical Specifications @25°C; Operating Temperature: -40°C to +130°C |                                      |  |                    |                    |                        |                             |       |                           |               |
| Part Number <sup>1</sup>  | L<br>@I <sub>RATED</sub><br>(μH±15%) | I <sub>RATED</sub> <sup>1</sup><br>(ADC) | DCR<br>TYP<br>(mW) | DCR<br>MAX<br>(mW) | L<br>@0Adc<br>(μH±15%) | Saturation Current<br>(ADC) |       | Heating<br>Current<br>(A) | Data<br>Sheet |
|   |                                      |  |                    |                    |                        | 25°C                        | 100°C |                           |               |
| <b>2-Turn Series (Low Loss)</b>   |                                      |  |                    |                    |                        |                             |       |                           |               |
| PL10100   | 0.45                                 | 73                                       | 0.38               | 0.48               | 0.45                   | 95                          | 80    | 73                        | M194          |
| PL10101   | 0.63                                 | 54                                       | 0.38               | 0.48               | 0.65                   | 63                          | 53    | 73                        | M194          |
| PL10102   | 0.85                                 | 39                                       | 0.38               | 0.48               | 0.91                   | 46                          | 37    | 73                        | M194          |
| PL10103   | 1.05                                 | 30                                       | 0.38               | 0.48               | 1.10                   | 35                          | 30    | 73                        | M194          |
| PL10104   | 1.25                                 | 25                                       | 0.38               | 0.48               | 1.30                   | 29                          | 26    | 73                        | M194          |
| PL10105   | 1.45                                 | 21                                       | 0.38               | 0.48               | 1.50                   | 24                          | 22    | 73                        | M194          |
| <b>2-Turn Series</b>  |                                      |  |                    |                    |                        |                             |       |                           |               |
| PL10106   | 0.45                                 | 52                                       | 0.78               | 0.98               | 0.45                   | 95                          | 80    | 52                        | M194          |
| PL10107   | 0.63                                 | 52                                       | 0.78               | 0.98               | 0.65                   | 63                          | 53    | 52                        | M194          |
| PL10108   | 0.85                                 | 39                                       | 0.78               | 0.98               | 0.91                   | 46                          | 37    | 52                        | M194          |
| PL10109   | 1.05                                 | 30                                       | 0.78               | 0.98               | 1.10                   | 35                          | 30    | 52                        | M194          |
| PL10110   | 1.25                                 | 25                                       | 0.78               | 0.98               | 1.30                   | 29                          | 26    | 52                        | M194          |
| PL10111   | 1.45                                 | 21                                       | 0.78               | 0.98               | 1.50                   | 24                          | 22    | 52                        | M194          |
| <b>3-Turn Series</b>  |                                      |  |                    |                    |                        |                             |       |                           |               |
| PL10112   | 0.95                                 | 42                                       | 1.15               | 1.43               | 1.00                   | 68                          | 54    | 42                        | M194          |
| PL10113   | 1.40                                 | 36                                       | 1.15               | 1.43               | 1.50                   | 43                          | 35    | 42                        | M194          |
| PL10114   | 1.90                                 | 25                                       | 1.15               | 1.43               | 2.00                   | 29                          | 25    | 42                        | M194          |
| PL10115   | 2.40                                 | 20                                       | 1.15               | 1.43               | 2.50                   | 23                          | 21    | 42                        | M194          |
| PL10116   | 2.80                                 | 15                                       | 1.15               | 1.43               | 3.00                   | 18                          | 16    | 42                        | M194          |
| PL10117   | 3.40                                 | 12                                       | 1.15               | 1.43               | 3.50                   | 15                          | 13    | 42                        | M194          |
| <b>4-Turn Series</b>  |                                      |  |                    |                    |                        |                             |       |                           |               |
| PL10118   | 1.60                                 | 37                                       | 1.44               | 1.80               | 1.60                   | 55                          | 43    | 37                        | M194          |
| PL10119   | 2.40                                 | 30                                       | 1.44               | 1.80               | 2.42                   | 35                          | 27    | 37                        | M194          |
| PL10120   | 3.30                                 | 17                                       | 1.44               | 1.80               | 3.60                   | 20                          | 18    | 37                        | M194          |
| PL10121   | 4.00                                 | 14                                       | 1.44               | 1.80               | 4.40                   | 16                          | 15    | 37                        | M194          |
| PL10122   | 4.90                                 | 11                                       | 1.44               | 1.80               | 5.34                   | 13                          | 12    | 37                        | M194          |
| PL10123   | 5.80                                 | 9  | 1.44               | 1.80               | 6.20                   | 11                          | 10    | 37                        | M194          |

- INRCORE's standard lead finish is tin/lead (Sn63/Pb37). Parts can be ordered Non-Lead by adding "NL" to the part number (i.e. PL10111NL).
- To order in Tape & Reel packaging, add the suffix "T" to the part number (i.e. PL10210T).





## HIGH FREQUENCY PLANAR TRANSFORMERS

Electrical Specifications @25°C - Power Rating up to 250W

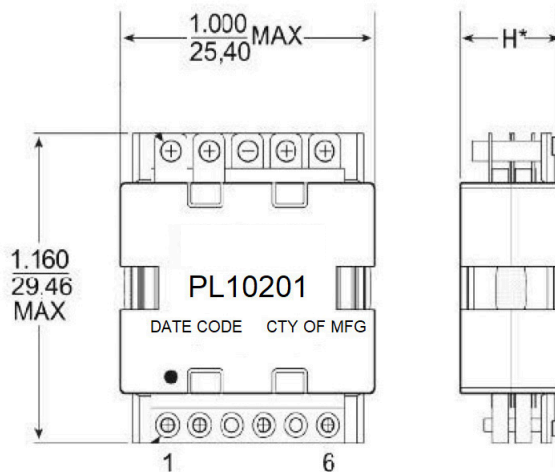
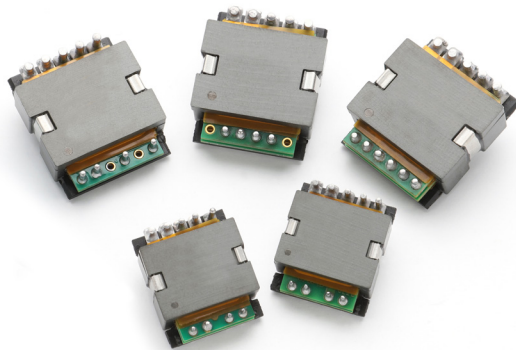
| Part Number | Turns Ratio         |             | Primary Inductance MIN (μH) | Leakage Inductance MIN (μH) | DCR mΩ MAX |           |             | Data Sheet |
|-------------|---------------------|-------------|-----------------------------|-----------------------------|------------|-----------|-------------|------------|
|             | Primary             | Secondary   |                             |                             | Primary A  | Primary B | Secondary   |            |
| PL10201     | 4T & 4T             | 1T:1T:1T:1T | 216                         | 0.30                        | 13         | 13        | 4.5         | M343       |
| PL10203     | 5T & 5T             | 1T:1T:1T:1T | 340                         | 0.30                        | 15         | 15        | 4.5         | M343       |
| PL10205     | 6T & 6T             | 1T:1T:1T:1T | 480                         | 0.30                        | 21         | 21        | 4.5         | M343       |
| PL10207     | 7T & 7T             | 1T:1T:1T:1T | 660                         | 0.30                        | 50         | 50        | 4.5         | M343       |
| PL10208     | 4T & 4T             | 1T & 1T     | 216                         | 0.30                        | 13         | 13        | 4.5         | M343       |
| PL10209     | 8T & 8T             | 1T:1T:1T:1T | 860                         | 0.30                        | 60         | 60        | 4.5         | M343       |
| PL10210     | 5T & 5T (w/ 5T aux) | 1T & 1T     | 340                         | 0.30                        | 15         | 15        | 0.56 & 0.56 | M343       |
| PL10212     | 6T & 6T (w/ 2T aux) | 1T & 1T     | 480                         | 0.30                        | 21         | 21        | 0.56 & 0.56 | M343       |
| PL10214     | 7T & 7T (w/ 3T aux) | 1T & 1T     | 660                         | 0.30                        | 50         | 50        | 0.56 & 0.56 | M343       |
| PL10216     | 8T & 8T             | 1T & 1T     | 860                         | 0.30                        | 60         | 60        | 0.56 & 0.56 | M343       |
| PL10230     | 4T                  | 1T:1T:1T:1T | 54                          | 0.30                        | 13         | -         | 4.5         | M343       |
| PL10231     | 5T (w/ 5T aux)      | 1T:1T:1T:1T | 85                          | 0.30                        | 15         | 470       | 4.5         | M343       |
| PL10232     | 6T (w/ 2T aux)      | 1T:1T:1T:1T | 120                         | 0.30                        | 21         | 156       | 4.5         | M343       |
| PL10233     | 7T (w/ 3T aux)      | 1T:1T:1T:1T | 165                         | 0.30                        | 50         | 200       | 4.5         | M343       |
| PL10234     | 4T                  | 7T & 7T     | 54                          | 0.30                        | 13         | -         | 4.5         | M343       |
| PL10235     | 5T (w/ 5T aux)      | 7T & 7T     | 85                          | 0.30                        | 15         | 470       | 40 & 40     | M343       |
| PL10236     | 6T (w/ 2T aux)      | 7T & 7T     | 120                         | 0.30                        | 21         | 156       | 40 & 40     | M343       |
| PL10237     | 7T (w/ 3T aux)      | 7T & 7T     | 165                         | 0.30                        | 50         | 200       | 40 & 40     | M343       |
| PL10238     | 4T                  | 1T & 1T     | 54                          | 0.30                        | 13         | -         | 40 & 40     | M343       |
| PL10239     | 5T (w/ 5T aux)      | 1T & 1T     | 85                          | 0.30                        | 15         | 470       | 40 & 40     | M343       |
| PL10240     | 6T (w/ 2T aux)      | 1T & 1T     | 120                         | 0.30                        | 21         | 156       | 1.12 & 1.12 | M343       |
| PL10241     | 7T (w/ 3T aux)      | 1T & 1T     | 165                         | 0.30                        | 50         | 200       | 1.12 & 1.12 | M343       |
| PL10242     | 4T                  | 2T & 1T     | 54                          | 0.30                        | 13         | -         | 1.12 & 1.12 | M343       |
| PL10243     | 5T (w/ 5T aux)      | 2T & 1T     | 85                          | 0.30                        | 15         | 470       | 1.12 & 1.12 | M343       |
| PL10244     | 6T (w/ 2T aux)      | 2T & 1T     | 120                         | 0.30                        | 21         | 156       | 1.12 & 1.12 | M343       |
| PL10245     | 7T (w/ 3T aux)      | 2T & 1T     | 165                         | 0.30                        | 50         | 200       | 1.80 & 0.60 | M343       |
| PL10246     | 8T                  | 1T:1T:1T:1T | 215                         | 0.30                        | 60         | -         | 1.80 & 0.60 | M343       |
| PL10247     | 8T                  | 2T & 1T     | 215                         | 0.30                        | 60         | -         | 1.80 & 0.60 | M343       |
| PL10248     | 8T                  | 1T & 1T     | 215                         | 0.30                        | 60         | -         | 1.80 & 0.60 | M343       |
| PL10249     | 8T                  | 2T & 1T     | 215                         | 0.30                        | 60         | -         | 1.80 & 0.60 | M343       |

- iNRCORE's standard lead finish is tin/lead (Sn63/Pb37). Parts can be ordered Non-Lead by adding "NL" to the part number (i.e. PL10122NL).
- To order in Tape & Reel packaging, add the suffix "T" to the part number (i.e. PL10210T).

### Design Specifications

| Design Type               | Maximum Height | Part Numbers |
|---------------------------|----------------|--------------|
| Double Interleave Design* | 10.2mm         | PL10201-16   |
| Single Interleave Design  | 9.10mm         | PL10230-49   |

\* Higher efficiency, lower DCR and lower leakage.



\*H - Maximum Height (see table above)





## HIGH FREQUENCY PLANAR TRANSFORMERS

Electrical Specifications @25°C - Power Rating up to 140W

| Part Number | Turns Ratio |           | Primary Inductance MIN (μH) | Leakage Inductance MIN (μH) | DCR mΩ MAX |           |               | Data Sheet |
|-------------|-------------|-----------|-----------------------------|-----------------------------|------------|-----------|---------------|------------|
|             | Primary     | Secondary |                             |                             | Primary A  | Primary B | Secondary     |            |
| PL10301     | 4T          | 5T        | 153                         | 0.45                        | 17.5       | 17.5      | 7             | M314       |
| PL10302     | 4T          | 5T        | 194                         | 0.45                        | 17.5       | 20        | 7             | M314       |
| PL10303     | 5T          | 5T        | 240                         | 0.55                        | 20         | 20        | 7             | M314       |
| PL10304     | 5T          | 6T        | 290                         | 0.60                        | 20         | 25        | 7             | M314       |
| PL10305     | 6T          | 6T        | 345                         | 0.65                        | 25         | 25        | 7             | M314       |
| PL10306     | 4T          | 4T        | 153                         | 0.40                        | 7.5        | 17.5      | 0.875 & 0.875 | M314       |
| PL10307     | 4T          | 5T        | 194                         | 0.40                        | 17.5       | 20        | 0.875 & 0.875 | M314       |
| PL10308     | 5T          | 5T        | 240                         | 0.50                        | 20         | 20        | 0.875 & 0.875 | M314       |
| PL10309     | 5T          | 6T        | 290                         | 0.60                        | 20         | 25        | 0.875 & 0.875 | M314       |
| PL10310     | 6T          | 6T        | 345                         | 0.60                        | 25         | 25        | 1.75 & 1.75   | M314       |
| PL10311     | 4T          | 4T        | 153                         | 0.40                        | 17.5       | 17.5      | 1.75 & 1.75   | M314       |
| PL10312     | 4T          | 5T        | 194                         | 0.40                        | 17.5       | 20        | 1.75 & 1.75   | M314       |
| PL10313     | 5T          | 5T        | 240                         | 0.40                        | 20         | 20        | 1.75 & 1.75   | M314       |
| PL10314     | 5T          | 5T        | 290                         | 0.50                        | 20         | 25        | 1.75 & 1.75   | M314       |
| PL10315     | 6T          | 6T        | 345                         | 0.50                        | 25         | 25        | 1.75 & 1.75   | M314       |

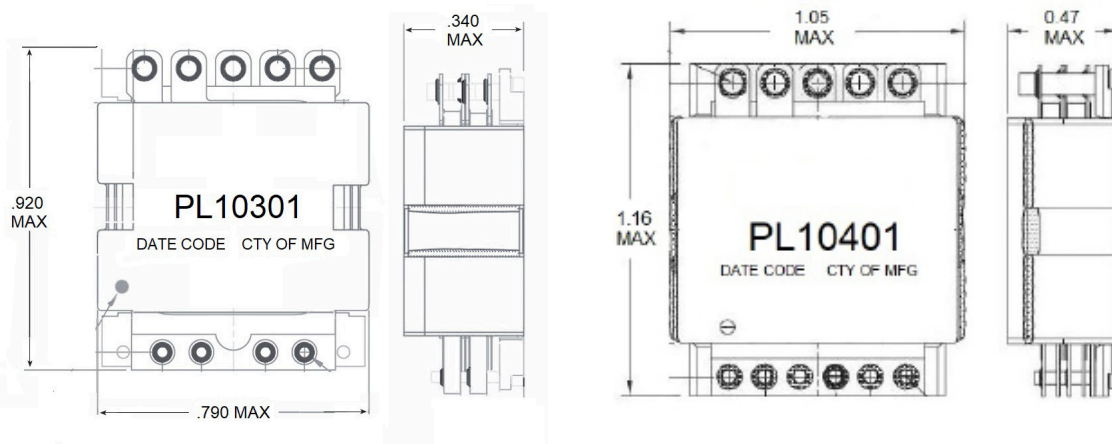


## HIGH FREQUENCY PLANAR TRANSFORMERS

Electrical Specifications @25°C - Power Rating up to 300W

| Part Number | Turns Ratio |             | Primary Inductance MIN (μH) | Leakage Inductance MIN (μH) | DCR mΩ MAX |           |               | Data Sheet |
|-------------|-------------|-------------|-----------------------------|-----------------------------|------------|-----------|---------------|------------|
|             | Primary     | Secondary   |                             |                             | Primary A  | Primary B | Secondary     |            |
| PL10401     | 4T & 4T     | 1T:1T:1T:1T | 211                         | 0.30                        | 6.8        | 6.8       | 4.5           | M380       |
| PL10402     | 5T & 5T     | 1T:1T:1T:1T | 330                         | 0.40                        | 8.5        | 8.5       | 4.5           | M380       |
| PL10403     | 6T & 6T     | 1T:1T:1T:1T | 423                         | 0.60                        | 10.2       | 10.2      | 4.5           | M380       |
| PL10404     | 7T & 7T     | 1T:1T:1T:1T | 588                         | 0.80                        | 11.8       | 11.8      | 4.5           | M380       |
| PL10405     | 4T & 4T     | 1T:1T:1T:1T | 768                         | 1.20                        | 13.4       | 13.4      | 4.5           | M380       |
| PL10406     | 8T & 8T     | 1T & 1T     | 216                         | 0.45                        | 6.8        | 6.8       | 0.056 & 0.056 | M380       |
| PL10407     | 5T & 5T     | 1T & 1T     | 340                         | 0.84                        | 8.5        | 8.5       | 0.056 & 0.056 | M380       |
| PL10408     | 6T & 6T     | 1T & 1T     | 480                         | 1.00                        | 10.2       | 10.2      | 0.056 & 0.056 | M380       |
| PL10409     | 7T & 7T     | 1T & 1T     | 660                         | 1.20                        | 11.8       | 11.8      | 0.056 & 0.056 | M380       |
| PL10410     | 8T & 8T     | 1T & 1T     | 860                         | 1.70                        | 13.4       | 13.4      | 0.056 & 0.056 | M380       |

- iNRCORE's standard lead finish is tin/lead (Sn63/Pb37). Parts can be ordered Non-Lead by adding "NL" to the part number (i.e. PL10305NL).
- To order in Tape & Reel packaging, add the suffix "T" to the part number (i.e. PL10305T).



# INRCORE POWER PRODUCTS

| SMT CURRENT SENSE TRANSFORMERS   |             |                    |                               |            |       |              |            |
|--|-------------|--------------------|-------------------------------|------------|-------|--------------|------------|
| Electrical Specifications @25°C; Operating Temperature: -55°C to +130°C; Current Rating: 10A |             |                    |                               |            |       |              |            |
| Part Number  | Turns Ratio | Current Rating (A) | Secondary Inductance MIN (μH) | DCR mΩ MAX |       | HiPot (Vrms) | Data Sheet |
|  |             |                    |                               | (8-7)      | (1-3) |              |            |
| PL3250   | 1:20        | 10                 | 0.080                         | 6          | 550   | 1000         | M278       |
| PL3251   | 1:30        | 10                 | 0.180                         | 6          | 870   | 1000         | M278       |
| PL3252   | 1:40        | 10                 | 0.320                         | 6          | 1140  | 1000         | M278       |
| PL3253   | 1:50        | 10                 | 0.500                         | 6          | 1500  | 1000         | M278       |
| PL3254   | 1:60        | 10                 | 0.720                         | 6          | 2250  | 1000         | M278       |
| PL3255   | 1:70        | 10                 | 0.980                         | 6          | 4750  | 1000         | M278       |
| PL3256   | 1:100       | 10                 | 2.00                          | 6          | 5500  | 1000         | M278       |
| PL3257   | 1:125       | 10                 | 3.00                          | 6          | 6500  | 700          | M278       |

| SMT CURRENT SENSE TRANSFORMERS   |             |                    |                               |            |       |              |            |
|--|-------------|--------------------|-------------------------------|------------|-------|--------------|------------|
| Electrical Specifications @25°C; Operating Temperature: -55°C to +130°C; Current Rating: 10A |             |                    |                               |            |       |              |            |
| Part Number  | Turns Ratio | Current Rating (A) | Secondary Inductance MIN (μH) | DCR mΩ MAX |       | HiPot (Vrms) | Data Sheet |
|  |             |                    |                               | (8-7)      | (1-3) |              |            |
| PL3258   | 1:20        | 20                 | 0.080                         | 0.75       | 550   | 1000         | M279       |
| PL3259   | 1:30        | 20                 | 0.18                          | 0.75       | 870   | 1000         | M279       |
| PL3260   | 1:40        | 20                 | 0.32                          | 0.75       | 1140  | 1000         | M279       |
| PL3261   | 1:50        | 20                 | 0.50                          | 0.75       | 1500  | 1000         | M279       |
| PL3262   | 1:60        | 20                 | 0.72                          | 0.75       | 2250  | 1000         | M279       |
| PL3263   | 1:70        | 20                 | 0.98                          | 0.75       | 4750  | 1000         | M279       |
| PL3264   | 1:100       | 20                 | 2.00                          | 0.75       | 5500  | 1000         | M279       |
| PL3265   | 1:125       | 20                 | 3.00                          | 0.75       | 6500  | 700          | M279       |
| PL3479   | 1:200       | 20                 | 8.00                          | 0.75       | 17000 | 700          | M279       |

| SMT CURRENT SENSE TRANSFORMERS   |             |                    |                               |            |       |              |            |
|--|-------------|--------------------|-------------------------------|------------|-------|--------------|------------|
| Electrical Specifications @25°C; Operating Temperature: -55°C to +130°C; Current Rating: 15A |             |                    |                               |            |       |              |            |
| Part Number  | Turns Ratio | Current Rating (A) | Secondary Inductance MIN (μH) | DCR mΩ MAX |       | HiPot (Vrms) | Data Sheet |
|  |             |                    |                               | (1,3-2,4)  | (5-6) |              |            |
| PL1170   | 1:1:100     | 15                 | 14.8                          | 1.5        | 930   | 500          | M133       |
| PL1961   | 1:1:200     | 15                 | 59.2                          | 2.3        | 4200  | 500          | M150       |

| SMT CURRENT SENSE TRANSFORMERS   |             |                    |                               |            |       |              |            |
|--|-------------|--------------------|-------------------------------|------------|-------|--------------|------------|
| Electrical Specifications @25°C; Operating Temperature: -55°C to +130°C; Current Rating: 35A |             |                    |                               |            |       |              |            |
| Part Number  | Turns Ratio | Current Rating (A) | Secondary Inductance MIN (μH) | DCR mΩ MAX |       | HiPot (Vrms) | Data Sheet |
|  |             |                    |                               | (11-12)    | (2-4) |              |            |
| PL1839   | 50:1        | 35                 | 1.40                          | 0.42       | 700   | 1800         | M302       |
| PL1808   | 100:1       | 35                 | 5.60                          | 0.42       | 1400  | 1800         | M302       |
| PL1840   | 200:1       | 35                 | 22.40                         | 0.42       | 2900  | 1800         | M302       |



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| AUDIO TRANSFORMERS  |                               |                               |   |                 |       |                 |            |
|---|-------------------------------|-------------------------------|---|-----------------|-------|-----------------|------------|
| Electrical Specifications @25°C; Operating Temperature: -40°C to +130°C |                               |                               |   |                 |       |                 |            |
| Part Number   | Turns Ratio<br>Pri:Sec<br>±2% | Primary Impedance<br>(Ω ±10%) | Insertion Loss<br>MAX<br>1KHz/1.0Vrms<br>(dB) | DCR<br>Ω<br>MAX |       | HiPot<br>(Vrms) | Data Sheet |
|   |                               |                               |   | (2-4)           | (7-9) |                 |            |
| PL3141  | 1.10                          | 600                           | 1.55  | 55              | 67    | 1500            | M358       |
| PL3183  | 1.10                          | 150                           | 1.50  | 12              | 14    | 1250            | M508       |

| GATE DRIVE TRANSFORMERS                            |             |                    |                 |                                   |                                   |                 |            |                             |            |            |
|--|-------------|--------------------|-----------------|-----------------------------------|-----------------------------------|-----------------|------------|-----------------------------|------------|------------|
| 1000VDC to 1500VDC - Basic & Functional Insulation |             |                    |                 |                                   |                                   |                 |            |                             |            |            |
| Part Number  | Turns Ratio | Pri-Sec Insulation | MAX<br>(v*usec) | Primary Inductance<br>MAX<br>(μH) | Leakage Inductance<br>MAX<br>(μH) | DCR<br>Ω<br>MAX |            | Package Size L/W/H<br>(in.) | Insulation | Data Sheet |
|  |             |                    |                 |                                   |                                   | Primary         | Secondary  |                             |            |            |
| PL3172NL   | 1:1         | 1500 Vrms          | 9.7             | 1200                              | 0.50                              | 0.91            | 0.91       | 0.355/0.340/0.300           | Functional | M297       |
| PL1960   | 1:1         | 1500 VDC           | 9.7             | 785                               | 0.46                              | 0.60            | 0.60       | 0.265/0.340/0.140           | Functional | M149       |
| PL3280   | 1:1:1       | 1500 Vrms          | 12.7            | 800                               | 0.65                              | 0.75            | 0.75       | 0.340/0.265/0.140           | Functional | M296       |
| X-1569NL   | 1:1:1       | 1500 VDC           | 45.1            | 3330                              | 0.70                              | 1.60            | 1.60       | 0.355/0.340/0.300           | Functional | M258       |
| X-1622NL   | 1:1:1       | 1500 Vrms          | 60              | 1400                              | 1.50                              | 1.60            | 1.50/1.50  | 0.355/0.340/0.300           | Functional | M295       |
| PL3057NL   | 2.5:1:1     | 1500 Vrms          | 27.2            | 1200                              | 0.80                              | 0.91            | 0.38/0.38  | 0.355/0.340/0.300           | Basic      | M294       |
| PL2973   | 1:1         | 1500 VDC           | 27.2            | 1200                              | 0.50                              | 0.91            | 0.91       | 0.355/0.340/0.300           | Basic      | M299       |
| PL3140   | 2:1:1       | 1500 Vrms          | -               | 1200                              | 0.60                              | 0.91            | 0.46       | 0.355/0.340/0.300           | Functional | M383       |
| PL3002   | 1:1:1       | 1600 Vrms          | 866             | 5000                              | 0.50                              | 6               | 7.2/7.2    | 0.750/0.750/0.500           | Functional | M386       |
| PL2148NL   | 1:1         | 1500 Vrms          | 55              | 1486                              | 0.80                              | 1.15            | 1.15       | 0.355/0.340/0.300           | Functional | M387       |
| PL3159   | 1:1:1       | 2700 VDC           | 21              | 507                               | 0.40                              | 0.85            | 0.85/0.85  | 0.315/0.200/0.118           | Functional | M388       |
| PL3212NL   | 1:1:1       | 3000 Vrms          | 95              | 450                               | 0.50                              | 0.080           | 0.072      | 0.810/0.750/0.480           | Basic      | M389       |
| PL3215NL   | 1:1:1       | 6000 Vrms          | 115             | 686                               | 0.80                              | 0.71            | 0.71/0.71  | 0.750/0.810/0.480           | Basic      | M394       |
| PL3445NL   | 1:1:1       | 1500 Vrms          | 85              | 7200                              | 2.0                               | 3.0             | 3.3        | 0.355/0.340/0.300           | Functional | M395       |
| PL3602NL   | 2:1:1       | 4000 Vrms          | 375             | 1500                              | 8.0                               | 2.2             | 1.60/1.60  | 0.650/0.500/0.599           | Functional | M396       |
| PL3716   | 1:1         | 700 Vrms           | 126             | 2500                              | 4.0                               | 5.8             | 6.20       | 0.650/0.443/0.400           | Functional | M392       |
| PL3839NL   | 1:1:1       | 2500 Vrms          | 48              | 1500                              | TBD                               | 1.5             | 1.50/1.50  | 0.572/0.512/0.340           | Functional | M393       |
| PL3840   | 1:1         | 10 KVrms           | 320             | 1850                              | 15                                | 0.133           | 0.12/0.085 | 1.319/1.417/0.728           | Functional | M397       |
| PL1863   | 2:1:1       | 2500 VDC           | 27.2            | 1200                              | 0.60                              | 0.91            | 0.46/0.46  | 0.355/0.340/0.300           | Functional | M398       |
| PL1903   | 1:1         | 1500 Vrms          | 15.4            | 750                               | 0.75                              | 0.88            | 0.70       | 0.470/0.350/0.160           | Basic      | M410       |
| PL2064   | 1:2.5:2.5   | 3750 Vrms          | 10.88           | 162                               | 0.24                              | 0.28            | 0.56/0.56  | 0.665/0.421/0.267           | Basic      | M412       |
| PL2072   | 1:1         | 1500 Vrms          | 12              | 403.2                             | 0.46                              | 0.685           | 0.685      | 0.345/0.265/0.098           | Functional | M367       |
| 10B-1002   | 1:1         | 700 Vrms           | 24              | 10000                             | 30                                | 11              | 11         | 0.650/0.443/0.440           | Functional | M464       |

<sup>1</sup> The maximum volt\*μSec rating limits the peak flux density to 2200 Gauss when used in a unipolar drive application. For bi-polar drive applications a maximum volt\*μsec of two times this rating is acceptable (i.e. 2\* (volt\*μsec rating) Volt\*μsec = (voltage applied to the primary) \* duty cycle / Frequency = V \* alpha / Freq\_Hz = V \* μsec

<sup>2</sup> Leakage inductance is measured at primary terminals with all secondaries shorted.

- INRCORE's standard lead finish is tin/lead (Sn63/Pb37). Parts can be ordered Non-Lead by adding "NL" to the part number (i.e. PL2973NL).
- To order in Tape & Reel packaging, add the suffix "T" to the part number (i.e. PL3280T).



| DISCONTINUOUS HIGH VOLTAGE FLYBACK TRANSFORMERS                         |             |                                       |                            |  |                 |       |            |
|---|-------------|---------------------------------------|----------------------------|--|-----------------|-------|------------|
| Electrical Specifications @25°C; Operating Temperature: -55°C to +125°C |             |                                       |                            |  |                 |       |            |
| Part Number   | Turns Ratio | Voltage Output<br>(V <sub>out</sub> ) | Primary Inductance<br>(μH) | Primary Inductance<br>Leakage<br>MAX<br>(nH) | DCR<br>Ω<br>MAX |       | Data Sheet |
|   |             |                                       |                            |  | (1-4)           | (5-8) |            |
| PL4761  | 1:20        | 1400                                  | 8.5 - 9.5                  | 650  | 0.50            | 80    | M569       |
| PL4762  | 1:30        | 1800                                  | 8.5 - 9.5                  | 750  | 0.50            | 115   | M569       |
| PL4763  | 1:40        | 2000                                  | 8.5 - 9.5                  | 850  | 0.50            | 150   | M569       |

# iNRCORE CUSTOM CAPABILITIES

## SPACE DEVELOPMENT / TESTING / VALIDATION CAPABILITIES

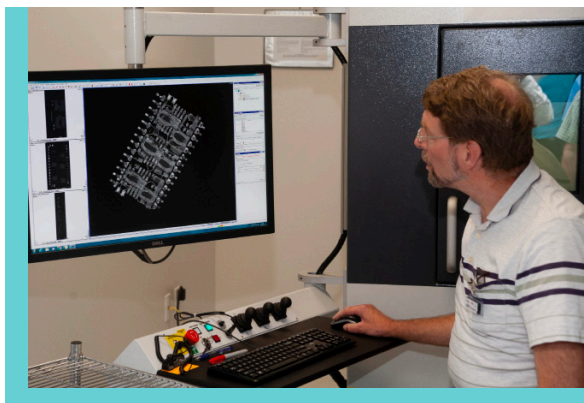
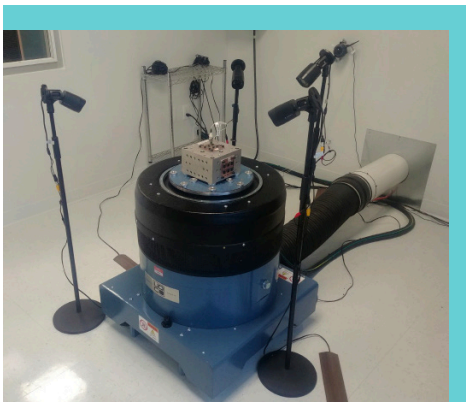
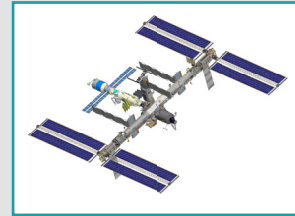
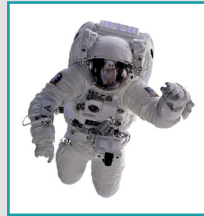
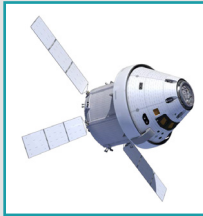
- MIL-STD-981
- NASA EEE-INST-002
- NASA-STD 8739.3
- IPC-STD-001DS
- ESA
- IPC-610
- MIL-PRF-21038
- MIL-PRF-27
- MIL-STD-202
- ECSS-Q-ST-70-38C
- UL 60601
- CSA C22.2
- AEC-Q200
- MIL-STD-883
- Custom Magnetic Power
- Signal Design/Build
- MIL-STD-810
- IPC/WHMA-A-620

## MANUFACTURING CAPABILITIES

- Bobbin Winding
- SMT Board Assembly
- In-House Machine Shop
- Custom Lead Forming
- Toroid Winding
- Electrical/Mechanical Assembly
- Automated Electrical Test
- E.S.S. Capability
- Automated Solder Tinning
- AS9100 Certified Facilities
- Harness Assembly
- Transfer Molding
- Vacuum Encapsulation

## SPACE PROGRAM PARTICIPATION

- ISS
- Orion
- Artemis
- Europa Clipper
- James Webb
- JUICE
- OSIRIS-REx
- Cygnus
- Nancy Grace Roman



# iNRCORE CUSTOM CAPABILITIES

| Product Capability                            | Packaging                        | Max Power      | Max Current | Frequency      |
|---|----------------------------------|----------------|-------------|----------------|
| Single Inductors                              | Lamination, Toroidal, Tape Wound | -              | 4 KVA       | 15 - 2 MHz     |
| Common Mode Chokes 1/3 Phase                  | Lamination, Toroidal, Tape Wound | -              | 500 A       | 15 - 2400 Hz   |
| Chokes - 3 Phase (Line Filtering)             | Lamination, Tape Wound           | -              | 500 A       | 15 - 2400 Hz   |
| Power Transformers - 1 Phase                  | Lamination, Toroidal, Tape Wound | 10 KVA         | -           | 15 - 1200 Hz   |
| Transformers - Laminated 3 Phase              | Lamination, Toroidal, Tape Wound | 10 KVA         | -           | 15 - 1200 Hz   |
| Transformers - Switch Mode                    | Planar, Bobbin Wound, Toroidal   | 10 KVA         | -           | 20K - 1 MHz    |
| Inductors - Switchmode Buck/Boost             | Toroidal, Bobbin Wound           | 500 VA         | -           | 20K - 1 MHz    |
| Transformers - Current Sense                  | Toroidal, Bobbin Wound           | 4 KVA (burden) | -           | 15 - 1 MHz     |
| Transformer Modules - Current Sense 1/3 Phase | Toroidal, Bobbin Wound           | 4 KVA (burden) | -           | 15 - 1 MHz     |
| Transformers - Gate Drive                     | Toroidal, Bobbin Wound           | -              | -           | 20 KHz - 1 MHz |
| Current Sense Transformers                    | Lamination, Toroidal, Tape Wound | -              | 10 KVA      | 15 - 1200 Hz   |

## TESTING SERVICES

Testing capabilities for product qualification and design validation

### ELECTRICAL

- Inductance with or without DC
- Turns Ratio
- HI-POT - Vac up to 5kV, Vdc up to 6kV
- Insulation Resistance
- Distortion
- Pulse Testing
- Thermal Rise
- Impedance
- Q (up to 1MHz)
- DCR
- SRF (up to 3GHz)
- Leakage Inductance
- Voltage Ratio
- Insertion Loss

### ENVIRONMENTAL

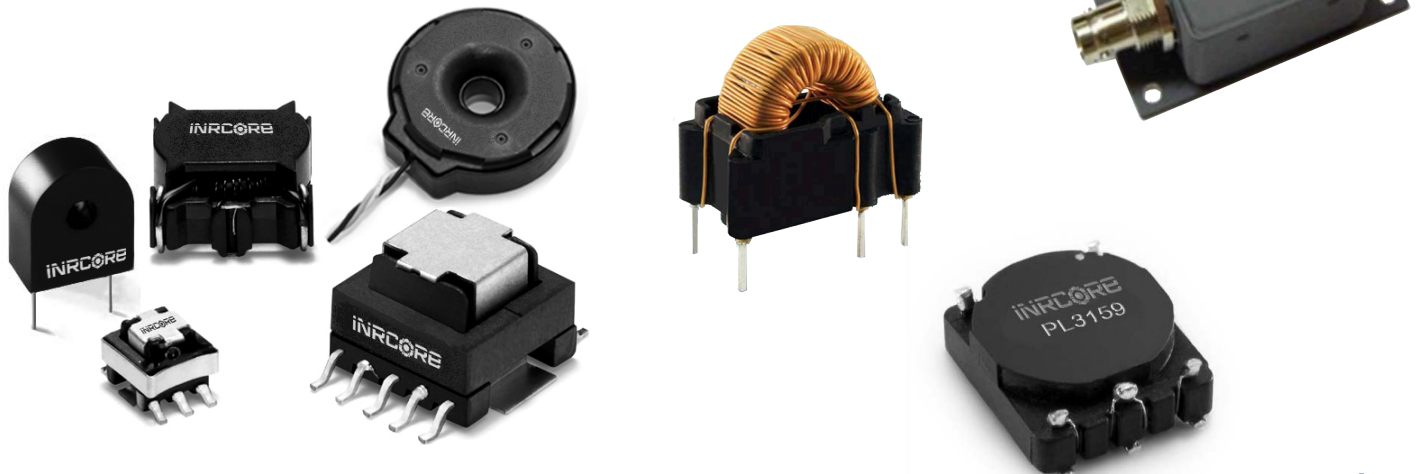
- Mechanical Shock
- Mechanical Vibration
- Solderability
- Resistance to Soldering
- Tin Whisker Analysis

### MECHANICAL

- Humidity (to 90% RH)
- Moisture Resistance
- Thermal Shock
- Thermal Cycling
- High/Low Temperature Storage
- Steam Aging

### ANALYTICAL

- X-Ray Imaging
- Real Time X-Ray
- Plating Composition Analysis
- Detailed Inspection Plans
- First Article Inspection to AS9102



# INDUCTOR DESIGN WORKSHEET

## CONTACT INFORMATION

Company/Division \_\_\_\_\_

Contact Name \_\_\_\_\_

Telephone \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip Code \_\_\_\_\_

Email Address \_\_\_\_\_

## ELECTRICAL

Common Mode  Differential Mode  PFC  Resonant

For PFC inductor ONLY, please specify RMS current at 100-120Hz: \_\_\_\_\_

And peak-to-peak current for operation frequency: \_\_\_\_\_

Winding 1

Winding 2

Winding 3

Inductance Range: \_\_\_\_\_

Rated Current: \_\_\_\_\_

Ripple Current: \_\_\_\_\_

QF (Quality Factor): \_\_\_\_\_

SRF (Self-Resonant Frequency) Minimum: \_\_\_\_\_

## MECHANICAL

Mounting Type:  Surface Mount  Through-Hole  Other: \_\_\_\_\_

Maximum Size: Length: \_\_\_\_\_ Width: \_\_\_\_\_ Height: \_\_\_\_\_

## SAFETY & ENVIRONMENTAL REQUIREMENTS

Dielectric Withstanding Voltage (DWV): \_\_\_\_\_  DC  RMS

Ambient Temperature Range: \_\_\_\_\_ °C Temperature Rise, MAX: \_\_\_\_\_ °C

Lead/Terminal Finish:  Tin/Lead  Pure Tin  Other: \_\_\_\_\_

## OTHER

Production Start Date \_\_\_\_\_

EAU or QTY to be Quoted \_\_\_\_\_

Target Price (USD) \_\_\_\_\_

Part Number \_\_\_\_\_

Competitor Part Number \_\_\_\_\_

Application \_\_\_\_\_

Program Name \_\_\_\_\_

Restricted/ITAR:  Yes  No





# TRANSFORMER DESIGN WORKSHEET

## CONTACT INFORMATION

Company/Division \_\_\_\_\_

Contact Name \_\_\_\_\_

Telephone \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip Code \_\_\_\_\_

Email Address \_\_\_\_\_

## ELECTRICAL

Total Output Power of Power Supply: \_\_\_\_\_

Switching Frequency: \_\_\_\_\_ (kHz) Maximum Duty Cycle: \_\_\_\_\_

Topology:

Flyback Continuous  Flyback Discontinuous  Forward Converter  Active Clamp Forward  Two-Switch Forward  Push-Pull  Half Bridge  Full-Bridge

Other: \_\_\_\_\_

Primary:

Input Voltage Range: \_\_\_\_\_ Desired Inductance (if known): \_\_\_\_\_

Turns Ratio (if known): \_\_\_\_\_ Input Current (if known): \_\_\_\_\_

Other: \_\_\_\_\_

| Secondary(ies): | S1    | S2    | S3    | S4    | S5    | S6    |
|-----------------|-------|-------|-------|-------|-------|-------|
| Output Voltage: | _____ | _____ | _____ | _____ | _____ | _____ |
| Output Current: | _____ | _____ | _____ | _____ | _____ | _____ |
| Diode Drop:     | _____ | _____ | _____ | _____ | _____ | _____ |

## MECHANICAL

Mounting Type:  Surface Mount  Through-Hole  Other: \_\_\_\_\_

Maximum Size: Length: \_\_\_\_\_ Width: \_\_\_\_\_ Height: \_\_\_\_\_

## SAFETY & ENVIRONMENTAL REQUIREMENTS

Agency Requirement: IEC: \_\_\_\_\_ UL: \_\_\_\_\_ CSA: \_\_\_\_\_

Insulation Class:  Functional  Basic  Supplementary  Reinforced

Dielectric Withstanding Voltage (DWV): \_\_\_\_\_  DC  RMS

Ambient Temperature Range: \_\_\_\_\_ °C Temperature Rise, MAX: \_\_\_\_\_ °C

Lead/Terminal Finish:  Tin/Lead  Pure Tin  Other: \_\_\_\_\_

## OTHER

Production Start Date \_\_\_\_\_

EAU or QTY to be Quoted \_\_\_\_\_

Target Price (USD) \_\_\_\_\_

Part Number \_\_\_\_\_

Competitor Part Number \_\_\_\_\_

Application \_\_\_\_\_

Program Name \_\_\_\_\_

Restricted/ITAR:  Yes  No

