

Power Detector

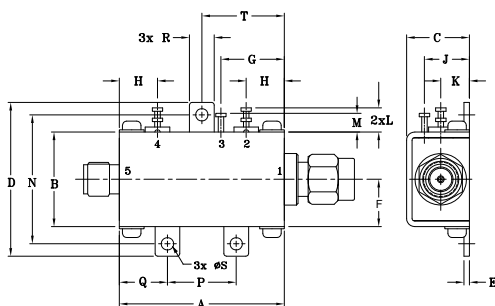
ZX47-55+

50Ω - 55dBm to +10dBm, 10 - 8000 MHz

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
DC Power:	
Max. voltage	5.7V
Max. current	120mA
Internal Power Dissipation	0.73W
Input Power	+18dBm

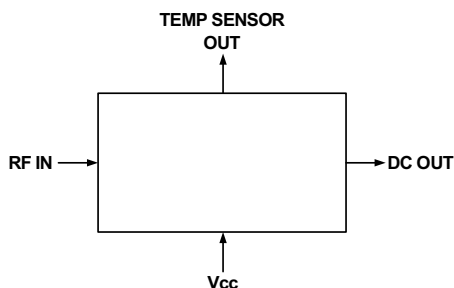
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K
1.20	.69	.46	1.12	.04	.34	.46	.28	.33	.21
30.5	17.5	11.6	28.4	1.0	8.7	11.7	7.1	8.3	5.3
L	M	N	P	Q	R	S	T	wt.	
.18	.14	.94	.50	.35	.18	.09	.60	grams	
4.5	3.5	23.8	12.7	8.9	4.6	2.3	15.2	31.8	

Simplified Functional Diagram



Features

- High Dynamic Range
- Wide Bandwidth
- Single Supply Voltage: +5V
- Stability Over Temperature
- Built-in Temperature Sensor
- Protected by US patent 6,790,049

Applications

- RF/IF Power Measurements
- Low Cost Power Monitoring System
- RF Leakage Monitors
- Fast feedback Levelling Circuits
- RF Power Control
- Receiver RF/IF Gain Control
- RSSI measurements



CASE STYLE: HN1173

Connectors	Model	Price	Qty.
SMA	ZX47-55-S+	\$89.95 ea.	(1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

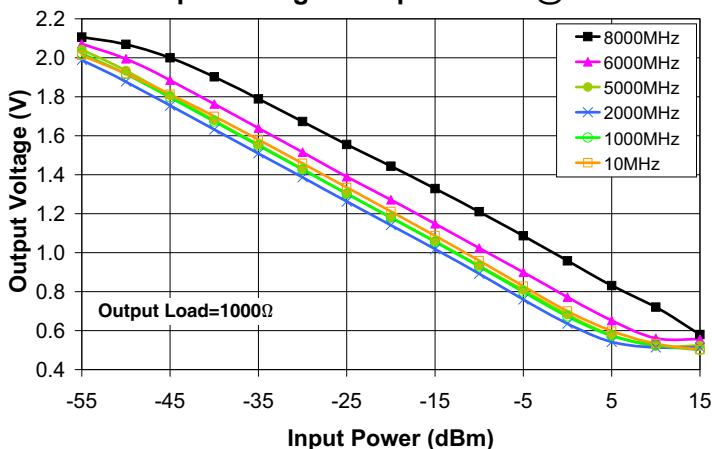
Electrical Specifications (T_{AMB} = 25°C)

FREQ. (MHz)		DYNAMIC RANGE @ ± 1 dB ERROR (dBm)	OUTPUT VOLTAGE RANGE (V)	SLOPE (note 1) (mV/dB)	VSWR	PULSE RESPONSE TIME (nsec)	TEMPERATURE SENSOR OUTPUT SLOPE (note 2) (mV/°C)	DC OPERATING POWER (note 3)
Min.	Max.	Typ.	Typ.	Typ.	Typ.	Rise (nsec)	Fall (nsec)	Vcc (volts)
								Current (mA)
								Min. Typ. Max. Typ.
10	1000	-50 to +5			1.05			
1000	5000	-55 to 0			1.40	400	10	4.5 5.0 5.5 100
5000	6000	-50 to +5	0.50 - 2.10	-25	1.50			
6000	8000	-45 to +10			1.30			

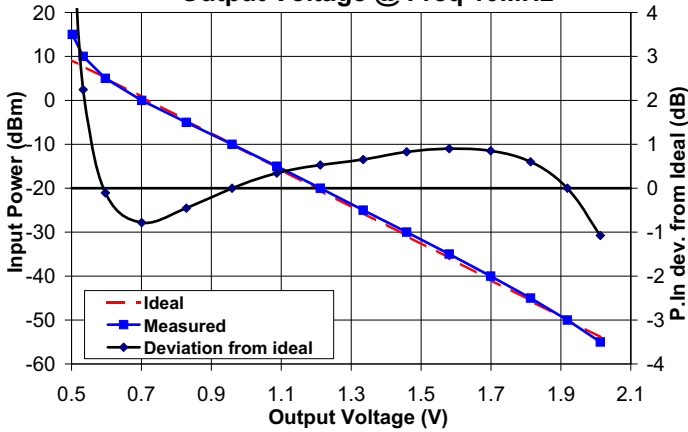
Notes:

1. The negative slope indicates that Output Voltage decreases as Input Power increases. See "Output Voltage vs Input Power" graph below.
2. Temperature sensor output (TEMP pin on Outline Drawing) provides a DC Output Voltage which increases linearly with temperature rise. Recommended minimum load for this port is 2 kΩ.
3. Recommended minimum load at DC out port is 100 Ω. See maximum ratings for no damage.

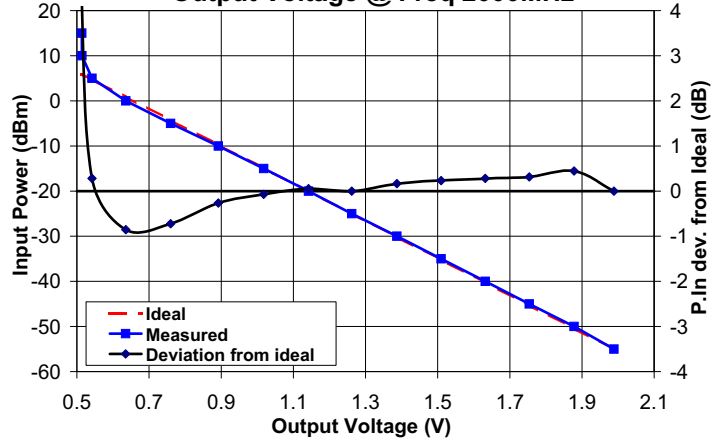
Output Voltage Vs Input Power @ +25°C



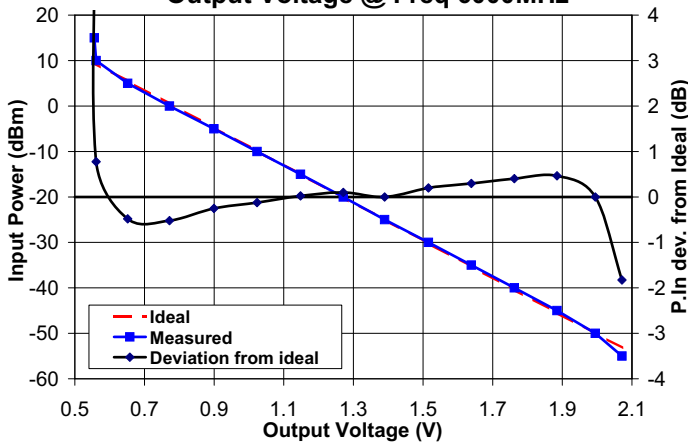
Power Input Deviation from Ideal Vs Output Voltage @ Freq 10MHz



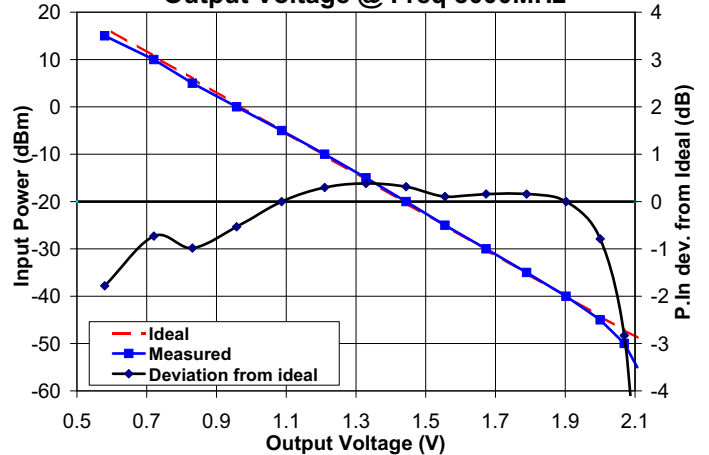
Power Input Deviation from Ideal Vs Output Voltage @ Freq 2000MHz



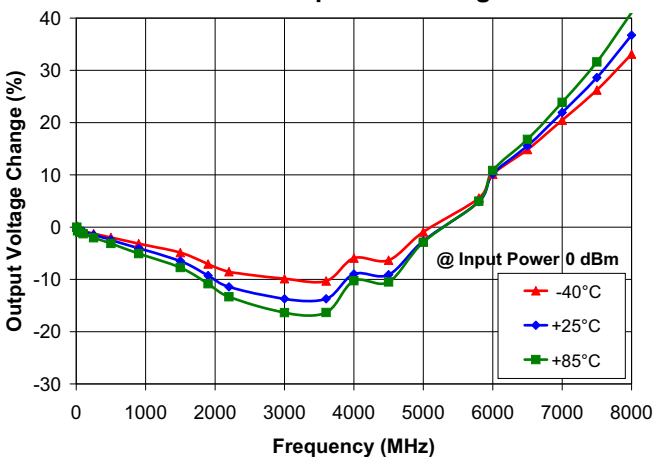
Power Input Deviation from Ideal Vs Output Voltage @ Freq 6000MHz



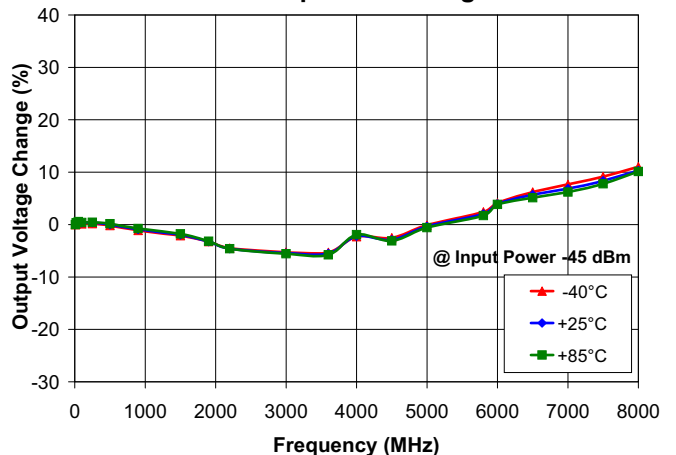
Power Input Deviation from Ideal Vs Output Voltage @ Freq 8000MHz



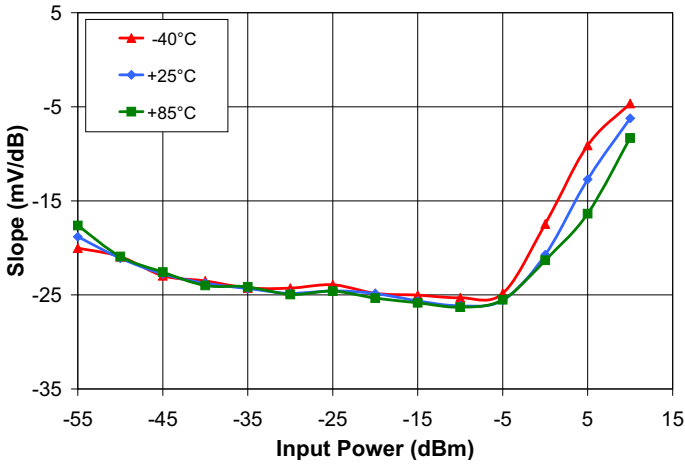
Output Voltage Change Vs Freq Over Temperature Range



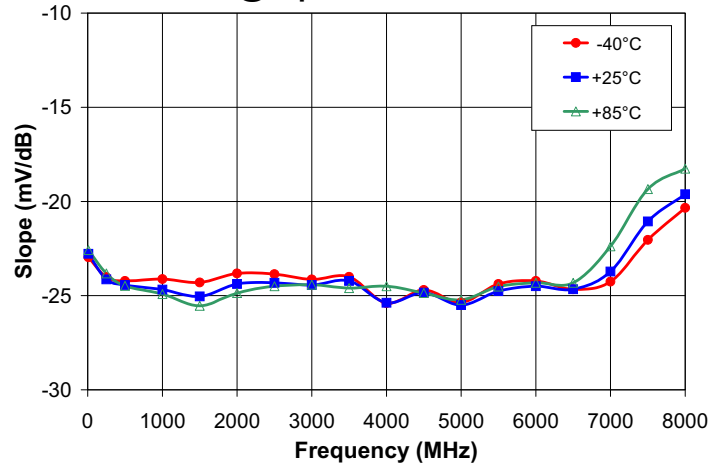
Output Voltage Change Vs Freq Over Temperature Range



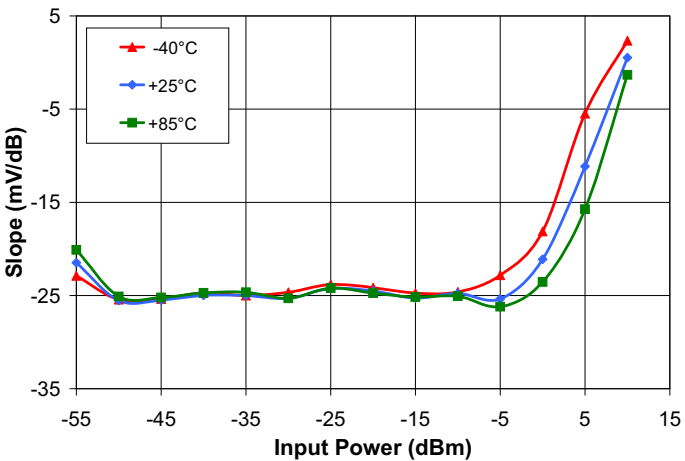
Slope Vs Input Power Over Temperature Range @ Freq 10MHz



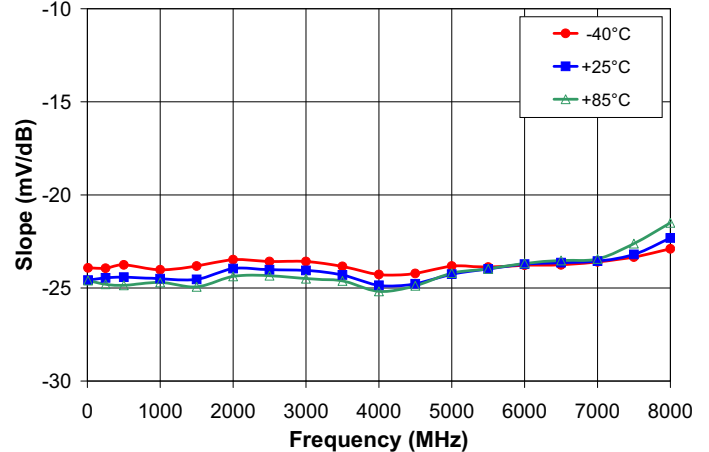
Slope Vs Freq Over Temperature Range @ Input Power -45dBm



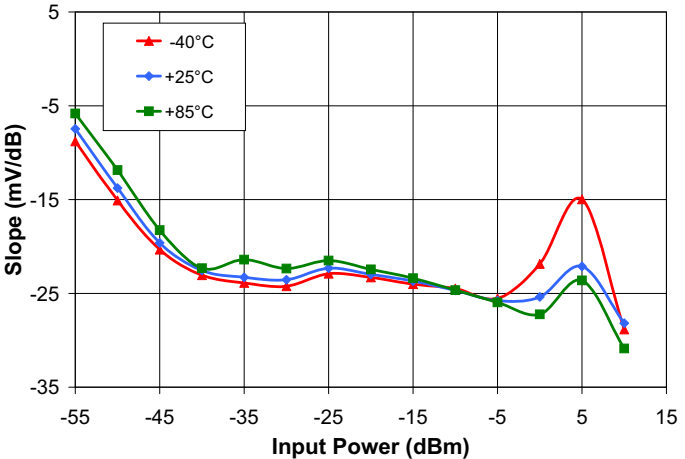
Slope Vs Input Power Over Temperature Range @ Freq 5000MHz



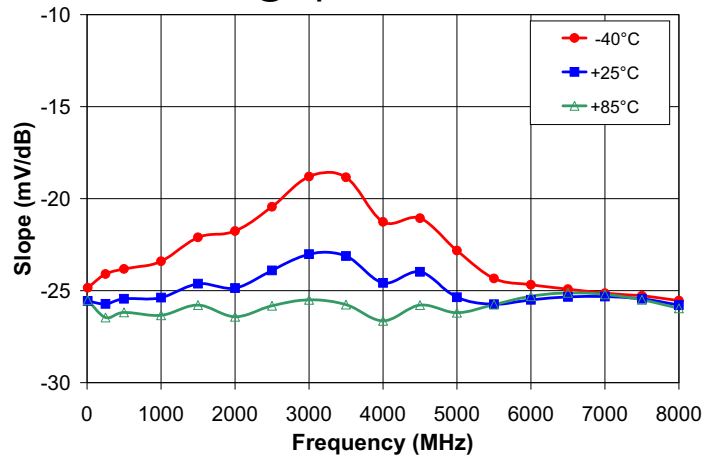
Slope Vs Freq Over Temperature Range @ Input Power -25dBm



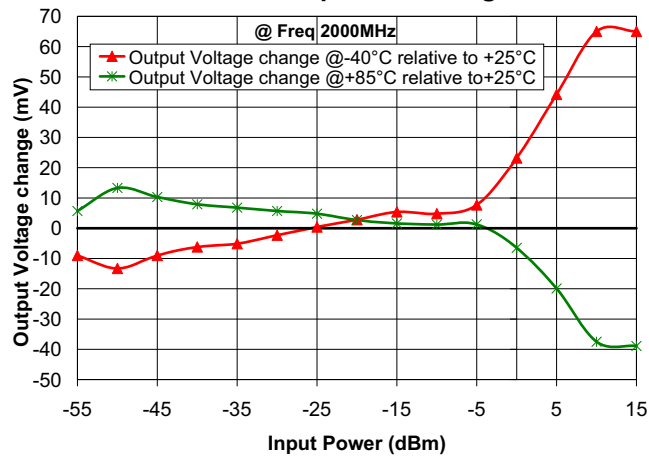
Slope Vs Input Power Over Temperature Range @ Freq 8000MHz



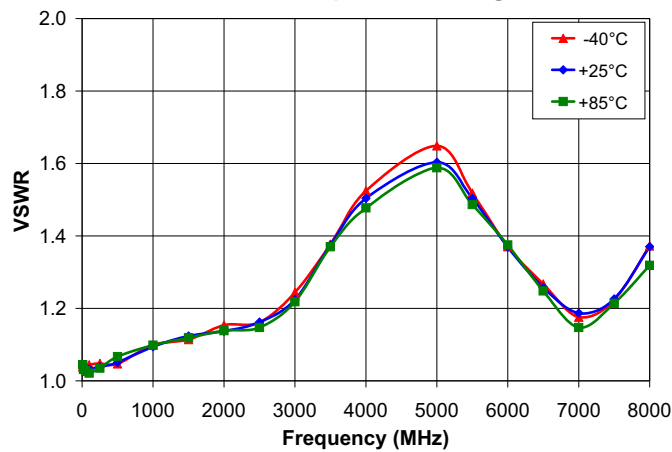
Slope Vs Freq Over Temperature Range @ Input Power -5dBm



Output Voltage Change Vs Input Power Over Temperature Range



VSWR Vs Freq Over Temperature Range



Temperature Sensor Voltage Vs Ambient Temperature

