

Overview

The KEMET PLT pulse transformers are common mode choke coils suitable for Power Line Communication (PLC). Designed with our proprietary ferrite core, they show excellent insertion loss characteristics.

Applications

- PLT-01: 264 VAC maximum power supply line for Power Line Communication (PLC)
- PLT-02: 110 VAC maximum power supply line for Power Line Communication (PLC)

Benefits

- Proprietary ferrite material
- Flat insertion loss characteristics
- Suitable for each country's power line, including 100 V type
- Operating temperature range from -25°C to $+100^{\circ}\text{C}$
- UL94 V-0 flame retardant rated base
- RoHS compliant

Ordering Information

| PLT- | 01 |
|--------|--------------------------|
| Series | Power Supply Line AC (V) |
| PLT | 01 = 264 V 02 = 110 V |

PLT-01



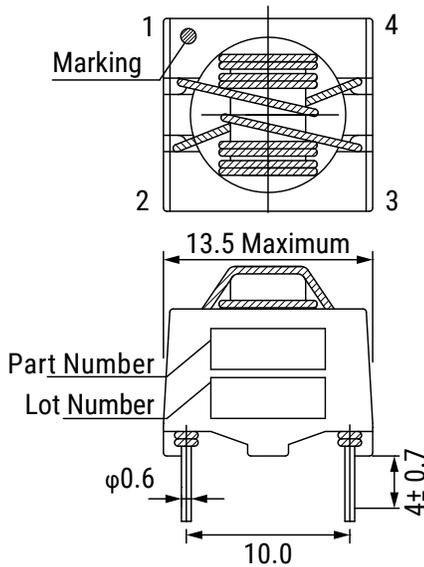
PLT-02



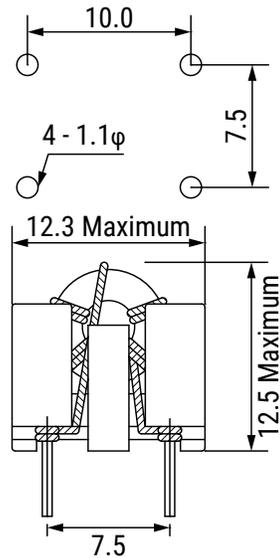
Dimensions – Millimeters

PLT-01

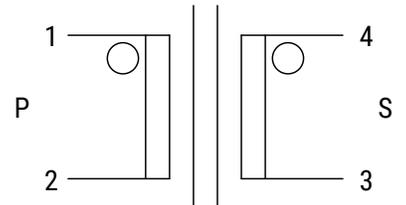
Dimensions - Millimeters



Pin Pattern Gauge Dimensions - Millimeters Tolerance ± 0.1 mm

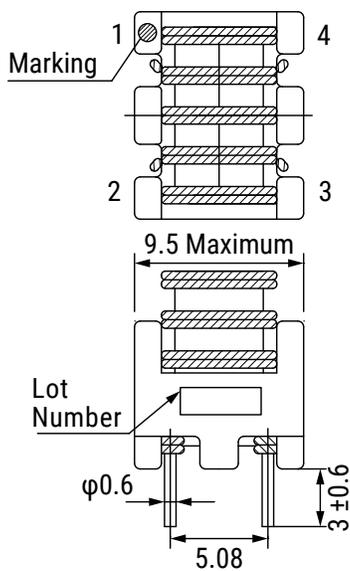


Circuit Diagram

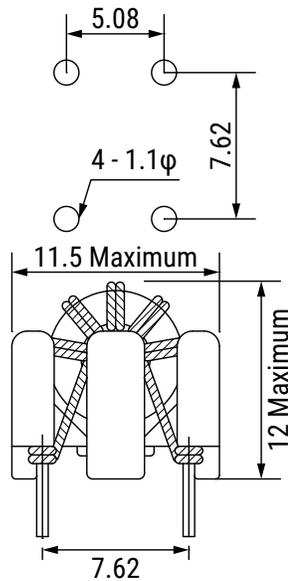


PLT-02

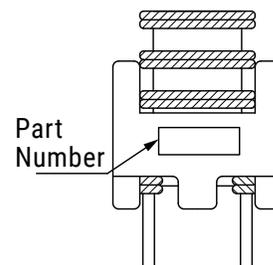
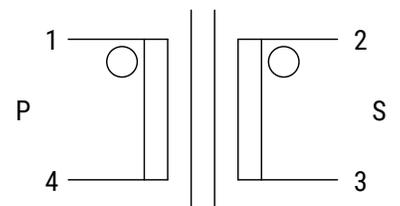
Dimensions - Millimeters



Pin Pattern Gauge Dimensions - Millimeters Tolerance ± 0.1 mm



Circuit Diagram



Environmental Compliance

All KEMET Pulse Transformers are RoHS compliant.



Performance Characteristics

| Item | Performance Characteristics |
|----------------------------------|---|
| Rated Current | 0.30 A _{rms} |
| Insulation Resistance | 100 MΩ minimum at 500 VDC (between coil and coil) |
| Rated Inductance | 7.5 μH minimum |
| Inductance Measurement Condition | 100 kHz, 1 mA |
| Rated DC Resistance Range | 55 mΩ maximum |
| Operating Temperature Range | -25°C to +100°C (including self-temperature rise) |

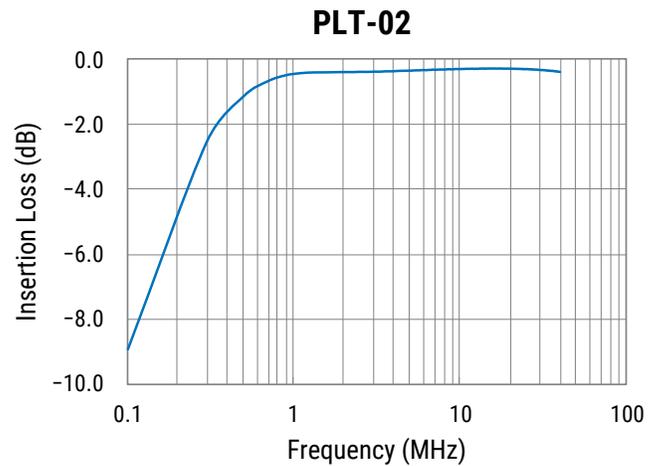
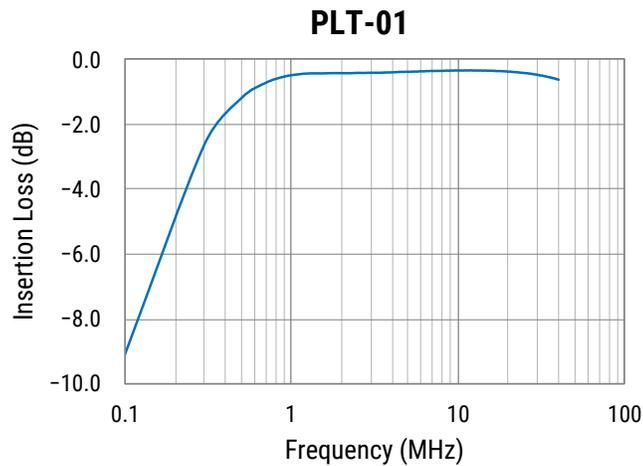
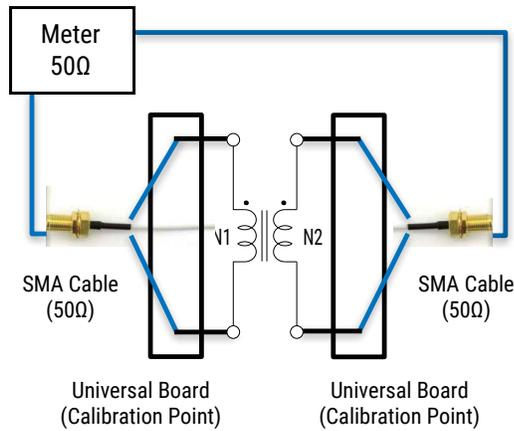
Table 1 – Ratings & Part Number Reference

| Part Number | Rated Voltage AC (V) Maximum | Rated Current (A) ΔT = 25°C | Inductance (μH) Minimum | DC Resistance (mΩ) Maximum | Dielectric Voltage AC ¹ (V) | Terminal Lead Diameter (mm) | Weight (g) |
|-------------|------------------------------|-----------------------------|-------------------------|----------------------------|--|-----------------------------|------------|
| PLT-01 | 264 | 0.3 | 7.5 | 55 | 3,600 | φ 0.6 | 1.8 |
| PLT-02 | 110 | 0.3 | 7.5 | 55 | 1,200 | φ 0.6 | 1.3 |

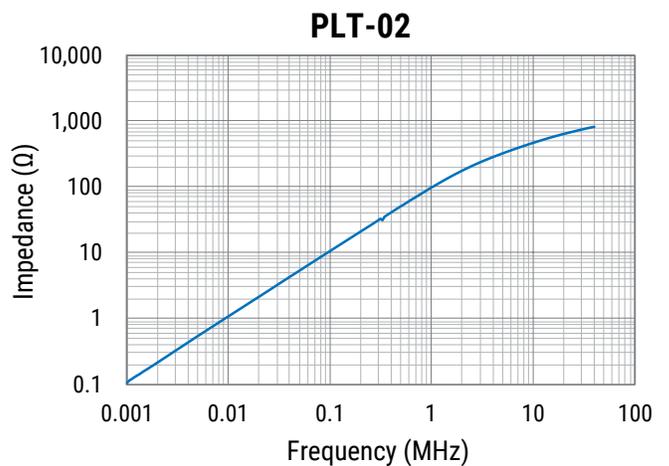
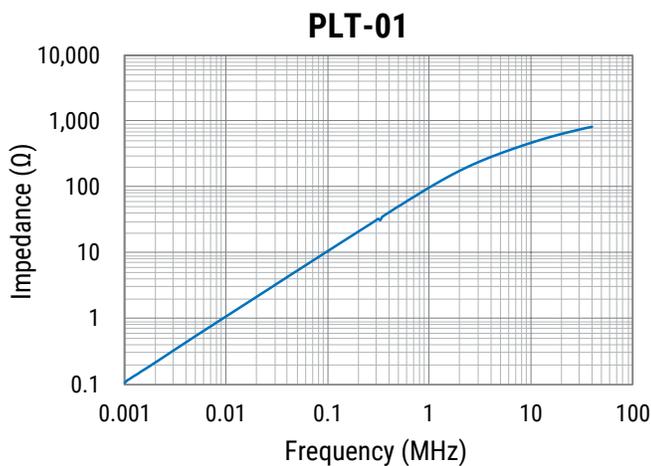
¹ Two seconds, between coil and coil, no abnormality.

Insertion Loss Characteristics

Measuring Circuit



Impedance Characteristics



Packaging

| Part Number | Packaging Type | Pieces per Box |
|-------------|----------------|----------------|
| PLT-01 | Bulk | 280 |
| PLT-02 | Bulk | 900 |

Handling Precautions

Precautions for product storage

Pulse Transformers should be stored in normal working environments. While the transformers themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Avoid also storage near strong magnetic fields as this might magnetize the product.

For optimized solderability Transformers stock should be used promptly, preferably within six months of receipt.

Product temperature rise values

The values listed for temperature rise are the result of self-heating in wires when the rated current is applied. Check and evaluate the value of the core temperature rise under actual operating conditions when using.

Export Control

For customers in Japan

For products which are controlled items subject to the “Foreign Exchange and Foreign Trade Law” of Japan, the export license specified by the law is required for export.

For customers outside Japan

Pulse Transformers should not be used or sold for use in the development, production, stockpiling or utilization of any conventional weapons or mass-destructive weapons (nuclear weapons, chemical or biological weapons or missiles) or any other weapons.

KEMET Electronics Corporation Sales Offices

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Although KEMET designs and manufactures its products to the most stringent quality and safety standards, given the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage.

Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated or that other measures may not be required.

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