

Duet™ & Duet+™ Isolation Modules

SMD Dual Port T1/E1 Transformers



US Patent Numbers:
5,656,985 6,297,721 B1
6,297,720 B1 6,320,489 B1
6,344,785 B1 6,662,431 B1

Product Features:

- DUET and DUET+ Telecom Transformers
- UL/EN60950 & DEMKO Recognized
- 100% Electrical Testing
- 1500Vrms Hi-Pot
- Patented Open Frame Construction

| DUET™ | | | | | | | | |
|---------------|---------|-----------------|------------|--------------|---------------|-----------|-----------------|-------------------|
| Part Number | Circuit | Turns Ratio ±2% | | Primary Pins | | Cw/w (pF) | PRI LL (µH max) | RoHS ¹ |
| | | TX | RX | TX | RX | | | |
| TG08-1505NZLF | A | 1CT:2CT | 1CT:2CT | 1-3 & 7-9 | 4-6 & 10-12 | 35 | 0.5 | Pb-Free |
| TG08-1505NZRL | A | 1CT:2CT | 1CT:2CT | 1-3 & 7-9 | 4-6 & 10-12 | 35 | 0.5 | RoHS (7a) |
| TG25-1505NZLF | A | 1CT:1.26CT | 1CT:1.26CT | 1-3 & 7-9 | 4-6 & 10-12 | 35 | 0.5 | Pb-Free |
| TG25-1505NZRL | A | 1CT:1.26CT | 1CT:1.26CT | 1-3 & 7-9 | 4-6 & 10-12 | 35 | 0.5 | RoHS (7a) |
| TG26-1505NZLF | A | 1CT:2CT | 1CT:2CT | 1-3 & 10-12 | 21-19 & 18-16 | 35 | 0.5 | Pb-Free |
| TG26-1505NZRL | A | 1CT:2CT | 1CT:2CT | 1-3 & 10-12 | 21-19 & 18-16 | 35 | 0.5 | RoHS (7a) |
| TG27-S004NZLF | A | 1CT:1.36CT | 1CT:2CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | Pb-Free |
| TG27-S004NZRL | A | 1CT:1.36CT | 1CT:2CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | RoHS (7a) |
| TG28-1505NZLF | A | 1CT:1.36CT | 1CT:1CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | Pb-Free |
| TG28-1505NZRL | A | 1CT:1.36CT | 1CT:1CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | RoHS (7a) |
| TG37-S002NZLF | A | 1CT:1.14CT | 1CT:1.14CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | Pb-Free |
| TG37-S002NZRL | A | 1CT:1.14CT | 1CT:1.14CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | RoHS (7a) |
| TG38-1505NZLF | A | 1CT:1.15CT | 1CT:1.15CT | 1-3 & 10-12 | 4-6 & 7-9 | 35 | 0.5 | Pb-Free |
| TG38-1505NZRL | A | 1CT:1.15CT | 1CT:1.15CT | 1-3 & 10-12 | 4-6 & 7-9 | 35 | 0.5 | RoHS (7a) |
| TG42-1505NZLF | A | 1CT:1.41CT | 1CT:1.41CT | 1-3 & 10-12 | 21-19 & 18-16 | 35 | 0.5 | Pb-Free |
| TG42-1505NZRL | A | 1CT:1.41CT | 1CT:1.41CT | 1-3 & 10-12 | 21-19 & 18-16 | 35 | 0.5 | RoHS (7a) |
| TG63-1505NZLF | A | 1CT:1.15CT | 1CT:2CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | Pb-Free |
| TG63-1505NZRL | A | 1CT:1.15CT | 1CT:2CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | RoHS (7a) |
| TG63-S002NZLF | A | 1CT:1.15CT | 1CT:2CT | 4-6 & 10-12 | 1-3 & 7-9 | 35 | 0.5 | Pb-Free |
| TG63-S002NZRL | A | 1CT:2CT | 1CT:1.15CT | 4-6 & 10-12 | 1-3 & 7-9 | 35 | 0.5 | RoHS (7a) |
| TG74-1505NZLF | A | 1CT:2CT | 1CT:1CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | Pb- Free |
| TG74-1505NZRL | A | 1CT:2CT | 1CT:1CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | RoHS (7a) |
| TG91-1505NZLF | A | 1CT:2.4CT | 1CT:1CT | 1-3 & 10-12 | 21-19 & 18-16 | 35 | 0.5 | Pb-Free |
| TG91-1505NZRL | A | 1CT:2.4CT | 1CT:1CT | 1-3 & 10-12 | 21-19 & 18-16 | 35 | 0.5 | RoHS (7a) |

For additional information contact your [local representative](#), or HALO's support staff at (650) 903-3800 or info@haloelectronics.com

Duet™ & Duet+™ Transformers

SMD Dual Port T1/E1 Modules



| DUET+™ | | | | | | | | |
|---------------|---------|-----------------|------------|--------------|---------------|--------------|--------------------|-------------------|
| Part Number | Circuit | Turns Ratio ±2% | | Primary Pins | | Cw/w (pF) | PRI LL (μH max) | RoHS ¹ |
| | | TX | RX | TX | RX | | | |
| TG36-1505NZLF | B | 1CT:1.15CT | 1CT:1.15CT | 4-6 & 10-12 | 1-3 & 7-9 | 35 | 0.5 | Pb-Free |
| TG36-1505NZRL | B | 1CT:1.15CT | 1CT:1.15CT | 4-6 & 10-12 | 1-3 & 7-9 | 35 | 0.5 | RoHS (7a) |
| TG43-1505NZLF | C | 1CT:1.41CT | 1CT:1.41CT | 1-3 & 10-12 | 21-19 & 18-16 | 35 | 0.5 | Pb-Free |
| TG43-1505NZRL | C | 1CT:1.41CT | 1CT:1.41CT | 1-3 & 10-12 | 21-19 & 18-16 | 35 | 0.5 | RoHS (7a) |
| TG48-1505NZLF | B | 1CT:2CT | 1CT:2CT | 4-6 & 10-12 | 1-3 & 7-9 | 35 | 0.5 | Pb-Free |
| TG48-1505NZRL | B | 1CT:2CT | 1CT:2CT | 4-6 & 10-12 | 1-3 & 7-9 | 35 | 0.5 | RoHS (7a) |
| TG75-1505NZLF | B | 1CT:2CT | 1CT:1CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | Pb-Free |
| TG75-1505NZRL | B | 1CT:2CT | 1CT:1CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | RoHS (7a) |
| TG85-1505NZLF | C | 1CT:2CT | 1CT:2CT | 1-3 & 10-12 | 4-6 & 7-9 | 35 | 0.5 | Pb-Free |
| TG85-1505NZRL | C | 1CT:2CT | 1CT:2CT | 1-3 & 10-12 | 4-6 & 7-9 | 35 | 0.5 | RoHS (7a) |
| TG85-S002NZLF | C | 1CT:2CT | 1CT:2CT | 1-3 & 10-12 | 21-19 & 18-16 | 35 | 0.5 | Pb-Free |
| TG85-S002NZRL | C | 1CT:2CT | 1CT:2CT | 1-3 & 10-12 | 21-19 & 18-16 | 35 | 0.5 | RoHS (7a) |
| TG93-1505NZLF | B | 1CT:2.42CT | 1CT:2.42CT | 4-6 & 10-12 | 1-3 & 7-9 | 35 | 0.5 | Pb-Free |
| TG93-1505NZRL | B | 1CT:2.42CT | 1CT:2.42CT | 4-6 & 10-12 | 1-3 & 7-9 | 35 | 0.5 | RoHS (7a) |
| TG97-1505NZLF | B | 1CT:1.36CT | 1CT:2CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | Pb-Free |
| TG97-1505NZRL | B | 1CT:1.36CT | 1CT:2CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | RoHS (7a) |
| TG98-1505NZLF | B | 1CT:1.36CT | 1CT:1CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | Pb-Free |
| TG98-1505NZRL | B | 1CT:1.36CT | 1CT:1CT | 4-6 & 10-12 | 24-22 & 18-16 | 35 | 0.5 | RoHS (7a) |
| TGSP-S225NZLF | C | 1CT:2.4CT | 1CT:1CT | 1-3 & 10-12 | 21-19 & 18-16 | 35 | 0.5 | Pb-Free |
| TGSP-S225NZRL | C | 1CT:2.4CT | 1CT:1CT | 1-3 & 10-12 | 21-19 & 18-16 | 35 | 0.5 | RoHS (7a) |
| TGSP-S281NZLF | B | 1CT:1.15CT | 1CT:2CT | 4-6 & 10-12 | 1-3 & 7-9 | 35 | 0.5 | Pb-Free |
| TGSP-S281NZRL | B | 1CT:1.15CT | 1CT:2CT | 4-6 & 10-12 | 1-3 & 7-9 | 35 | 0.5 | RoHS (7a) |

Notes:

1. Pb-Free parts are RoHS 6/6 compliant. RoHS (7a) parts contain lead per exemption 7a which is set to expire in July 2016.
2. Parts with RL suffix are not recommended for new designs.
3. Contact the factory or your local representative for individual datasheet or additional information.