

# T1/CEPT/ISDN-PRI TRANSFORMERS

## Quad Port SMT Transformer Modules with IC Side Protection



- Eight transformers in a low profile surface mount package
- Includes IC Side Protection Circuit on each channel to suppress low voltage transients
- Compatible with PMC-Sierra's PM 4329 HDLIU
- Low DCR
- Patented "Interlock Base" construction for high reliability
- Minimum Isolation voltage: 1500 Vrms

### Electrical Specifications @ 25°C

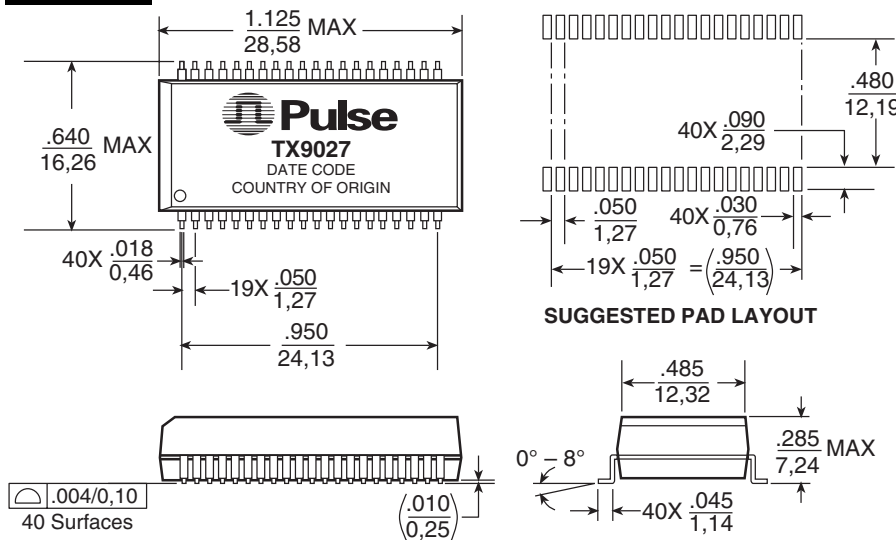
| Part Number                                                             | Turns Ratio (Pri:Sec ±2%) |     | OCL Line Side (mH MIN) | Cw/w (pF MAX) | LL (µH MAX) | Package/ Schematic |
|-------------------------------------------------------------------------|---------------------------|-----|------------------------|---------------|-------------|--------------------|
|                                                                         | TX                        | RX  |                        |               |             |                    |
| EXTENDED TEMPERATURE RANGE MODEL – OPERATING TEMPERATURE -40°C TO +85°C |                           |     |                        |               |             |                    |
| TX9027                                                                  | 1:2                       | 1:2 | 1.2                    | 30            | .5          | QTERA              |

NOTE: The crosstalk attenuation is typically 50 dB or better.

### Mechanical

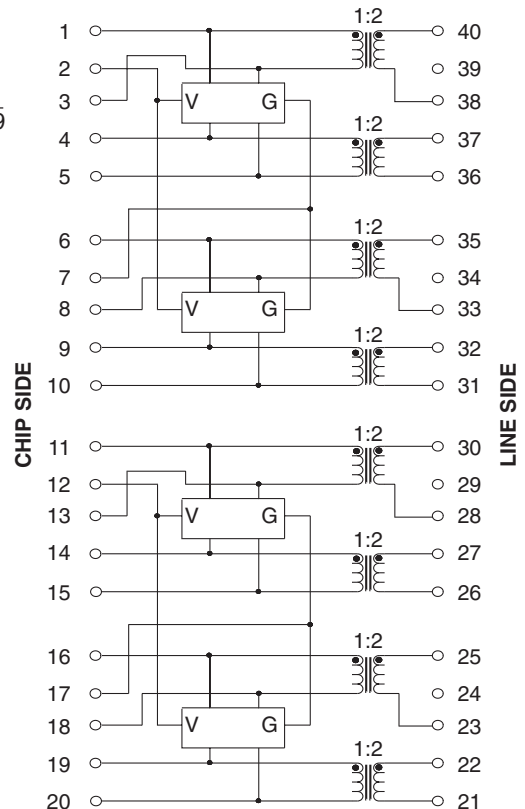
### Schematic

#### QTERA



Weight .....5.0 grams  
Tape & Reel.....250/reel  
Tube .....15/tube

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$   
Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$



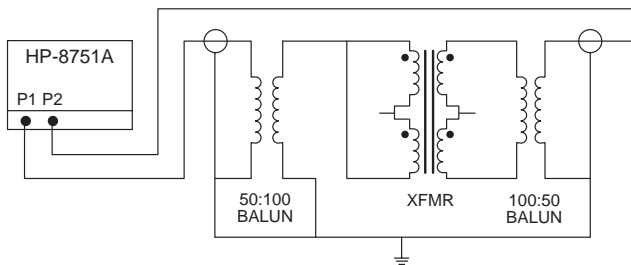
# T1/CEPT/ISDN-PRI TRANSFORMER

## Quad Port SMT Transformer Module with IC Side Protection

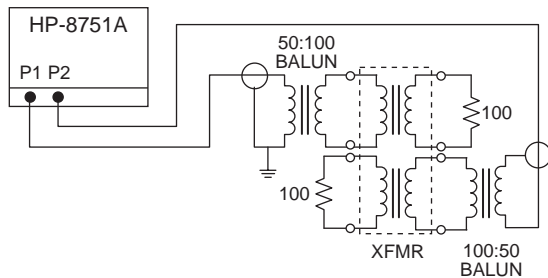


### Application Notes

- Flammability** — Materials used in the products are recognized as UL94-V0 approved. Products meet the requirements of IEC 695-2-2 (Needle Flame Test).
- Balance Characteristics** — The transformers meet the requirements for longitudinal balance of FCC part 68.
- Common Mode Rejection Ratio** — the CMRR for all transformers is better than 50 dB at 1 MHz. A typical test circuit is shown below.



- Crosstalk Attenuation** — In the dual packages, which contain transmit and receive transformers side by side, sufficient crosstalk attenuation is achieved by the inherent characteristics of the toroid cores as well as by their proper positioning. The crosstalk attenuation is typically 50 dB or better from 100 kHz to 10 MHz. This result was established with the test circuit shown below.



- Return Loss** — ITU-T G.703 and European national regulatory documents specify minimum return loss levels. The transformers will allow these limits to be complied within the situations where they are applicable.

| Frequency   | 50-100 kHz | 100 kHz-2 MHz | 2-3 MHz |
|-------------|------------|---------------|---------|
| Return Loss |            |               |         |
| XMIT        | 9 dB       | 15 dB         | 11 dB   |
| REC         | 12 dB      | 18 dB         | 14 dB   |

- Surge Voltage Capability** — All transformers and chokes meet surge voltage tests according to the most stringent regulatory documents when system designs include the proper voltage and current suppression devices.
- Isolation Voltage** — 100% of transformers are tested during production to the specified isolation voltage level.
- General Information** — The TX9027 is specifically designed for use in 1.544 Mbps (T1), 2.048 Mbps (CEPT) and ISDN Primary rate (PRI) interface applications. Use of the proper transformer allows the interface circuit to comply with ITU-T G.703 and other standards regarding pulse waveform, return loss, and balance.

### For More Information :

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