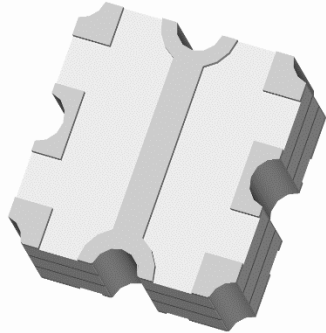


SMT Crossover

Xinger[®]



Description:

The X2BS is a low profile crossover to intersect an RF and RF circuit trace in an easy to use surface mount package designed for frequencies up to 6 GHz. The X2BS is ideal for any application where an RF circuit must intersect with another RF circuit without resorting to a multilayer PCB.

Parts have been subjected to rigorous qualification testing and units are 100% tested. They are manufactured using materials with x and y thermal expansion coefficients compatible with common substrates such as FR4, G-10, RF-35, RO4003 and polyimide. Produced with 6 of 6 RoHS compliant tin immersion finish.

Electrical Specifications**

Frequency	Port Impedance	Return Loss	Isolation
GHz	Ohms	dB Min	DB Min
DC – 2.5	50	20	50
2.5 – 3.5	50	18	30
3.5 – 6.0	50	15	20
Insertion Loss	Power	Operating Temp.	
dB Max	Watts	°C	
0.05	30	-55 to +85	
0.10	15	-55 to +85	
0.20	10	-55 to +85	

Features:

- DC – 6.0 GHz
- RF – RF Crossover
- Low Loss
- High Isolation
- Surface Mountable
- Tape And Reel
- Convenient Package
- 100% Tested
- Lead Free

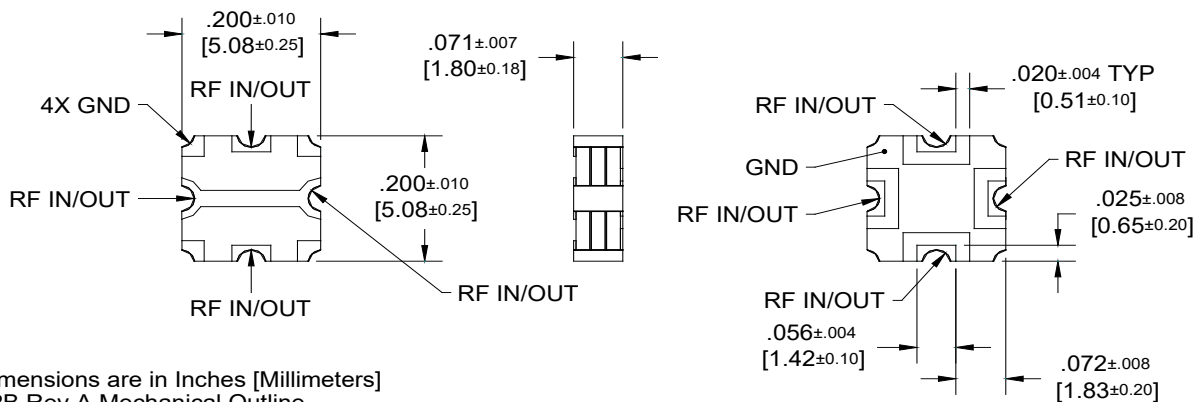
**Specification based on performance of unit properly installed on microstrip printed circuit boards with 50 Ω nominal impedance. Specifications subject to change without notice.

Mechanical Outline:

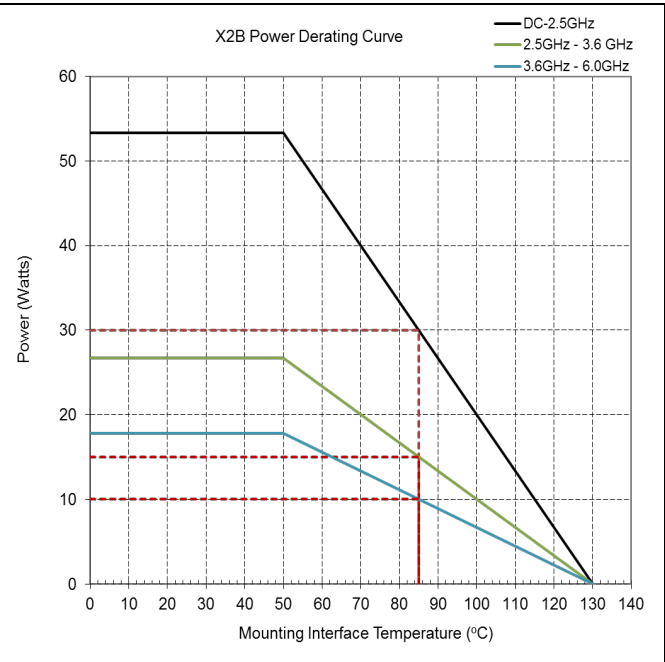
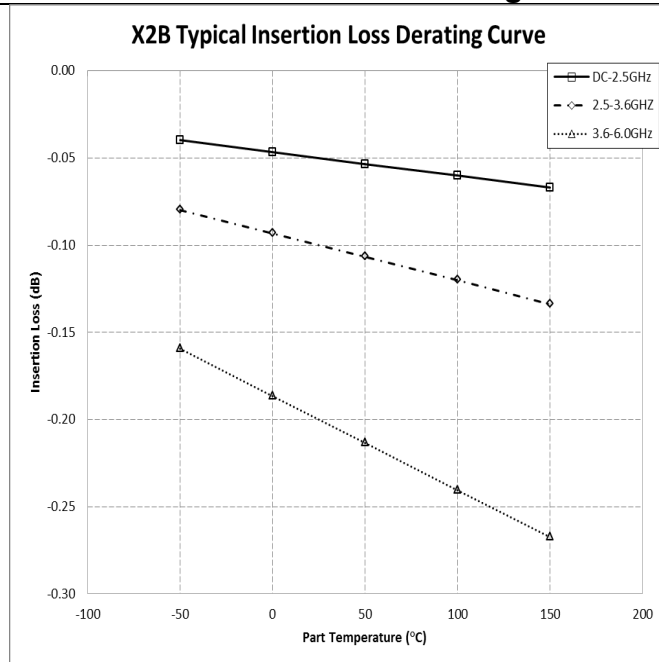
Top View (Near-side)

Side View

Bottom View (Far-side)



Insertion Loss and Power Derating Curves



Insertion Loss Derating

The insertion loss, at a given frequency, of a group of couplers is measured at 25°C and then averaged. The measurements are performed under small signal conditions (i.e. using a Vector Network Analyzer). The process is repeated at 85°C and 150°C. A best-fit line for the measured data is computed and then plotted from -55°C to 150°C

Power Derating

The power handling and corresponding power derating plots are a function of the thermal resistance, mounting surface temperature (base plate temperature), maximum continuous operating temperature of the coupler, and the thermal insertion loss. The thermal insertion loss is defined in the Power Handling section of the data sheet.

As the mounting interface temperature approaches the maximum continuous operating temperature, the power handling decreases to zero.

If mounting temperature is greater than 95°C, Xinger Crossover will perform reliably as long as the input power is derated to the curve above.