

T1/E1/CEPT/ISDN-PRI INTERFACE MODULES

Dual Surface Mount Transformer Modules, 1500Vrms, Extended Temperature Range



- Optimized for enhanced EMC performance
- Extended temperature range
- Dual SMT package contains transformers with Common Mode Chokes on both transmit and receive channels
- Models matched to leading transceiver ICs
- Patented Interlock Base construction for high reliability
- UL1950 approved

Electrical Specifications @ 25°C

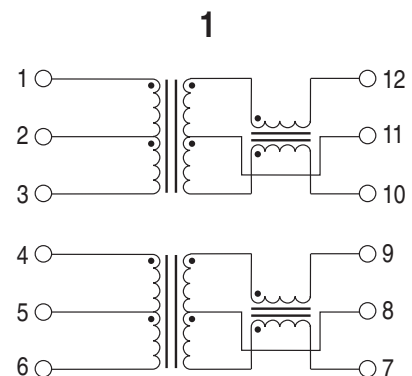
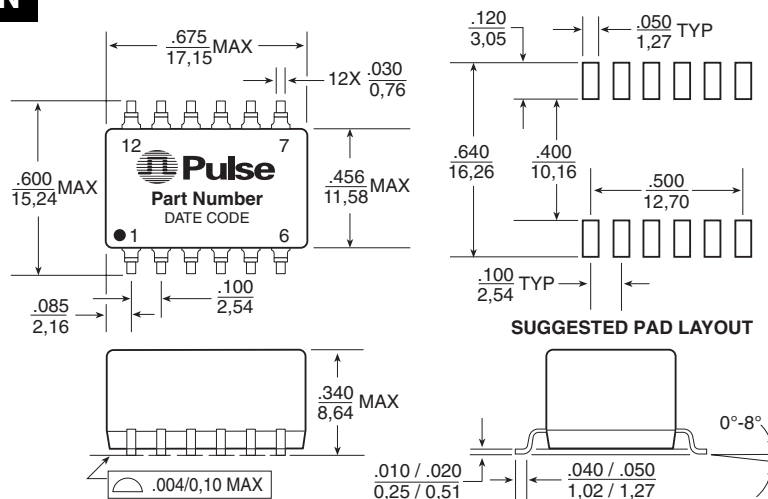
| RoHS-5 Compliant Part No. | RoHS-6 Compliant Part No. | Turns Ratio ² (Pri:Sec ± 2%) | Secondary OCL @ 25°C (mH MIN) | L _L (μH MAX) | C _{w/w} (pF MAX) | DCR Pri (Ω MAX) | Package/ Schematic | Primary Pins |
|---|---------------------------|--|----------------------------------|----------------------------|------------------------------|--------------------|-----------------------|--------------|
| EXTENDED TEMPERATURE RANGE MODELS¹ – OPERATING TEMPERATURE -40°C TO +85°C | | | | | | | | |
| T1207 | T1207NL | 1CT:2CT & 1CT:2CT | 1.20 | .60 | 25 | .60 | AN/1 | 1-3, 4-6 |
| T1208 | T1208NL | 1CT:2CT & 1CT:1.36CT | 1.20 | .60 | 30 | .70 | AN/1 | 1-3, 4-6 |
| T1209 | T1209NL | 1CT:1.15CT & 1CT:2CT | 1.20 | .60 | 35 | .80 | AN/1 | 1-3, 4-6 |
| T1210 | T1210NL | 1CT:1.26CT & 1CT:2CT | 1.20 | .60 | 30 | .80 | AN/1 | 1-3, 4-6 |
| T1220 | T1220NL | 1CT:1CT & 1CT:1CT | 1.20 | .60 | 35 | .90 | AN/1 | 1-3, 4-6 |
| T1211 | T1211NL | 1CT:1.15CT & 1CT:1.15CT | 1.20 | .60 | 35 | .80 | AN/1 | 1-3, 4-6 |
| T1212 | T1212NL | 1CT:1CT & 1CT:2CT | 1.20 | .60 | 35 | .90 | AN/1 | 1-3, 4-6 |
| T1213 | T1213NL | 1CT:1.15CT & 1CT:1CT | 1.20 | .60 | 35 | .90 | AN/1 | 1-3, 4-6 |
| T1214 | T1214NL | 1CT:1.36CT & 1CT:1.36CT | 1.20 | .60 | 30 | .80 | AN/1 | 1-3, 4-6 |
| T1215 | T1215NL | 1CT:1.41CT & 1CT:1.41CT | 1.20 | .60 | 30 | .70 | AN/1 | 1-3, 4-6 |
| T1216 | T1216NL | 1CT:2.3CT & 1CT:2CT | 1.20 | .60 | 25 | .60 | AN/1 | 1-3, 4-6 |
| T1217 | T1217NL | 1CT:2.42CT & 1CT:2.42CT | 1.20 | .60 | 25 | .60 | AN/1 | 1-3, 4-6 |
| T1218 | T1218NL | 1CT:1CT & 1CT:1.36CT | 1.20 | .60 | 35 | .90 | AN/1 | 1-3, 4-6 |
| T1219 | T1219NL | 1CT:2.4CT & 1CT:1CT | 1.20 | .60 | 35 | .90 | AN/1 | 1-3, 4-6 |

NOTE: Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (ex: T1207T and T1207NLT).

Mechanical

Schematics

AN



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

Weight 4.0 grams
Tape & Reel250/reel
Tube30/tube

T1/E1/CEPT/ISDN-PRI INTERFACE MODULES

Dual Surface Mount Transformer Modules, 1500Vrms, Extended Temperature Range



Notes From Tables

- Extended Temperature Range Models** — For extended temperature range transformers (-40°C to +85°C operating temperature range), OCL (Open Circuit Inductance) is specified at both -40°C and +25°C. At -40°C, OCL is 600 µH minimum. All other parameters are specified at +25°C only. Standard temperature range is 0°C to +70°C.
- Turns ratio is specified primary: secondary (CT = Center Tap).
- Standard packaging for the surface mount package is anti-static tubes. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number, (i.e. T1220T).

Application Notes

- ET Product** — All coils have an ET product of 10V-µsec minimum.
- Flammability** — Materials used in the products are recognized as UL94-VO 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 50dB at 1MHz. A typical test circuit is shown below.
- Crosstalk Attenuation** — In the 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 65dB or better. 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 | 50-100kHz | 100kHz-2MHz | 2-3MHz |
|-------------|-----------|-------------|--------|
| Return Loss | | | |
| XMIT | 9 dB | 15dB | 11dB |
| RCV | 12dB | 18dB | 14dB |

- Surge Voltage Capability** — All transformers and chokes meet surge voltage tests according to the most stringent regulatory documents, when used with the proper voltage and current suppression devices:
 - Metallic Voltage: 800V peak, 10/560µsec
 - Longitudinal Voltage: 2,400V peak, 10/700µsec
- Isolation Voltage** — 100% of transformers are tested during production to the specified isolation voltage level.
- General Information** — The transformers are specifically designed for use in 1.544Mbps (T1), 2.048Mbps (CEPT) and ISDN Primary rate (PRI) interface applications. They are matched to the majority of the line interface transceiver ICs currently available. 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.
- Transformer Selection Guide** — Please contact Pulse Application Engineering or see our website for the latest Pulse Transformer Selection Guide.

For More Information:

Pulse Worldwide Headquarters

12220 World Trade Dr.
San Diego, CA 92128
U.S.A.

www.pulseeng.com

TEL: 858 674 8100

FAX: 858 674 8262

Pulse Europe

Einsteinstrasse 1
D-71083 Herrenberg
Germany

Tel: 49 7032 7806 116

Fax: 49 7032 7806 135

Pulse China Headquarters

No. 1
Industrial District
Changan, Dongguan
China

Tel: 86 769 85538070

Fax: 86 769 85538870

Pulse North China

Room 1503
XinYin Building
No. 888 YiShan Rd.
Shanghai 200233
China

Tel: 86 21 54643211/2

Fax: 86 21 54643210

Pulse South Asia

150 Kampong Ampat
#07-01/02
KA Centre
Singapore 368324

Tel: 65 6287 8998

Fax: 65 6280 0080

Pulse North Asia

No. 26
Kao Ching Rd.
Yang Mei Chen
Taoyuan Hsien
Taiwan, R. O. C.

Tel: 886 3 4641811

Fax: 886 3 4641911

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners.

© Copyright, 2006. Pulse Engineering, Inc. All rights reserved.

www.pulseeng.com

T660.B (6/06)



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.