

Product Data Sheet – June 2011 Iss 1 Rev 3

Description:

RPG offers broadband harmonic mixers with integrated isolator (50 – 220 GHz) for optimum RF matching. Hence standing waves, usually degrading RF power measurement accuracy, are suppressed. With each mixer covering a full waveguide band, the complete frequency range from 50 to 325 GHz becomes accessible for accurate power and frequency response measurements.



Features:

- Low conversion loss with reduced inband ripple
- Excellent VSWR with isolated input port
- Replaceable Precision Test Port Adapter
- Calibration table based on traceable standards for WR10, WR12 and WR15
- Conversion loss data provided in file format
- 3 port design and 2 port design

Applications:

- General RF Power and Frequency measurements
- Electron Spin Resonance (ESR)
- Spectrum Analyzers
- NF Measurement
- Network Analyzers
- Radiated Emission measurements
- Tx/Rx Systems and Compact Ranges
- Antenna Measurements

Specifications:

	WR15	WR12	WR10	WR8	WR6.5	WR5.1	WR3.4	
Frequency Range	50 – 75 GHz	60 – 90 GHz	75 – 110 GHz	90 – 140 GHz	110 – 170 GHz	140 – 220 GHz	220 – 325 GHz	
RF - Interface	WR15 with Flange UG387 HP/A	WR12 with Flange UG387 HP/A	WR10 with Flange UG387 HP/A	WR8 with Flange UG387 U-M	WR6.5 with Flange UG387 U-M	WR5.1 with Flange UG387 U-M	WR3.4 with Flange UG387 U-M	
IF & LO-Interface	SMA-F							
LO-Harmonic-No.	6	6	8	10	12	16	22	
LO-Frequency	8.5 GHz to 12.5 GHz	10 GHz to 15 GHz	9.375 GHz to 13.75 GHz	9 GHz to 14 GHz	9.16 GHz to 14.13 GHz	8.72 GHz to 13.72 GHz	10 GHz to 14.77 GHz	
LO- Power Range	+13 dBm to +20 dBm	+13 dBm to +17 dBm					+13 dBm to +16 dBm	
IF- Range	10 MHz to 1000 MHz							
RF- VSWR	1.5 : 1	1.5 : 1	1.5 : 1	1.5 : 1	1.6 : 1	1.7 : 1	2.5 : 1	
1 dB Compr. point	-3 dBm typical	-3 dBm typical	-3 dBm typical	-3 dBm typical	-3 dBm typical	-3 dBm typical	-5 dBm typical	
Maximum RF- Power	+10 dB,	+3 dBm	+3 dBm	+3 dBm	+3 dBm	+3 dBm	0 dBm	
Conversion Loss	30 dB max; typical 22 dB	30 dB max; typical 20 dB	30 dB max; typical 23 dB	35 dB max; typical 28 dB	37 dB max; typical 30 dB	42 dB max; typical 35 dB	44 dB max; typical 40 dB	
Traceable Standard	fully referenced	fully referenced	fully referenced	Power meter reference	Power meter reference	Power meter reference	Power meter reference	
Order Code	SAM-75	SAM-90	SAM-110	SAM-140	SAM-170	SAM-220	SAM-325	