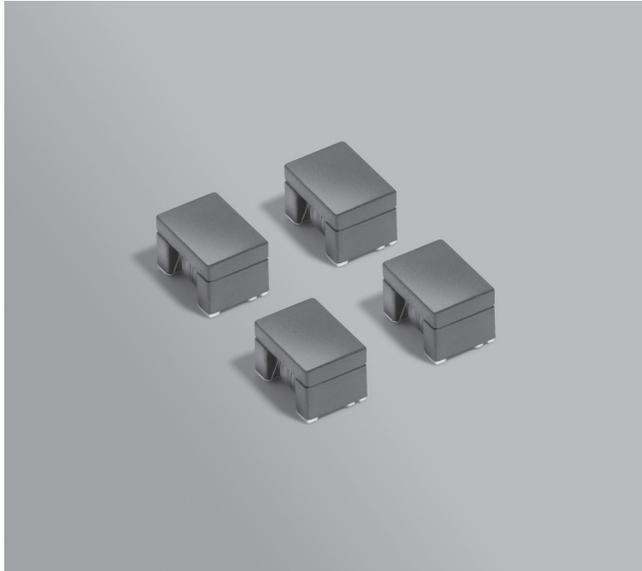


# Ethernet Isolation Transformers



- Complies with IEEE 802.3 Standards
- Chip-style in a compact SMT package: 4.7 x 3.1 x 3.1 mm
- Fully automated for cost reduction and reliability
- AEC-Q200 qualified

**Core material** Ferrite

**Terminations** RoHS compliant matte tin over nickel over silver-platinum-glass frit

**Weight** 120 – 130 mg

**Ambient temperature** –40°C to +125°C with Irms current

**Max part temperature** +140°C(ambient + temp rise)

**Storage temperature** Component: –40°C to +125°C.  
Tape and reel packaging: –40°C to +80°C

**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Packaging** 600/7" reel; 2200/13" reel Plastic tape: 12 mm wide, 0.25 mm thick, 8 mm pocket spacing, 3.25 mm pocket depth

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCBt\\_Washing.pdf](#).

Part number <sup>1</sup>	Inductance <sup>2</sup> min (µH)	Imp. ratio pri : sec	DCR max (Ohms)	Isolation <sup>3</sup> (Vrms)	Insertion loss max (dB)	Bandwidth (MHz)	IDC <sup>4</sup> max (mA)
1812TRX-S124R_	120	1CT : 1CT	2.5	1500	0.15	0.1 – 1100	430
1812TRX-S254R_	250	1CT : 1CT	3.8	1500	0.35	0.1 – 820	350

1. When ordering, please specify **packaging** code:

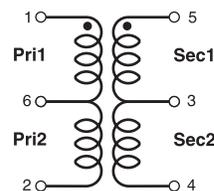
**1812TRX-S254RC**

**Packaging:** **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (600 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

**D** = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (2200 parts per full reel).

- Inductance is per winding, measured at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter and a Coilcraft CCF 1113 fixture.
- 1500 Vrms, one minute isolation (hipot) between primary to secondary.
- IDC max per the center tap is the current required to increase the part temperature 15°C from ambient 25°C.
- Electrical specifications at 25°C. Measurements are referenced to 50 Ohms.

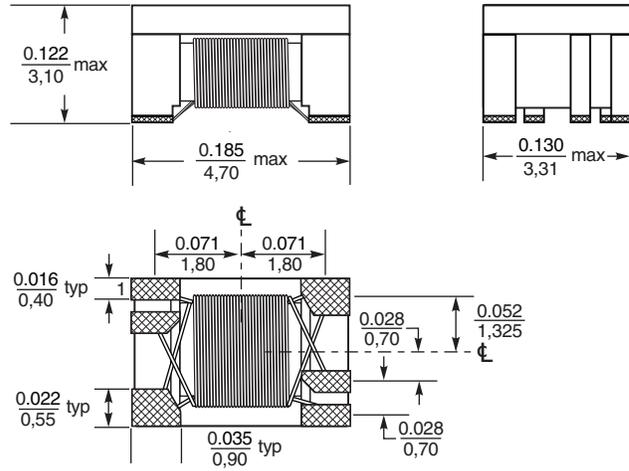
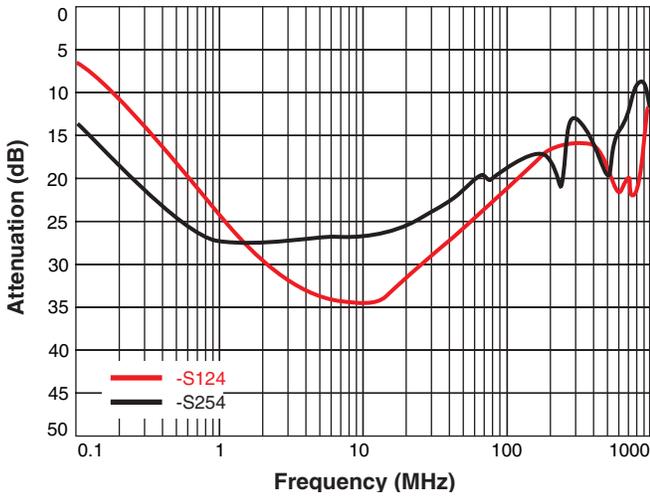
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



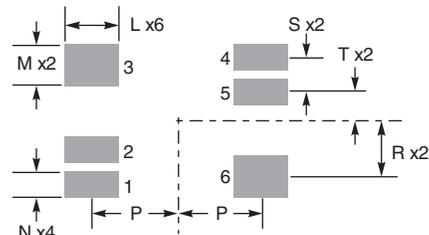
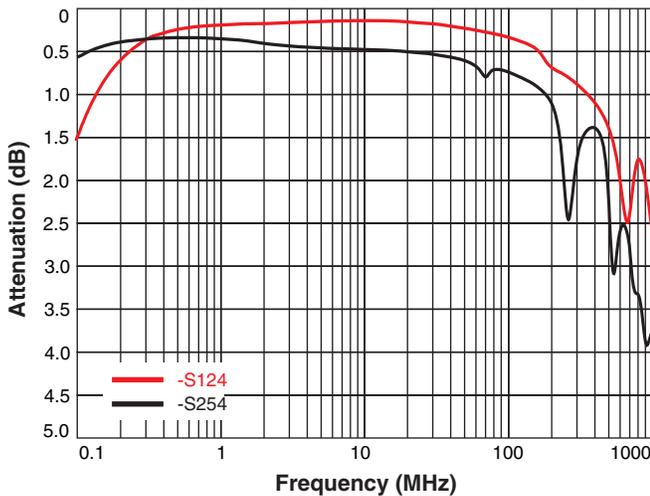


# Ethernet Isolation Transformers – 1812TRX

## Return Loss



## Insertion Loss



**Recommended Land Pattern**

Dimensions are in  $\frac{\text{inches}}{\text{mm}}$

L	M	N	P	R	S	T	
0.039	0.028	0.022	0.071	0.052	0.028	0.028	inches
1.0	0.70	0.55	1.80	1.325	0.70	0.70	mm



**US** +1-847-639-6400 sales@coilcraft.com  
**UK** +44-1236-730595 sales@coilcraft-europe.com  
**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw  
**China** +86-21-6218 8074 sales@coilcraft.com.cn  
**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

Document 1591-2 Revised 09/13/24  
 © Coilcraft Inc. 2025  
 This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.