

# MIL-STD-1553 TRANSFORMERS

Value Series (COTS) THT Non-QPL Interface Transformers  
Ruggedized



These Non-QPL interface transformers are built and tested in ISO 9001 approved facilities.

- ⊗ Dual ratio, dual interface
- ⊗ Conform to all electrical and physical parameters of MIL-PRF-21038/27
- ⊗ Operating Temperature: -55°C to +125°C
- ⊗ Moisture Sensitivity Level: 3
- ⊗ Lead Finish: SnPb
- ⊗ Applicable Specifications:
  - ⊗ MIL-STD-1553B
  - ⊗ MIL-STD-202
  - ⊗ MIL-PRF-21038
  - ⊗ ISO 9001

## Summary Performance Specifications

|                                 |                 |
|---------------------------------|-----------------|
| Drop                            | 20% MAX         |
| Overshoot                       | ±1V MAX         |
| Common Mode Rejection (CMR)     | 45dB MIN        |
| Frequency Range (no load)       | 75kHz - 1MHz    |
| Insulation Resistance (MIN)     | 10K MΩ @ 250Vdc |
| Dielectric Withstanding Voltage | 100Vrms         |

## Electrical Specifications @ 25°C

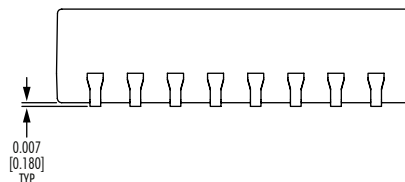
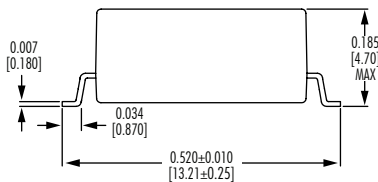
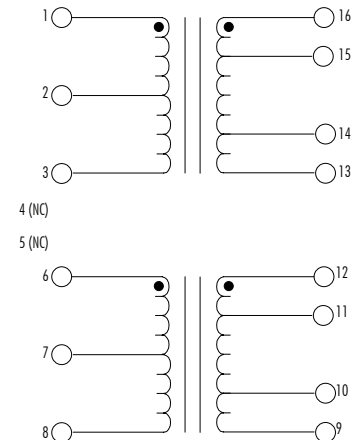
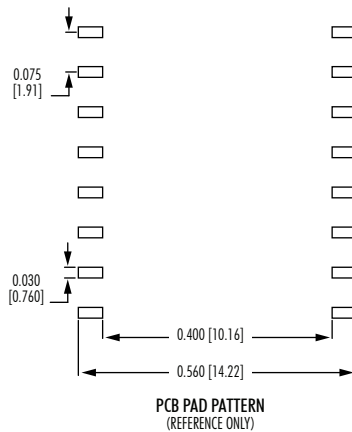
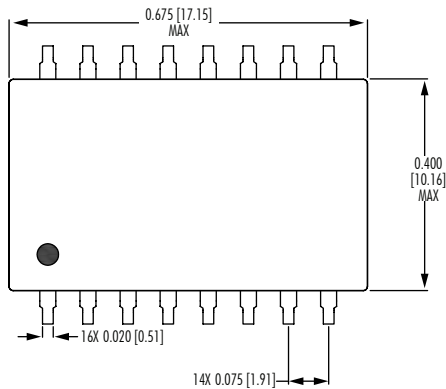
| Part Number | Turns Ratio (±3%) |                |                 |                 | RDC MAX (Ω) |       |         |        | Impedance MIN (Ω) |
|-------------|-------------------|----------------|-----------------|-----------------|-------------|-------|---------|--------|-------------------|
|             | (1-3) : (16-13)   | (6-8) : (12-9) | (1-3) : (15-14) | (6-8) : (11-10) | (1-3)       | (6-8) | (16-13) | (12-9) | (16-13), (12-9)   |
| DKG1553-45  | 1:2.50            | 1:2.50         | 1:1.79          | 1:1.79          | 1.0         | 1.0   | 3.5     | 3.5    | 4000              |
| DKG1553-70  | 1:3.00            | 1:3.00         | 1:2.15          | 1:2.15          | 0.50        | 0.50  | 3.5     | 3.5    | 4000              |
| DKG1553-71  | 1:3.54            | 1:3.54         | 1:2.50          | 1:2.50          | 0.50        | 0.50  | 3.5     | 3.5    | 4000              |
| DKG1553-72  | 1:3.75            | 1:3.75         | 1:2.70          | 1:2.70          | 0.50        | 0.50  | 3.5     | 3.5    | 4000              |
| DKG1553-75  | 1:2.65            | 1:2.65         | 1:2.07          | 1:2.07          | 0.50        | 0.50  | 3.5     | 3.5    | 4000              |

## Mechanicals

## Electrical Schematics

DKG1553-XX

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



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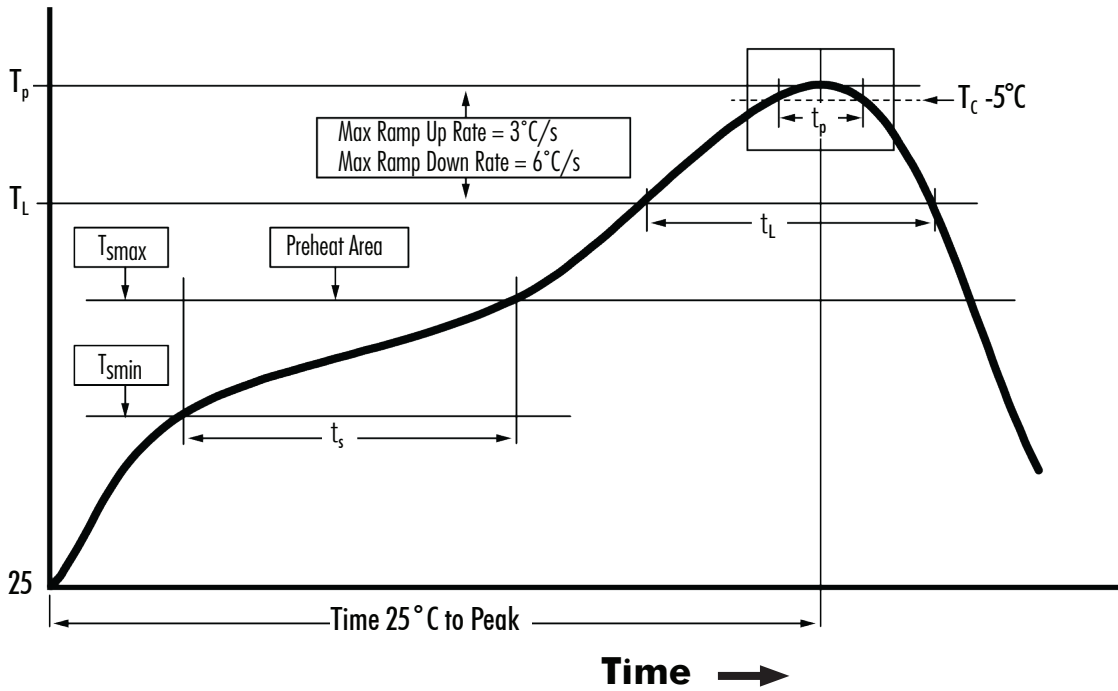
M322.E (11/21)

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## Tin/Lead Recommended Reflow Profile (Based on J-STD-020D)



| $T_{SMIN}$<br>(°C) | $T_{SMAX}$<br>(°C) | $T_L$<br>(°C) | $T_P$<br>(°C MAX) | $t_s$<br>(s) | $t_L$<br>(s) | $t_p$<br>(s MAX) | Ramp-up rate<br>( $T_L$ to $T_p$ ) | Ramp-down rate<br>( $T_p$ to $T_L$ ) | Time<br>25°C to peak temperature<br>(s MAX) |
|--------------------|--------------------|---------------|-------------------|--------------|--------------|------------------|------------------------------------|--------------------------------------|---------------------------------------------|
| 100                | 150                | 183           | 225               | 60 - 120     | 60 - 150     | 20               | 3°C/s MAX                          | 6°C/s MAX                            | 360                                         |

### NOTES:

1. All temperatures measured on the package leads.
2. Maximum times of reflow cycle: 2



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