



# Planar Monolithics Industries, Inc.

RF & Microwave Components and Modules to 40GHz

ISO9001:2008 Certified

May 21, 2014

## 0.5 to 2.0GHz I/Q Vector Modulator with

## 20dB Attenuation & 360 Degrees Phase Control

PMI Model No. PIQ-0R5G2G-360-20-CD-1

PMI Model No. PIQ-0R5G2G-360-20-CD-1 is a 0.5 to 2.0GHz, High Performance I/Q Vector Modulator with 2 x 12 bit monotonic TTL compatible channels (I and Q). This model offers a full 360 degrees of phase shift with a minimum of 20dB of amplitude control. The maximum switching speed is 500nsec and the unit operates on either +/-12VDC or +/-15VDC. The housing measures 5.0" x 5.0" x 1.0"



Frequency Range	0.5 to 2.0GHz
Dynamic Range	20dB & 360 Degrees
RF Input Power	+5dBm CW, 1.0 Watt max
Insertion Loss	11.0dB max
VSWR	1.6:1 max (50 ohm system)
Attenuation vs Frequency	±1.5dB typ
Phase vs Frequency	±10.0 degrees typ
Control Logic	2x12 BITS (I & Q), TTL Compatible
Control Slopes	Linear
Switching Speed	500 nSec max
Temperature Coefficient	±0.035 dB/°C & ±0.17 Deg/°C
Power Supply	±12V to ±15V @ 100mA max
RF Connectors	SMA Female Input and Output
Power/ Logic Connectors	DC-37P, Sub Miniature D Multi-Pin
Size	5.0" x 5.0" x 1.0"

Temperature:	-10°C to +60 °C Operating -65°C to +125 °C Non-Operating
Humidity:	MIL-STD-202G, Method 103B Cond B
Shock	MIL-STD-202G, Method 213B Cond B
Vibration:	MIL-STD-202G, Method 204D Cond B
Altitude:	MIL-STD-202G, Method 105C Cond B
Temperature Cycle	MIL-STD-202G, Method 107D Cond A

## PLANAR MONOLITHICS INDUSTRIES, INC.

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Maryland 21704 USA |

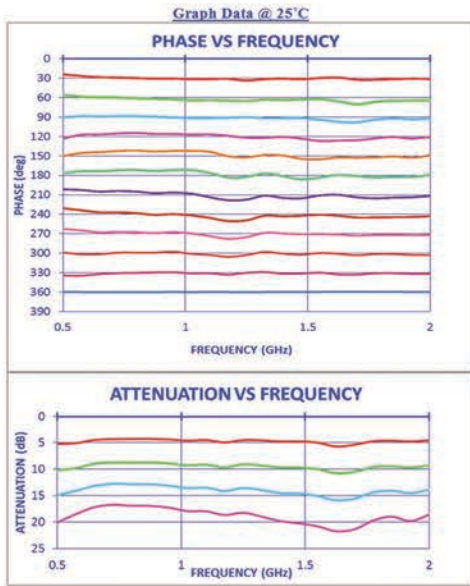
Tel: 301-662-5019 | Fax: 301-662-1731

4921 Roberts J. Mathews Parkway  
Suite 1 El Dorado Hills, CA 95762 USA

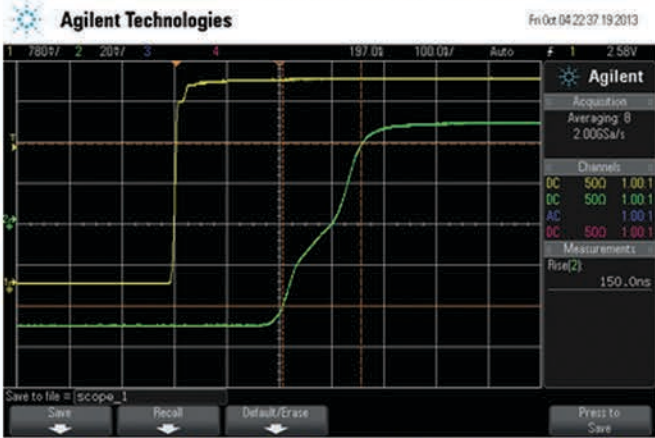
Tel: 916-542-1401 | Fax: 916-265-2597

Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com) | [www.pmi-rf.com](http://www.pmi-rf.com)

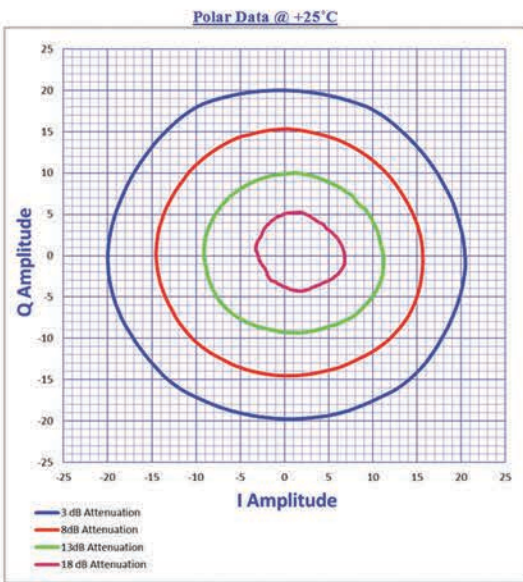
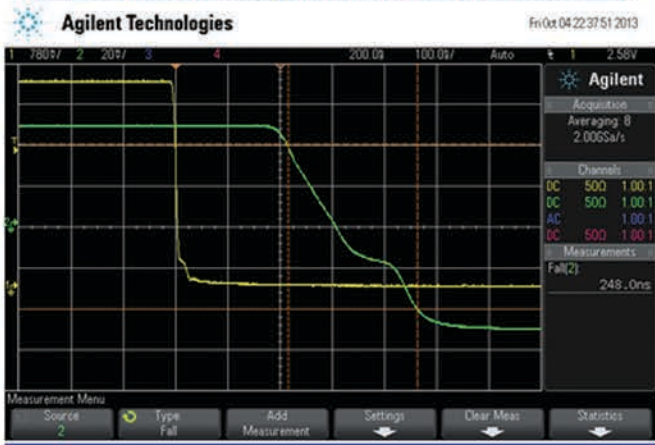
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**Rise Time, Delay On (Switching Speed) @ 25°C**

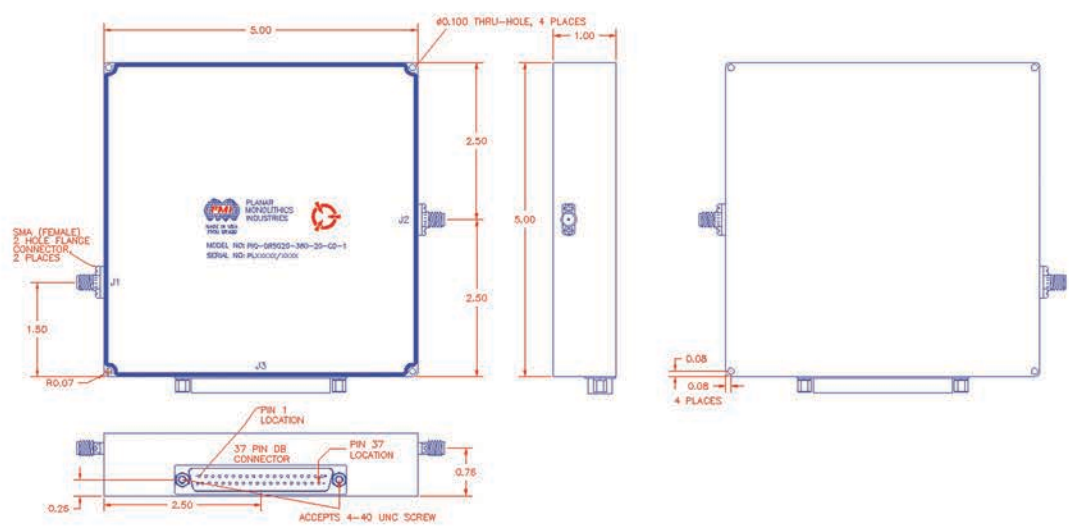


**Fall Time, Delay Off (Switching Speed) @ 25°C**



Yellow Trace(1):  
Green Trace(2):

Input Signal  
Phase Response  
(Measured with a Mixer)



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