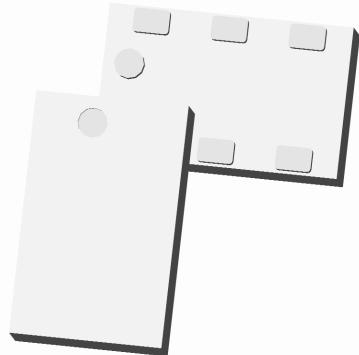


Xinger®



Ultra Low Profile 0805 3 dB, 90° Hybrid Coupler

Description

The C1720J5003AHF 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 PCS, DCS, DECT, and WCDMA-3G applications. The C1720J5003AHF 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 C1720J5003AHF 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.

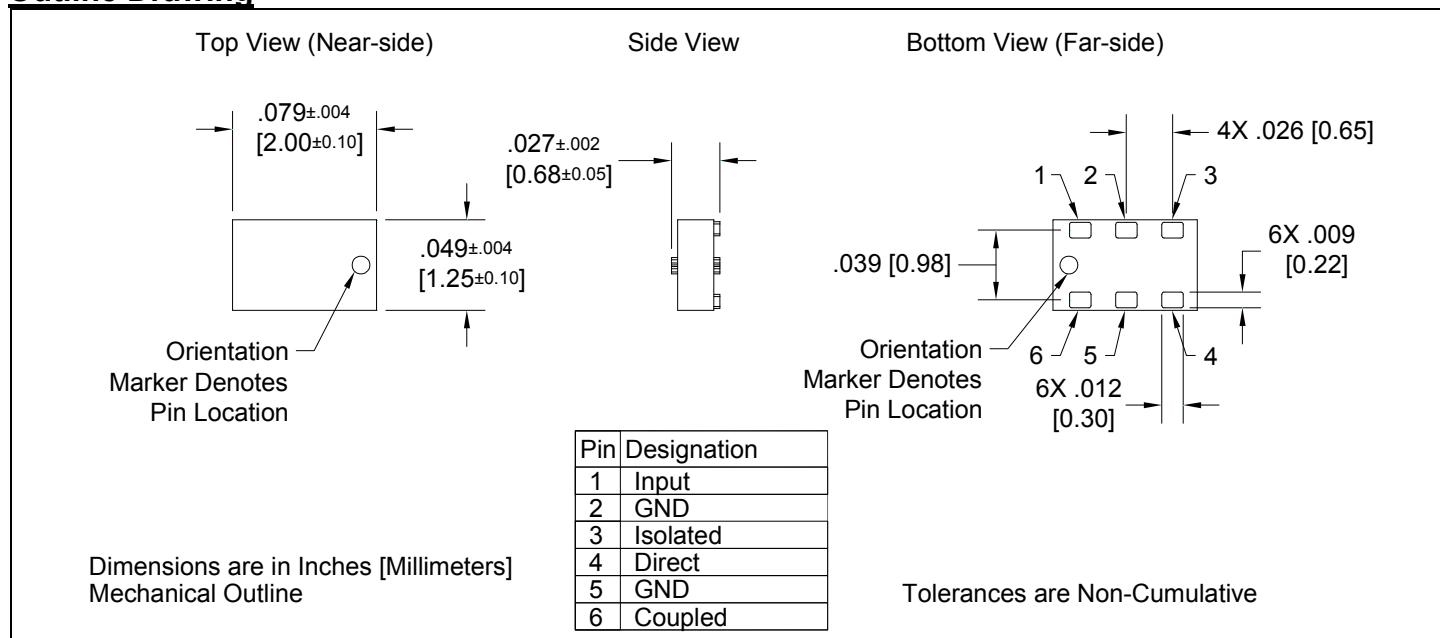
Detailed Electrical Specifications:

Specifications subject to change without notice.

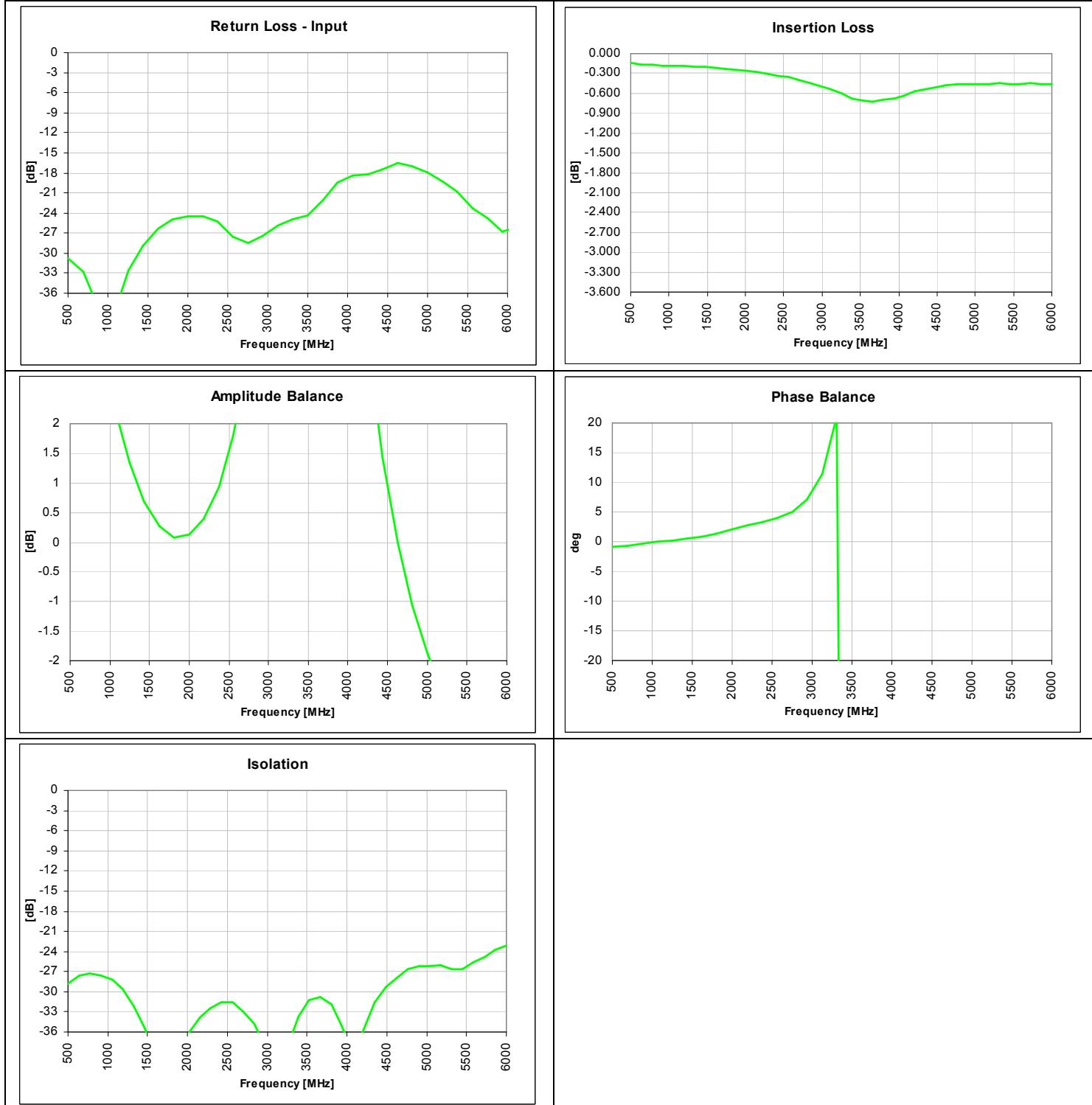
Features:	Parameter	ROOM (25°C)			Unit
		Min.	Typ.	Max	
• 1700 – 2000 MHz	Frequency	1700		2000	MHz
• 0.7mm Height Profile	Port Impedance		50		Ω
• PCS, DCS, DECT, & WCDMA-3G	Return Loss	21	27		dB
• High Isolation & Low Loss	Isolation	24	36		dB
• Surface Mountable	Insertion Loss*		0.3	0.4	dB
• Tape & Reel	Amplitude Balance		0.2	1.0	dB
• Non-conductive Surface	Phase Balance (relative to 90°)		1	5	Degrees
• RoHS Compliant	Power Handling			4	Watts
• Halogen-Free	Operating Temperature	-55		+85	°C

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

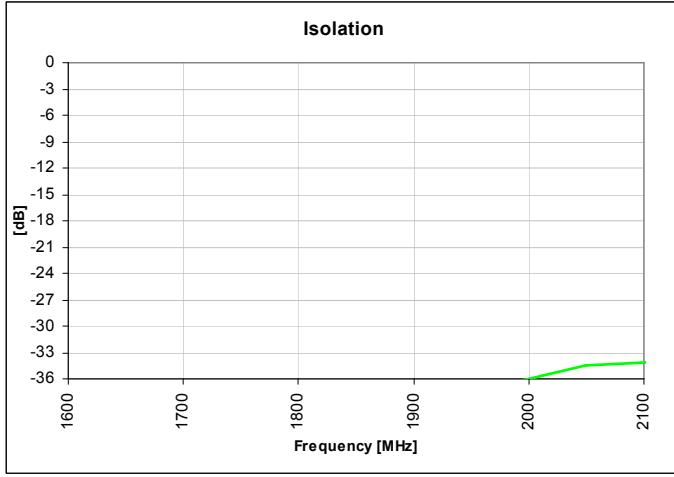
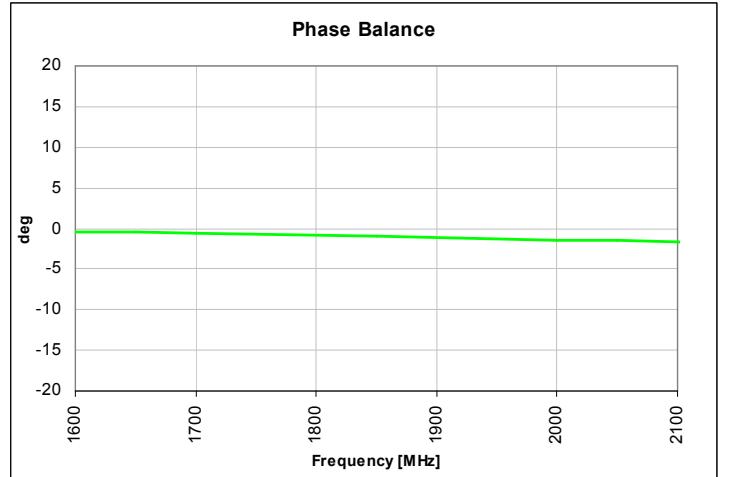
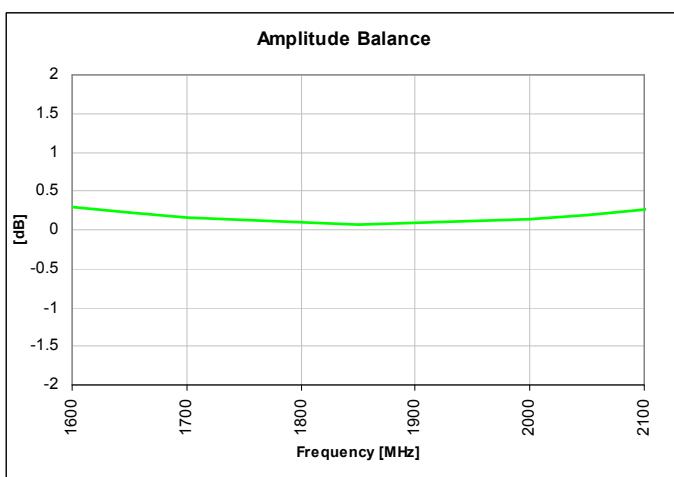
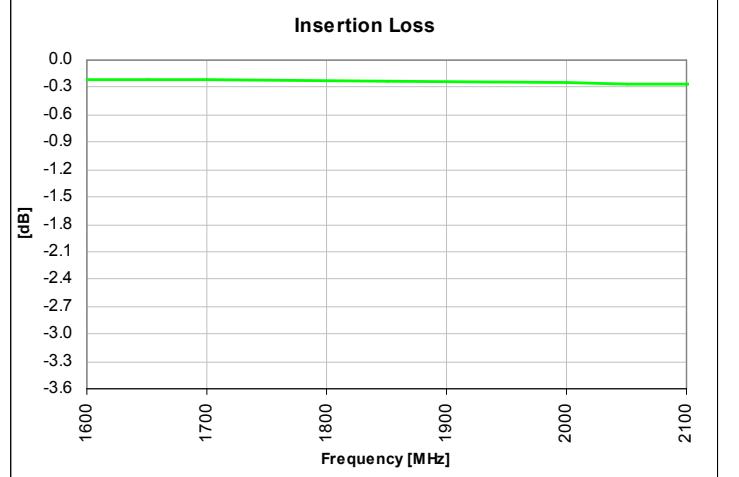
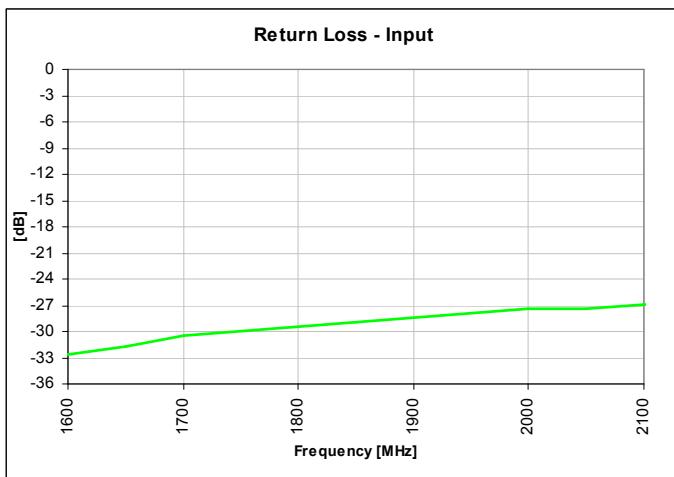
Outline Drawing



Typical Broadband Performance: 500 MHz. to 6000 MHz.



Typical Performance: 1600 MHz. to 2100 MHz.

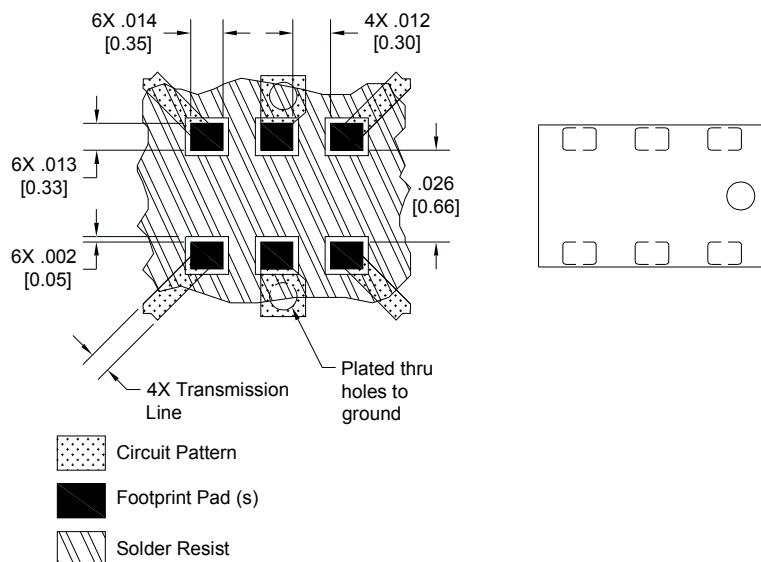


Mounting Configuration:

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/ $^{\circ}$ 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.

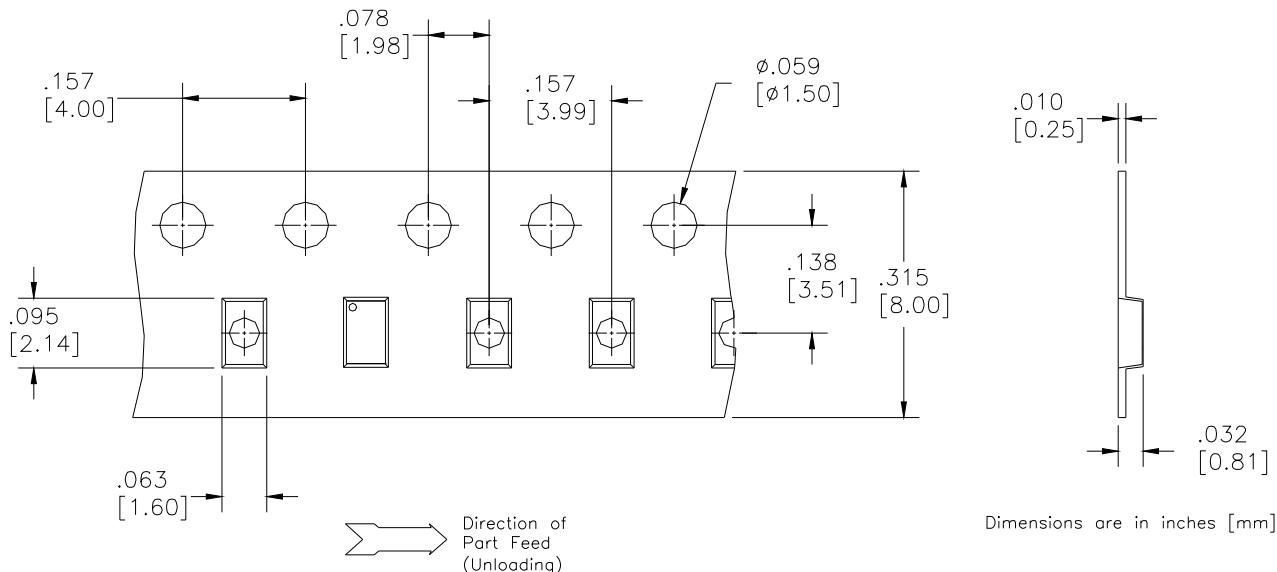


Dimensions are in Inches [Millimeters]
Mounting Footprint

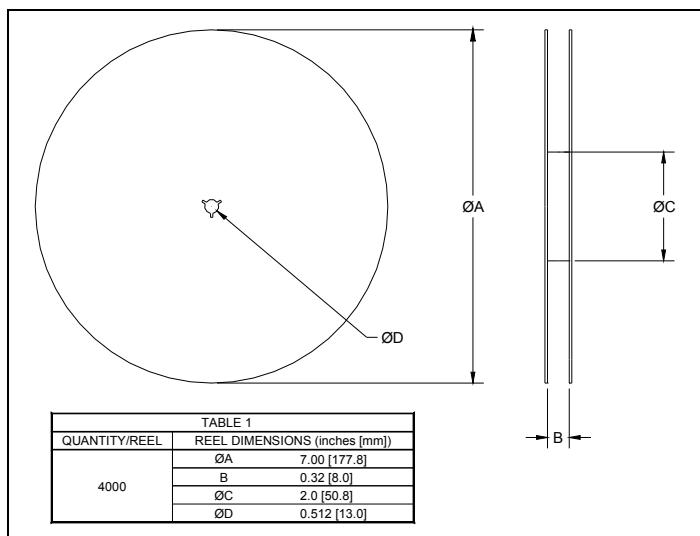


Packaging and Ordering Information

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.



Dimensions are in inches [mm]



Mouser Electronics

Authorized Distributor

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