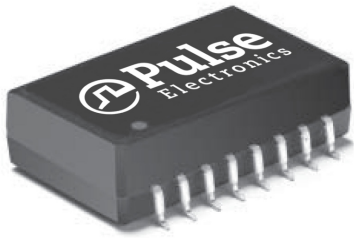


# ISDN S-Interface Low Profile Dual SMT Transformers



- RoHS peak reflow temperature rating 245°C
- Meets pulse waveform template of CCITT I.430 when recommended transformer and chip pair are used
- Excellent longitudinal balance
- 2 kVrms isolation voltage
- Available in Tape & Reel or tube packaging
- UL recognized

## Electrical Specifications @ 25°C - Operating Temperature 0°C to 70°C

RoHS Compliant Part Number	Ratio <sup>A</sup> (±2%)		OCL Pri (mH MIN)	L <sub>L</sub> Sec (μH MAX)		CW/W (pF MAX)	CD Pri <sup>B</sup> (pF MAX)		DCR Pri (Ω ±25%)		DCR Sec (W ±25%)		D I <sub>DC</sub> <sup>C</sup> (mA MAX)
	A	B	A & B	A	B	A & B	A	B	A	B	A	B	
T5008NL	1:1	1:1	22	5	5	100	42	42	2.4	2.4	2.4	2.4	1750

U.S. Patent No. 5,015,981Z

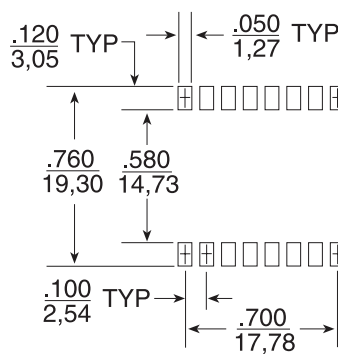
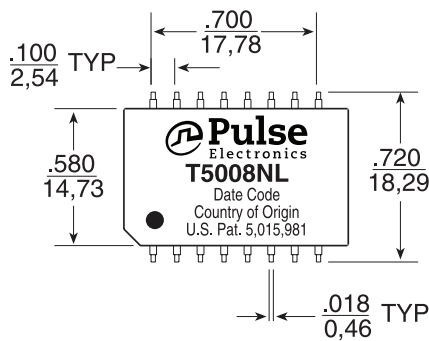
### Notes:

- A. A center-tapped** winding can be created by connecting two ends of a split center winding together on the printed circuit board. In ISDN-S applications, the primary winding is the line side transforme winding.
- B. Minimum primary** inductance and maximum distributed capacitance satisfy the transmitter output and receiver input impedance requirements of CCITT I.430 for both the TE and the NT. The maximum distributed capacitance allows sufficient margin for the capacitance of the IC and a protection diode network. It is consistent with the overall maximum value specified and the permitted length of the basic access TE cord.
- C. The maximum** specified unbalanced DC current capability is based on 20 mH minimum primary OCL.

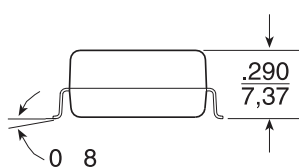
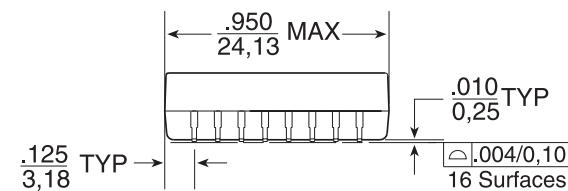
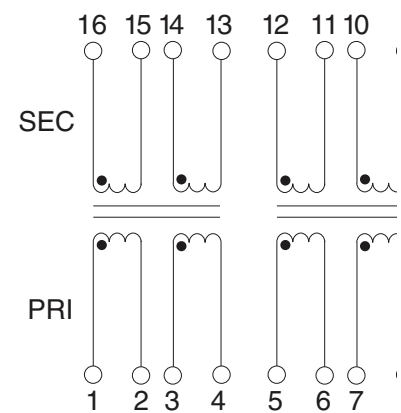
## Mechanical

## Schematic

### T5008NL



### SUGGESTED PAD LAYOUT



Dimensions: Inches  
mm

Unless otherwise specified, all tolerances are ± .010  
0,25

USA 858 674 8100

Germany 49 7032 7806 0

Singapore 65 6287 8998

Shanghai 86 21 62787060

China 86 755 33966678

Taiwan 886 3 4356768

# ISDN S-Interface Low Profile Dual SMT Transformers

IC Manufacturer	IC Part Number	Dual Surface Mount
<b>TX &amp; RX</b>		
<b>Motorola</b>	MC145474/145475 MC145574	T5008NL

Packaging Information	
<b>Type</b>	SMT
<b>Part Weight</b>	7 grams
<b>Parts/Tube</b>	20
<b>Parts/Tray*</b>	50
<b>Parts/Reel*</b>	200
<b>Reel Diameter</b>	13 inches
<b>Tape Width</b>	44 mm
<b>Pitch</b>	24 mm

**Notes:** Standard packaging for the transformer is anti-static tubes. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the end of the part number, (i.e. T5008NLT).

## Application Notes

**1. General Information** - The S-interface is the standardized four-wire digital telephone access point defined by the CCITT I-series recommendations for the Integrated Services Digital Network. This "basic rate success" accommodates two 64 kbps "B-channels" for more information, one 16Kbps "D-channel" intended for signaling and control, and 48Kbps for framing and other purposes, giving a total rate of 192Kbps. The CCITT physical layer recommends that the user network interface be transformer coupled.

The transformer provides isolation for the line card or the terminal from the line. It is also a way to provide phantom power feeding to the terminal over the S-loop. Each end requires a transmit and a receive transformer. Chokes are used in some applications to reduce common mode noise.

Transformers described in this data sheet are matched to the transceivers offered by the IC manufacturers listed.

- 2. Safety Standards Recognition** - All transformers listed in this data sheet are recognized to UL 1459 and UL 1950 as a basic insulation barrier.
- 3. Flammability** - Materials used in the products are recognized UL94-VO. Products meet the requirements of IEC 695-2-2 (needle flame test).
- 4. For more** application notes please refer to data sheet T604.

## Common Mode Chokes

Refer to data sheet G002 for selection of low and high frequency common mode chokes.

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