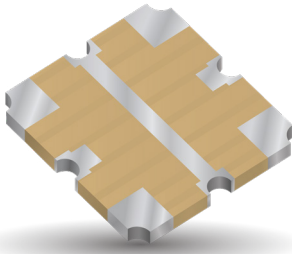


Multilayer Organic (MLO®) SMT Crossovers

MLO® SMT Crossovers

RF-DC



GENERAL DESCRIPTION

The MLO® SMT RF-DC Crossover is a very low profile crossover that intersects an RF and DC circuit trace in an SMT package. The RF-DC Crossover is a low cost solution for applications where a critical RF circuit trace intersects a DC circuit precluding the need for an expensive multilayer printed circuit board. The SMT package can support frequencies up to 6 GHz. MLO® crossovers have been subjected to JEDEC reliability standards and 100% electrically tested. The RF-DC crossovers are available in NiSn.

FEATURES

- DC – 6.0 GHz
- RF – DC Crossover
- Low Loss
- DC Isolation
- Surface Mountable
- Tape and Reel
- 100% Tested

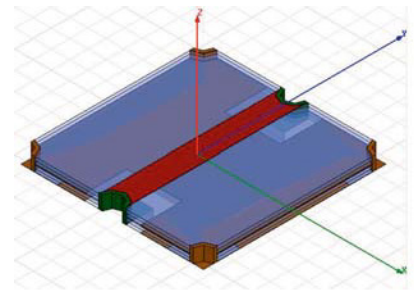
APPLICATIONS

- Military and Commercial Radar
- Medical Imaging Electronics
- Communications Transmitter
- Optical Drivers

LAND GRID ARRAY ADVANTAGES

- Inherent Low Profile
- Excellent Solderability
- Low Parasitics
- Better Heat Dissipation

TOP VIEW



HOW TO ORDER

| | | | |
|------------|-------------|-------------|---|
| X2A | 2020 | RFDC | T |
| Series | Size | Type | Packaging |
| | | | T = 1000pcs T&R T/250 = 250pcs T&R B = Bulk |



| Frequency (GHz) | Port Impedance (ohms) | Ins. Loss (dB max) | Return Loss (dB min) | Power (Watts) | θJC (°C /Watts) | Operating Temperature (°C) |
|-----------------|-----------------------|--------------------|----------------------|---------------|-----------------|----------------------------|
| DC -2.5 | 50 | 0.05 | 20 | 30 | 140 | -55 to +85 |
| 2.5 - 4.0 | 50 | 0.10 | 20 | 19 | 140 | -55 to +85 |
| 4.0 - 6.0 | 50 | 0.15 | 15 | 9 | 140 | -55 to +85 |

* Specification based on performance of component assembled properly on printed circuit board with 50Ω nominal impedance.

QUALITY INSPECTION

Finished parts are 100% tested for electrical parameters and visual characteristics.

NiSn compatible with automatic soldering technologies: Pb free reflow, wave soldering, vapor phase and manual.

- 55°C to +85°C

TERMINATION

OPERATING TEMPERATURE

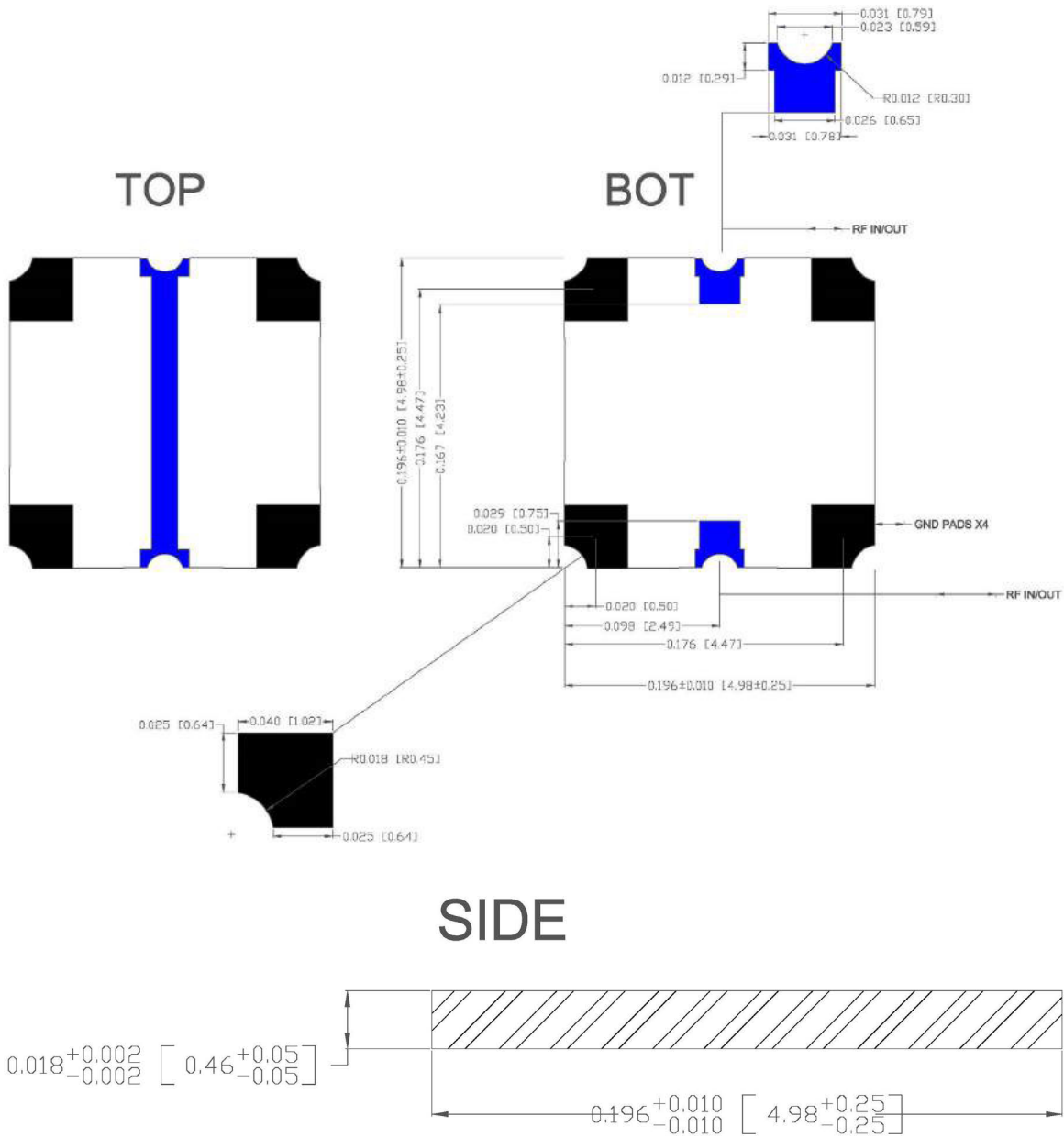
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MLO® SMT Crossovers

RF-DC



MECHANICAL OUTLINE



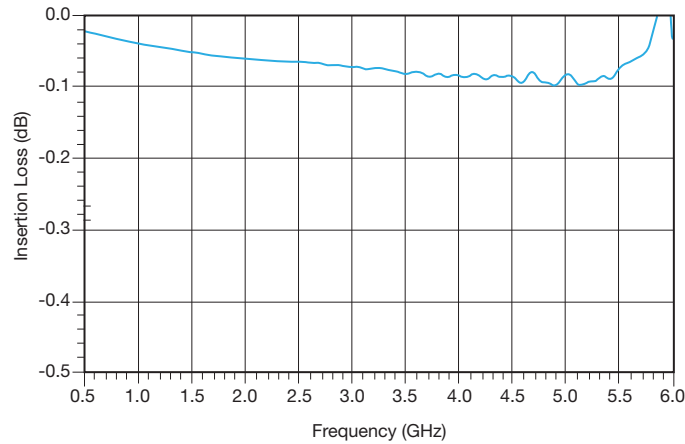
Multilayer Organic (MLO[®]) SMT Crossovers

MLO[®] SMT Crossovers

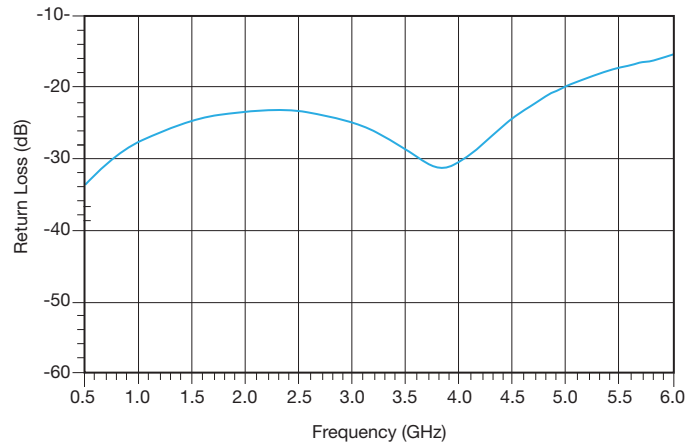
RF-DC

RF-DC SMT CROSSOVER PERFORMANCE: 0.3 GHZ TO 6 GHZ

RF/DC Crossover – Insertion Loss



RF/DC Crossover – Return Loss

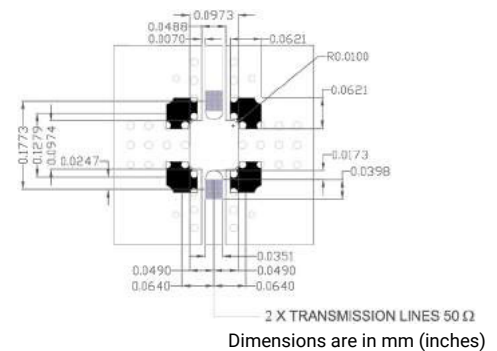


MOUNTING PROCEDURE

MLO[®] SMT crossovers require 50Ω transmission lines leading to and from all of the RF ports. Proper grounding is required in order to ensure optimal device performance. If these conditions are not met then performance parameters including insertion loss, return loss and any isolation may not meet published values. All of the MLO[®] components utilize castellated interconnects which allow for high yield assembly, expansion matched and halogen free dielectric. When mounting the user must be mindful of the following: a) ensure the RF pads of the device are in contact with the circuit trace of the printed circuit board and b) the ground plane of neither the component nor the PCB is in contact with the RF signal. Parts are specifically oriented in the tape and reel.

MOUNTING FOOTPRINT

To ensure proper electrical and thermal performance there must be a ground plane with 100% solder connection underneath the part.



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