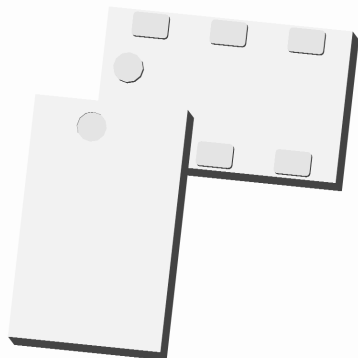


Xinger®



Ultra Low Profile 0805 3 dB, 90° Hybrid Coupler

Description

The C2327J5003AHF is a low cost, low profile sub-miniature high performance 3 dB coupler in an easy to use surface mount package. It is designed for WiMax, WiBro, WiFi, ISM, and EUMTS applications. The C2327J5003AHF is ideal for balanced power and low noise amplifiers, plus signal distribution and other applications where low insertion loss and tight amplitude and phase balance are required. The C2327J5003AHF is available on tape and reel for pick and place high volume manufacturing.

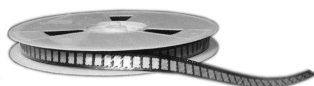
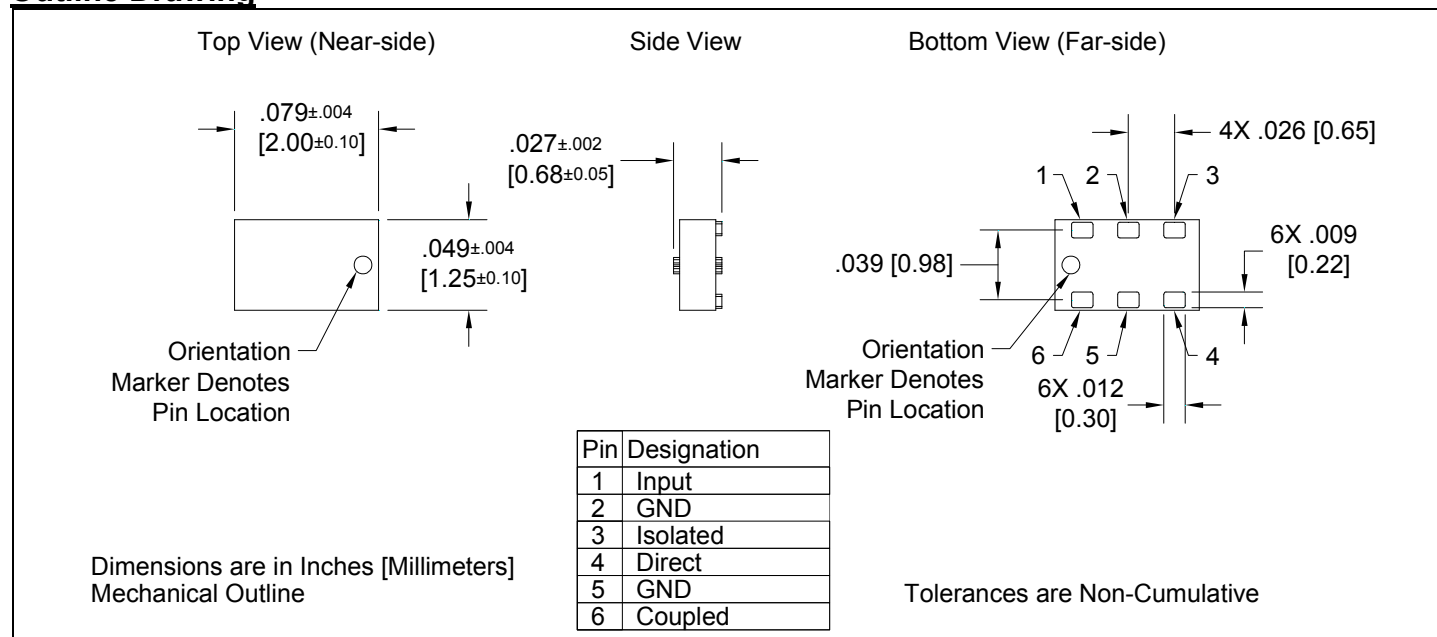
All of the Xinger components are constructed from ceramic filled PTFE composites which possess excellent electrical and mechanical stability having X and Y thermal coefficient of expansion (CTE) of 17 ppm/°C.

Detailed Electrical Specifications: Specifications subject to change without notice.

Features:	Parameter	ROOM (25°C)			Unit
		Min.	Typ.	Max	
2300 – 2700 MHz 0.7mm Height Profile - WiMax, WiBro, WiFi & ISM - Low Insertion Loss - High Isolation - Surface Mountable - Tape & Reel - Non-conductive Surface - RoHS Compliant - Halogen-free	Frequency	2300		2700	MHz
	Port Impedance		50		Ω
	Return Loss	15	18		dB
	Isolation	18	22		dB
	Insertion Loss*		0.3	0.4	dB
	Amplitude Balance		0.1	0.9	dB
	Phase Balance (relative to 90°)		4	8	Degrees
	Power Handling			4	Watts
	Operating Temperature	-55		+85	°C

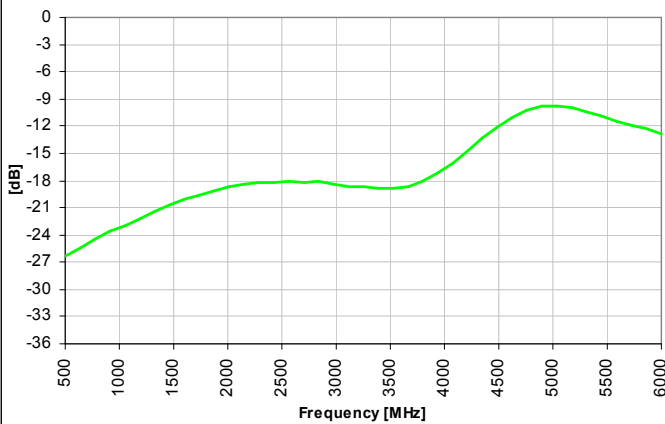
* Insertion Loss stated at room temperature (Insertion Loss is approximately 0.1 dB higher at +85 °C)

Outline Drawing

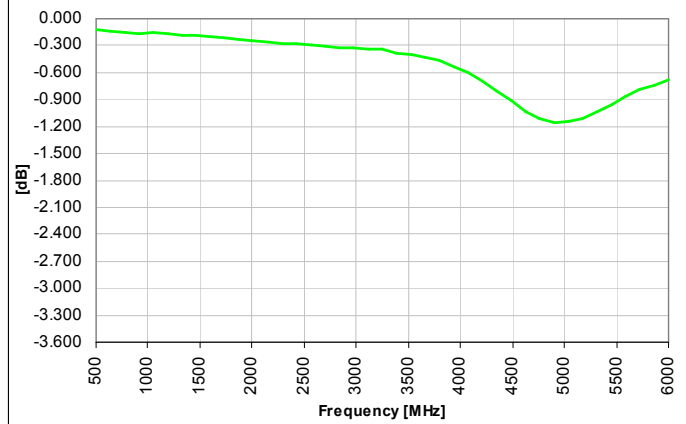


Typical Broadband Performance: 500 MHz. to 6000 MHz.

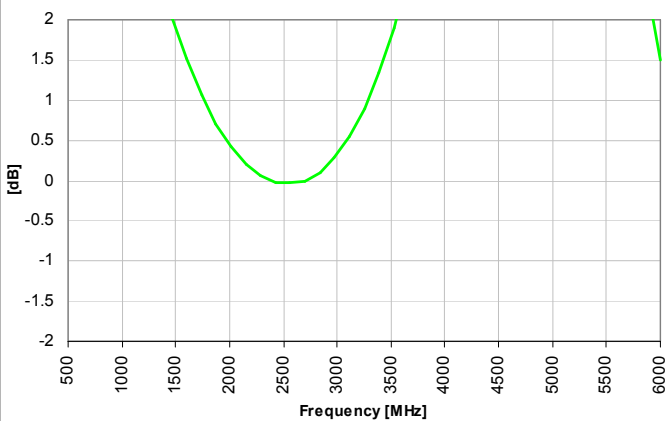
Return Loss - Input



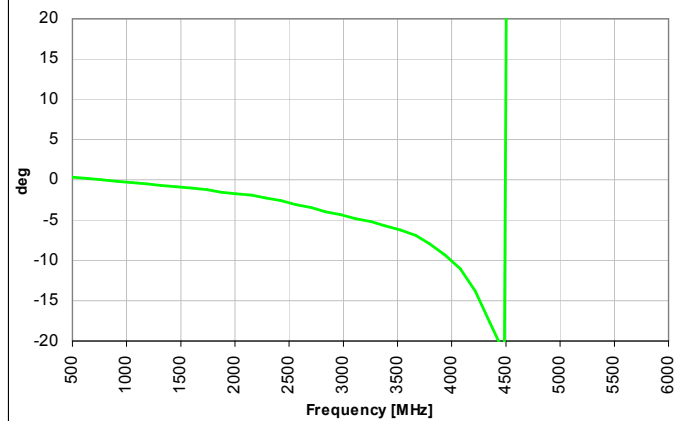
Insertion Loss



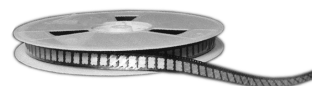
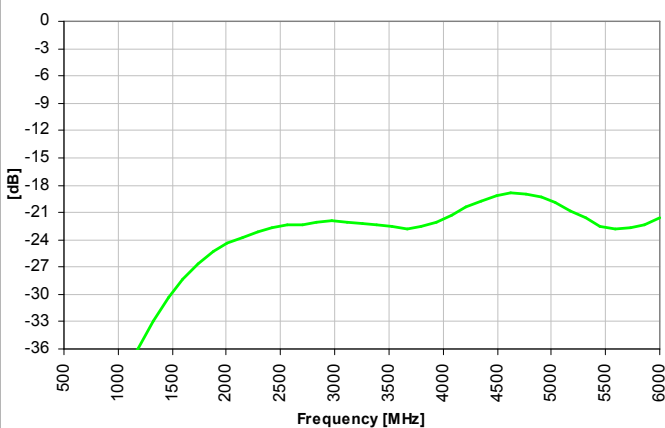
Amplitude Balance



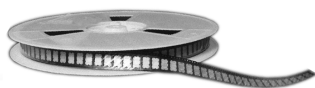
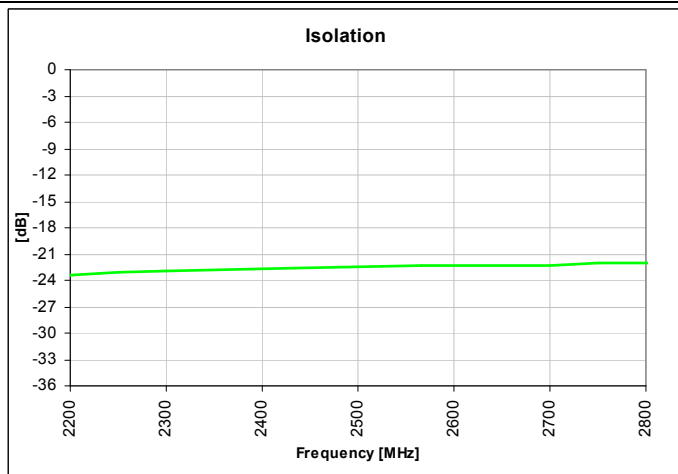
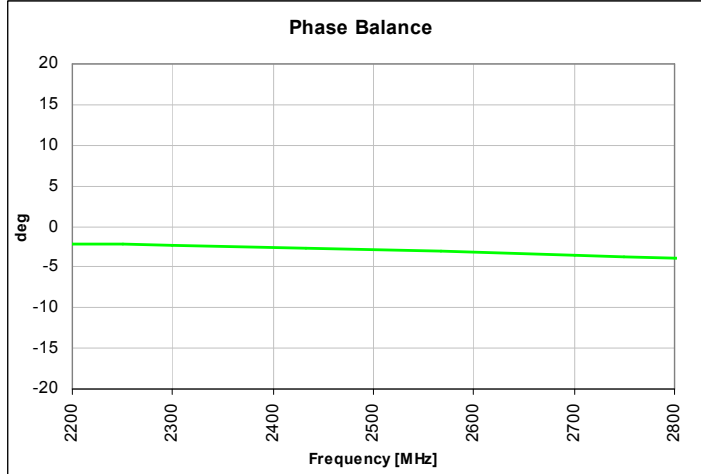
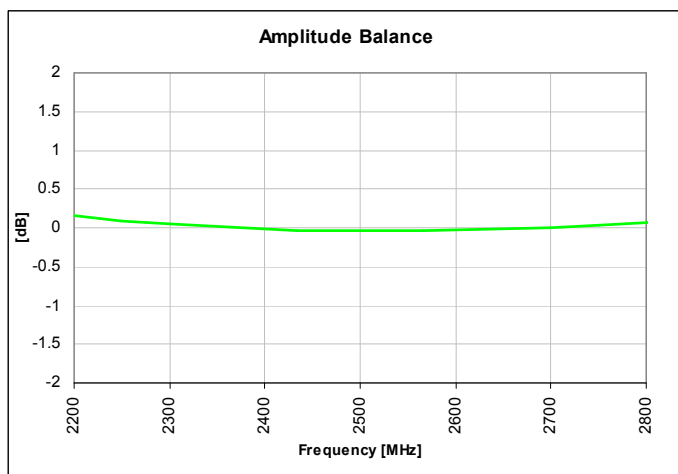
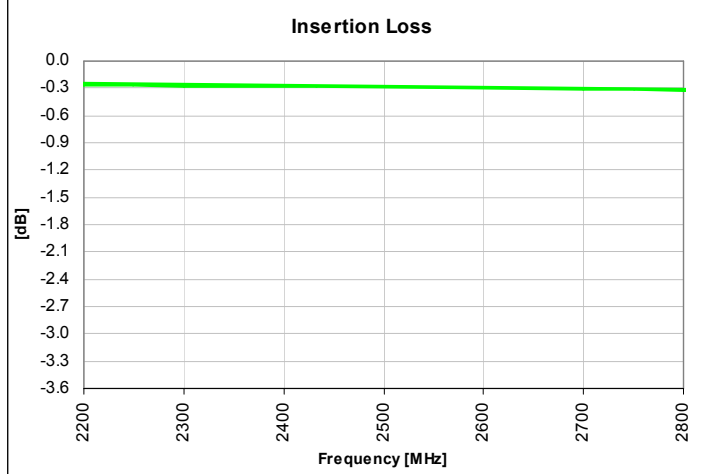
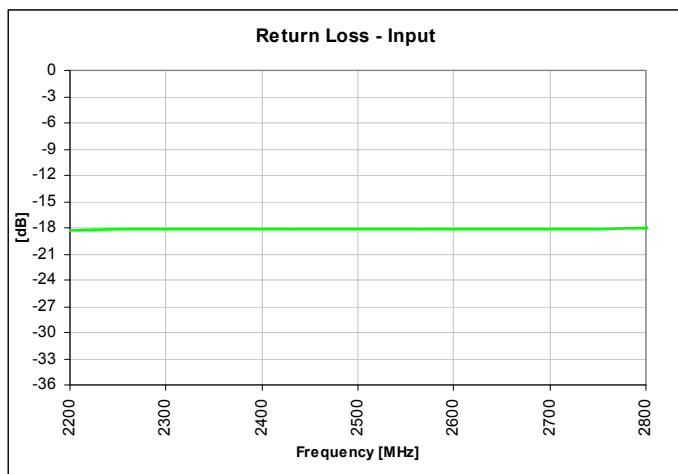
Phase Balance



Isolation



Typical Performance: 2200 MHz. to 2800 MHz.

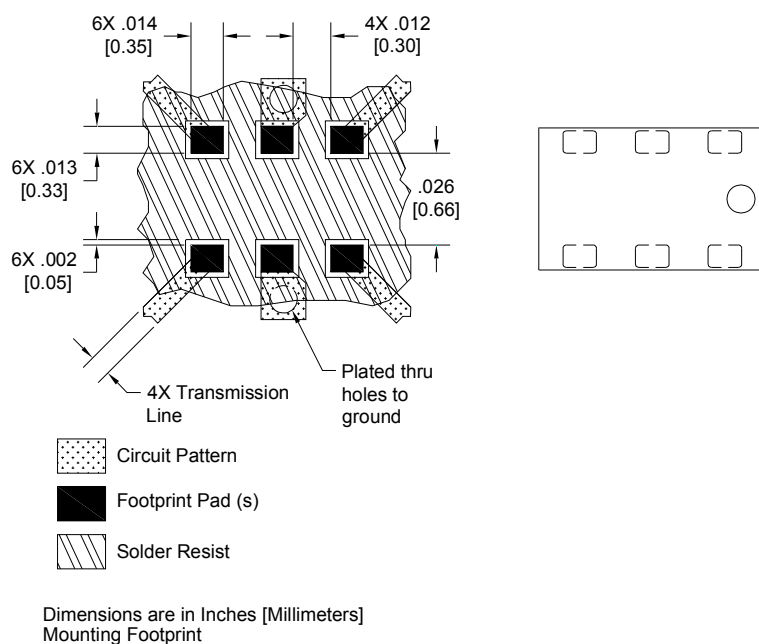


Mounting Configuration:

In order for Xinger surface mount components to work optimally, the proper impedance transmission lines must be used to connect to the RF ports. If this condition is not satisfied, insertion loss, Isolation and VSWR may not meet published specifications.

All of the Xinger components are constructed from ceramic filled PTFE composites which possess excellent electrical and mechanical stability having X and Y thermal coefficient of expansion (CTE) of 17 ppm/°C.

An example of the PCB footprint used in the testing of these parts is shown below. In specific designs, the transmission line widths need to be adjusted to the unique dielectric coefficients and thicknesses as well as varying pick and place equipment tolerances.



Packaging and Ordering Information

Parts are available in reel and are packaged per EIA 481-2. Parts are oriented in tape and reel as shown below. Minimum order quantities are 4000 per reel. See Model Numbers below for further ordering information.

