

HALO **Duet™ SMD Dual Port Line Interface Modules**

ELECTRONICS, INC.

HALO Electronics is pleased to introduce the Duet™ and Duet+™ series of Dual Port Line Interface Modules for real estate sensitive T-1, E-1, PRI ISDN and CEPT applications. Designed to meet the requirements of G.703. UL60950 and EN60950 recognized. Isolation Modules are available for most Line Interface IC manufacturers' products. Non-standards are available.



Duet™ SMD Dual Port Line Interface Modules

NZ Package



Schematic



Electrical Specifications @ 25°C

| | |
|--------------------------|--------------|
| Isolation Voltage: | 1,500Vrms |
| OCL: | 1.5mH Typ. |
| PRI DCR: | 0.8Ω Max. |
| LL: | 0.5μH Max. |
| Cw/w: | 35pF Max. |
| Crosstalk (0.1- 10 MHz): | -60dB Typ. |
| Operating Temp. Range: | -40 to +85°C |

Patented Construction

| | | |
|--------------|--------------|--------------|
| US Pat Nbrs: | 5,656,985 | 6,297,721 B1 |
| | 6,297,720 B1 | 6,320,489 B1 |
| | 6,344,785 B1 | 6,662,431 B1 |

| Part Number | Turns Ratio (±2%) | | Primary Pins | |
|---------------|-------------------|------------|--------------|---------------|
| | TX | RX | TX | RX |
| TG08-1505NZRL | 1CT:2CT | 1CT:2CT | 4-6 & 10-12 | 1-3 & 7-9 |
| TG23-1505NZRL | 1CT:2.42CT | 1CT:2.42CT | 4-6 & 10-12 | 1-3 & 7-9 |
| TG24-1505NZRL | 1CT:1.36CT | 1CT:1.36CT | 4-6 & 10-12 | 24-22 & 18-16 |
| TG26-1505NZRL | 1CT:2CT | 1CT:2CT | 1-3 & 10-12 | 21-19 & 18-16 |
| TG27-S004NZRL | 1CT:1.36CT | 1CT:2CT | 4-6 & 10-12 | 24-22 & 18-16 |
| TG28-1505NZRL | 1CT:1.36CT | 1CT:1CT | 4-6 & 10-12 | 24-22 & 18-16 |
| TG37-S002NZRL | 1CT:1.14CT | 1CT:1.14CT | 4-6 & 10-12 | 24-22 & 18-16 |
| TG38-1505NZRL | 1CT:1.15CT | 1CT:1.15CT | 4-6 & 10-12 | 1-3 & 7-9 |
| TG42-1505NZRL | 1CT:1.41CT | 1CT:1.41CT | 1-3 & 10-12 | 21-19 & 18-16 |
| TG63-1505NZRL | 1CT:1.15CT | 1CT:2CT | 4-6 & 10-12 | 24-22 & 18-16 |
| TG63-S002NZRL | 1CT:1.15CT | 1CT:2CT | 4-6 & 10-12 | 1-3 & 7-9 |
| TG73-1505NZRL | 1CT:2.3CT | 1CT:1CT | 4-6 & 10-12 | 24-22 & 18-16 |
| TG74-1505NZRL | 1CT:2CT | 1CT:1CT | 4-6 & 10-12 | 24-22 & 18-16 |
| TG80-1505NZRL | 1CT:2.45CT | 1CT:2.45CT | 4-6 & 10-12 | 24-22 & 18-16 |
| TG91-1505NZRL | 1CT:2.4CT | 1CT:1CT | 1-3 & 10-12 | 21-19 & 18-16 |

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NZ Package



Patented Construction

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

Duet+ Schematic A



Duet+ Schematic B



Electrical Specifications @ 25°C

Isolation Voltage: 1,500Vrms
 OCL: 1.5mH Typ.
 PRI DCR: 0.8Ω Max.
 LL: 0.5μH Max.
 Cw/w: 35pF Max.
 Crosstalk (0.1- 10 MHz): -60dB Typ.
 Operating Temp. Range: -40 to +85°C

| Part Number | Turns Ratio (±2%) | | Schematic | PRI Pins | |
|---------------|-------------------|------------|-----------|-------------|---------------|
| | TX | RX | | TX | RX |
| TG36-1505NZRL | 1CT:1.15CT | 1CT:1.15CT | A | 4-6 & 10-12 | 1-3 & 7-9 |
| TG43-1505NZRL | 1CT:1.41CT | 1CT:1.41CT | B | 1-3 & 10-12 | 21-19 & 18-16 |
| TG48-1505NZRL | 1CT:2CT | 1CT:2CT | A | 4-6 & 10-12 | 1-3 & 7-9 |
| TG75-1505NZRL | 1CT:2CT | 1CT:1CT | A | 4-6 & 10-12 | 24-22 & 18-16 |
| TG85-1505NZRL | 1CT:2CT | 1CT:2CT | B | 1-3 & 10-12 | 4-6 & 7-9 |
| TG85-S002NZRL | 1CT:2CT | 1CT:2CT | B | 1-3 & 10-12 | 21-19 & 18-16 |
| TG93-1505NZRL | 1CT:2.42CT | 1CT:2.42CT | A | 4-6 & 10-12 | 1-3 & 7-9 |
| TG96-1505NZRL | 1CT:2.3CT | 1CT:1CT | A | 4-6 & 10-12 | 24-22 & 18-16 |
| TG97-1505NZRL | 1CT:1.36CT | 1CT:2CT | A | 4-6 & 10-12 | 24-22 & 18-16 |
| TG98-1505NZRL | 1CT:1.36CT | 1CT:1CT | A | 4-6 & 10-12 | 24-22 & 18-16 |
| TGSP-S225NZRL | 1CT:2.4CT | 1CT:1CT | B | 1-3 & 10-12 | 21-19 & 18-16 |
| TGSP-S281NZRL | 1CT:1.15CT | 1CT:2CT | A | 4-6 & 10-12 | 1-3 & 7-9 |