



COAXIAL

Power Detector

ZV47-E673RMS+

50Ω -35 dBm to +0 dBm 0.1 to 67 GHz 1.85 mm Female

KEY FEATURES

- Ultra Wide Matched Input Freq. Range: 0.1 to 67 GHz
- 35 dB Linear Dynamic Range (<±1 dB Error)
- Positive Output Voltage Slope, 0 to +1.2 V
- Low Supply Current: 34 mA at +3.3 V typical

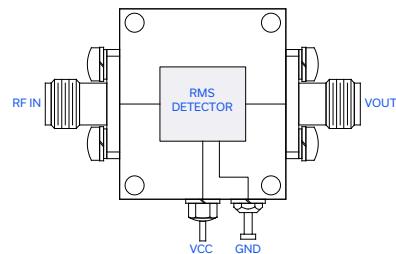


Generic photo used for illustration purposes only

APPLICATIONS

- Test and Measurement
- RMS Power Detection of Complex Waveforms
- 4G, 5G and 6G Transmit Power Control
- Radar Systems

FUNCTIONAL DIAGRAM



PRODUCT OVERVIEW

Mini-Circuits' ZV47-E673RMS+ is a high-accuracy RMS power detector with an ultra-wide RF input bandwidth of 0.1 GHz to 67 GHz. The DC output voltage of the detector provides an accurate representation of the average signal power applied to the RF input. This device provides a linear-in-dB response with 29 mV/dB logarithmic slope over its 35 dB dynamic range with typically better than ±1 dB accuracy. It is housed in a compact, gold over nickel plated brass alloy case (0.84" x 0.96" x 0.37") with a 1.85 mm female connector on the RF input and a 2.92 mm female connector providing the detected output voltage.

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter		Frequency (GHz)	Min.	Typ.	Max.	Units
Frequency Range			0.1		67	GHz
Dynamic Range at ±1 dB Error		0.1 - 67		-35 to 0		dBm
Output Voltage Range		0.1 - 67		0 to +1.2		V
Slope		0.1 - 67		+29		mV/dB
Return Loss		0.1 - 67		12		dB
Pulse Response Time	Rise	0.1 - 67		2.9		
	Fall	0.1 - 67		8.1		μsec
DC Operating Conditions	Vcc	0.1 - 67	+2.7	+3.3	+3.6	V
	Current	0.1 - 67		34		mA

ABSOLUTE MAXIMUM RATINGS¹

Parameter	Ratings
Operating Case Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +100 °C
DC Supply Voltage	+3.8 V
DC Supply Current	38 mA
RF Input Power	+12 dBm

1. Permanent damage may occur if any of these limits are exceeded.



COAXIAL

Power Detector

ZV47-E673RMS+

50Ω

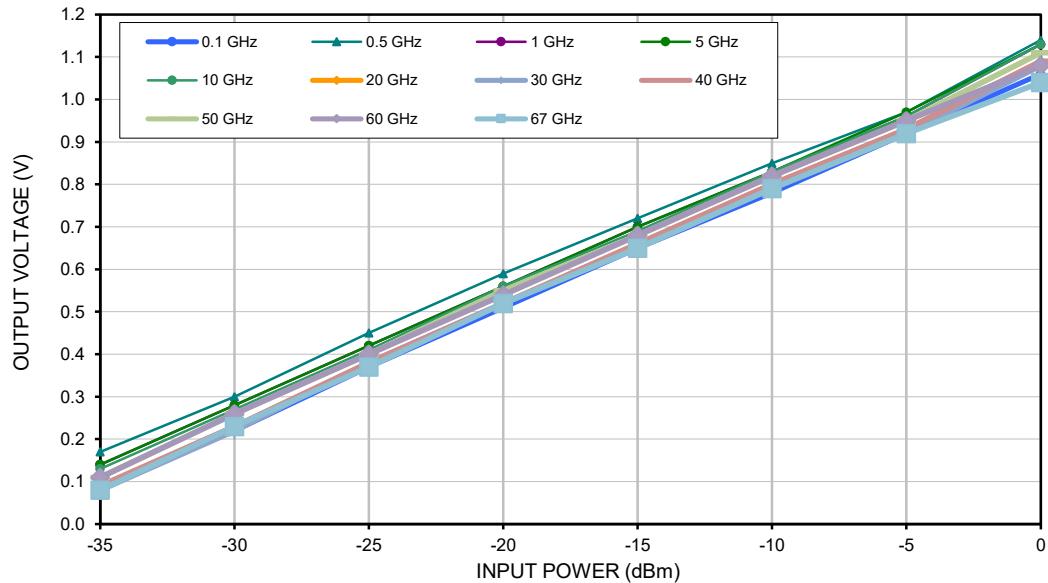
-35 dBm to +0 dBm

0.1 to 67 GHz

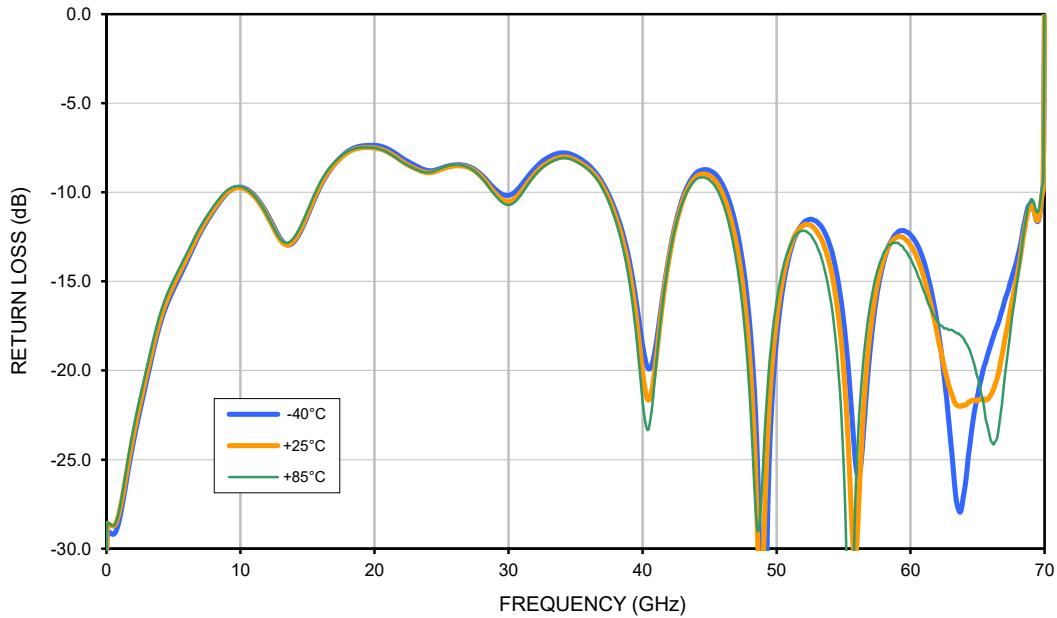
1.85 mm Female

TYPICAL PERFORMANCE GRAPHS

OUTPUT POWER @+25°C



RETURN LOSS





COAXIAL

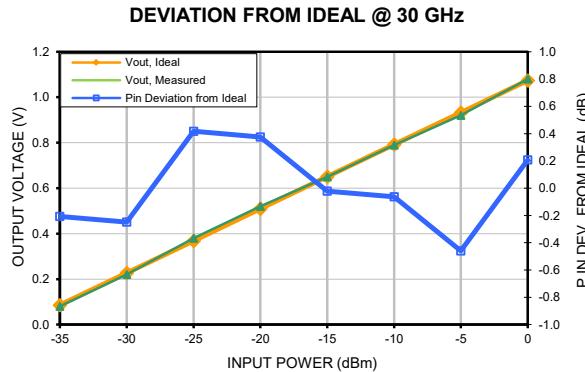
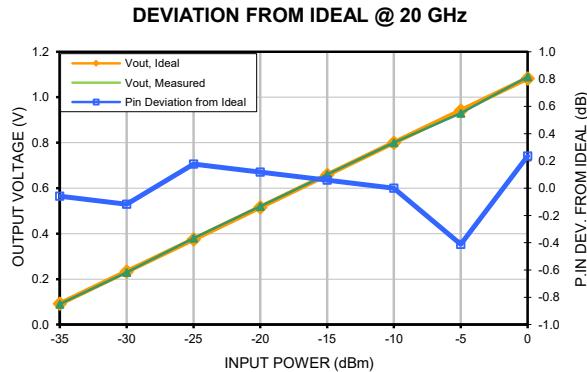
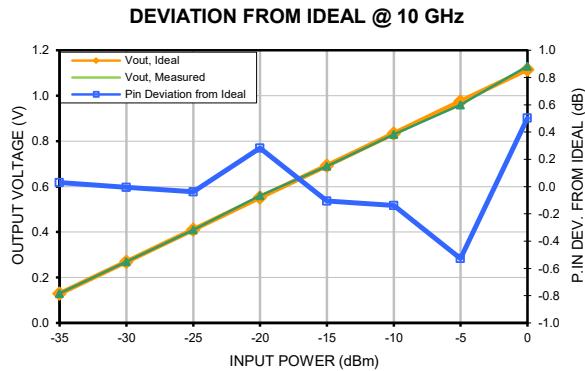
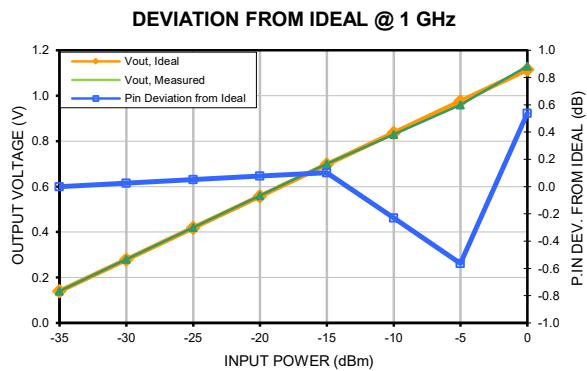
Power Detector

ZV47-E673RMS+

50Ω -35 dBm to +0 dBm 0.1 to 67 GHz 1.85 mm Female

TYPICAL PERFORMANCE GRAPHS

The following charts show measured output voltage as a function of input power at a fixed frequency (green), plotted alongside an ideal linear voltage curve (orange) for comparison. Also shown is the difference of measured and ideal voltage represented as an error in input power (blue).





COAXIAL

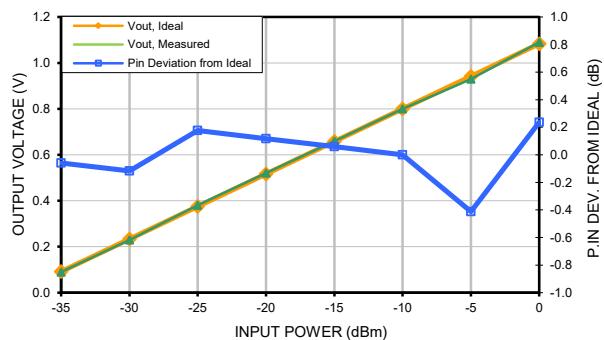
Power Detector

ZV47-E673RMS+

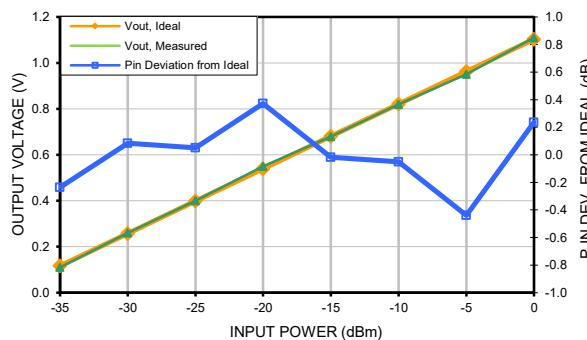
50Ω -35 dBm to +0 dBm 0.1 to 67 GHz 1.85 mm Female

TYPICAL PERFORMANCE GRAPHS

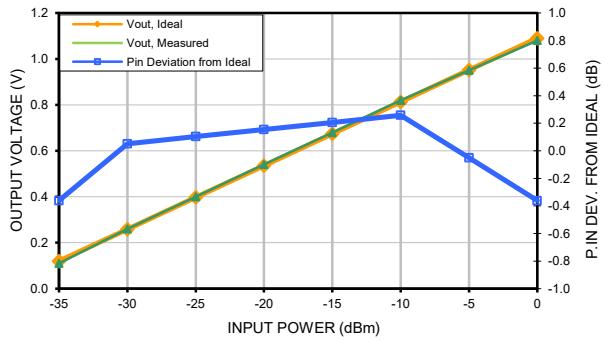
DEVIATION FROM IDEAL @ 40 GHz



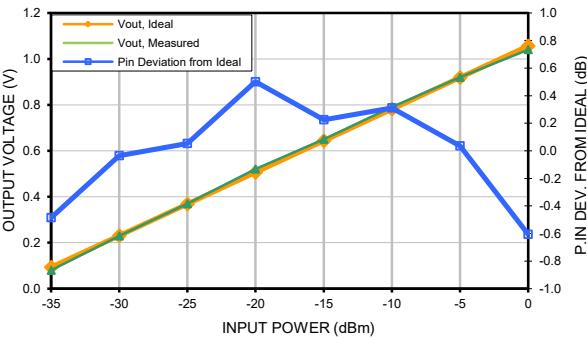
DEVIATION FROM IDEAL @ 50 GHz



DEVIATION FROM IDEAL @ 60 GHz



DEVIATION FROM IDEAL @ 67 GHz





COAXIAL

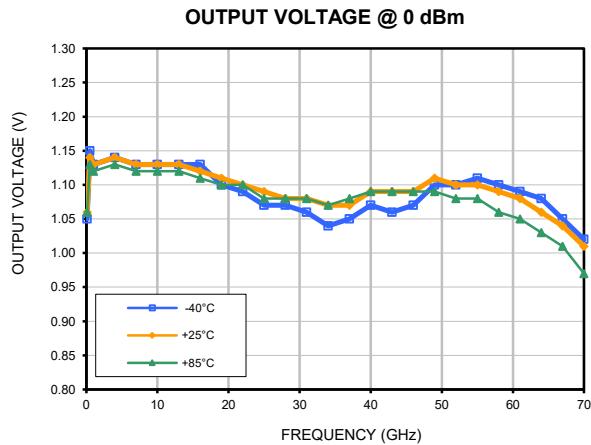
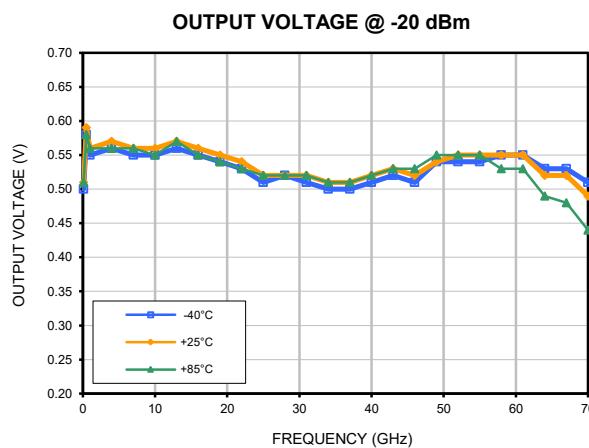
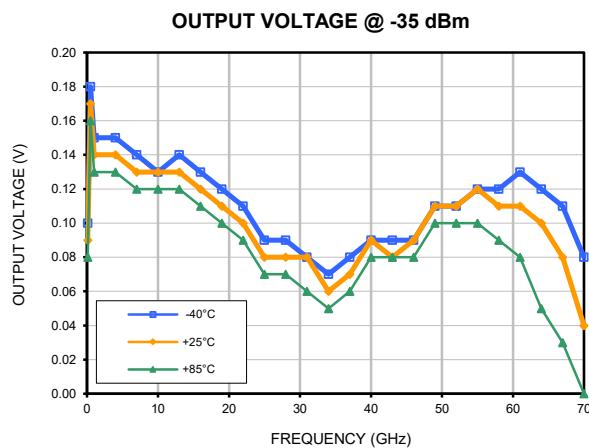
Power Detector

ZV47-E673RMS+

50Ω -35 dBm to +0 dBm 0.1 to 67 GHz 1.85 mm Female

TYPICAL PERFORMANCE GRAPHS

The following charts show measured output voltage at various temperatures as a function of frequency at a fixed input power.





COAXIAL

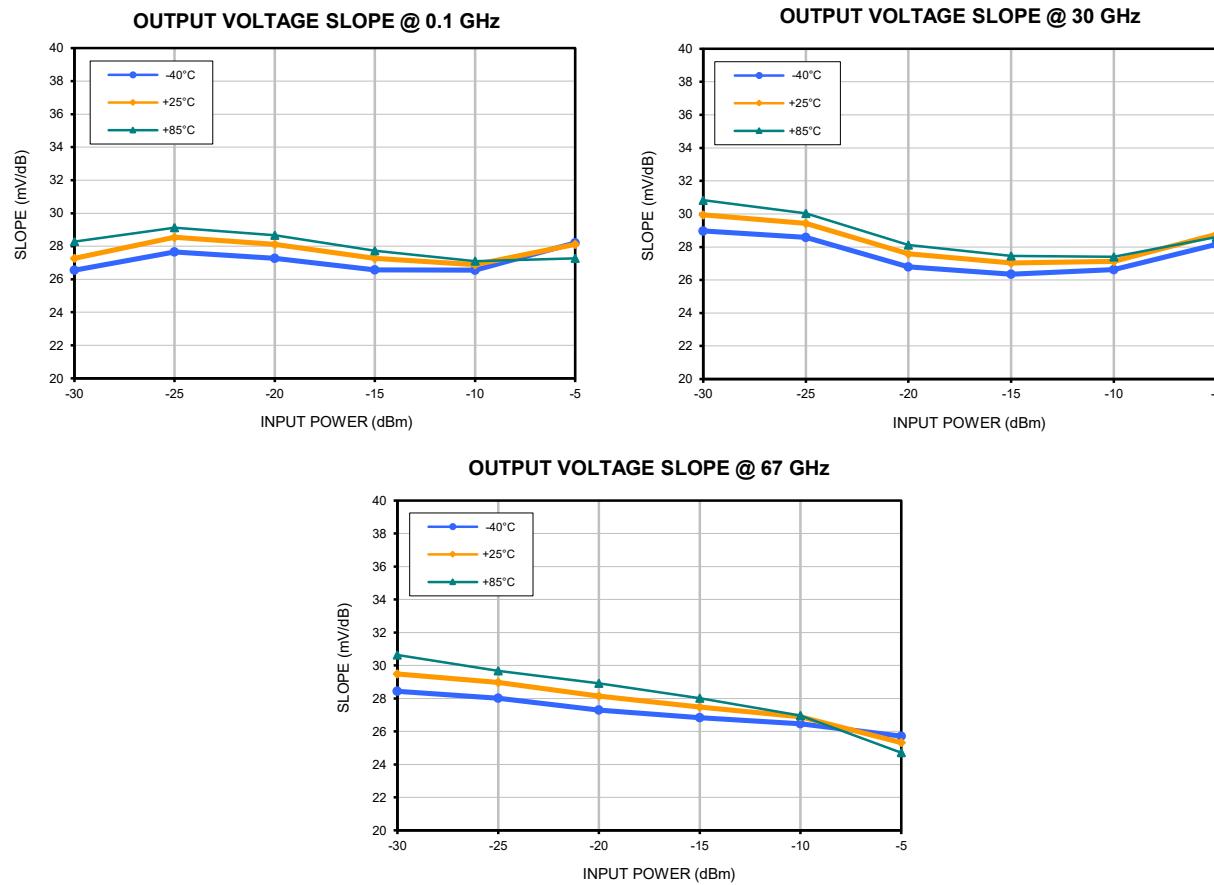
Power Detector

ZV47-E673RMS+

50Ω -35 dBm to +0 dBm 0.1 to 67 GHz 1.85 mm Female

TYPICAL PERFORMANCE GRAPHS

The following charts show output voltage slope at various temperatures as a function of input power at a fixed frequency. The output voltage slope at a given input power is obtained by using linear regression over the range from -35 dBm to 0 dBm.





COAXIAL

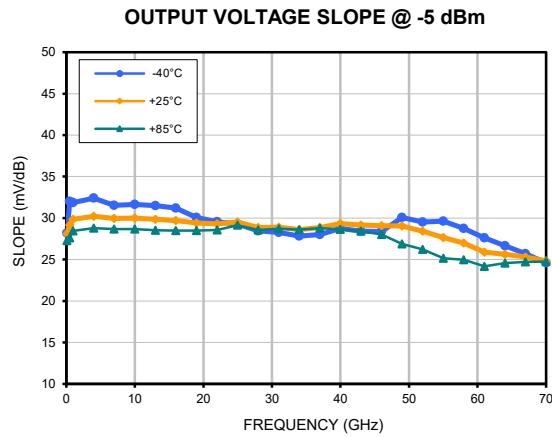
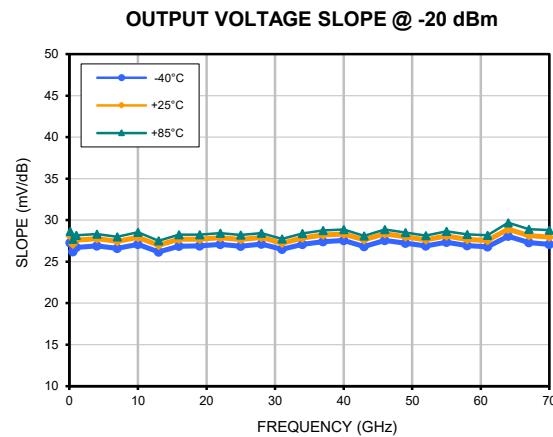
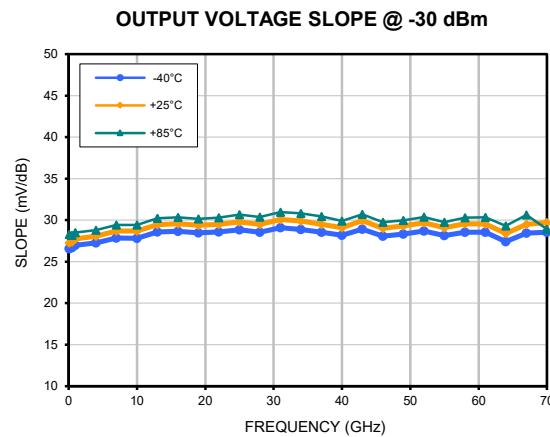
Power Detector

ZV47-E673RMS+

50Ω -35 dBm to +0 dBm 0.1 to 67 GHz 1.85 mm Female

TYPICAL PERFORMANCE GRAPHS

The following charts show output voltage slope at various temperatures as a function of frequency at a fixed input power. The output voltage slope at a given input power is obtained by using linear regression over the range from -35 dBm to 0 dBm.





COAXIAL

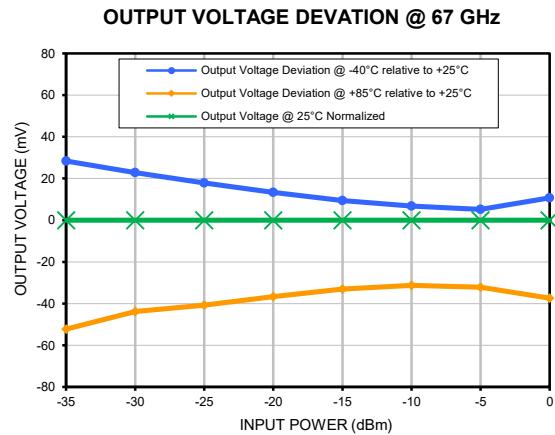
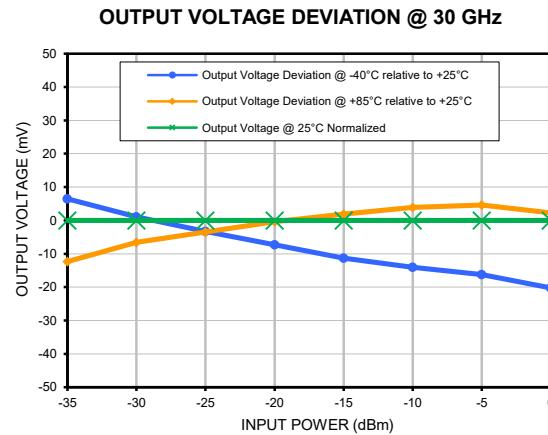
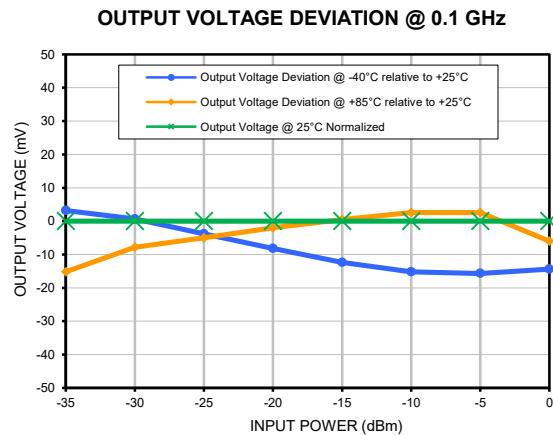
Power Detector

ZV47-E673RMS+

50Ω -35 dBm to +0 dBm 0.1 to 67 GHz 1.85 mm Female

TYPICAL PERFORMANCE GRAPHS

The following charts show measured output voltage deviation at -40°C relative to +25°C (blue) and measured output voltage deviation at +85°C relative to +25°C (orange). Also shown is the measured output voltage measured at +25°C normalized (green) for comparison.





COAXIAL

Power Detector

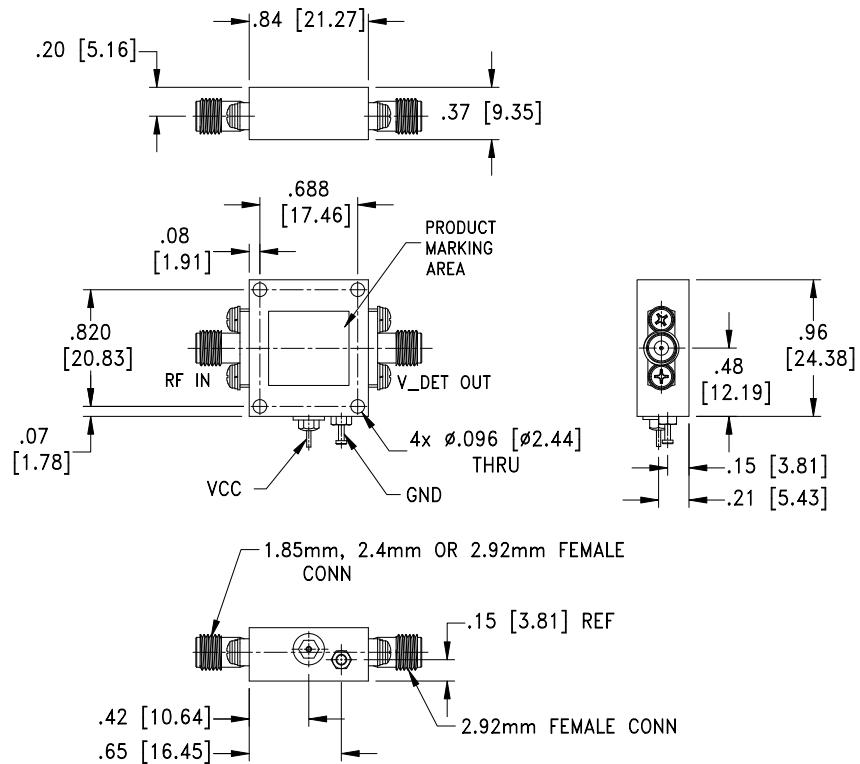
ZV47-E673RMS+

50Ω -35 dBm to +0 dBm 0.1 to 67 GHz 1.85 mm Female

COAXIAL/PIN DESCRIPTION

Function	Marking on Unit	Connector
RF IN	RF IN	1.85 Female
VOUT	V_DET OUT	2.92 Female
Vcc (+3.3V)	VCC	-
GROUND	GND	-

CASE STYLE DRAWING



Weight: 45 grams

Dimensions are in inches [mm]. Tolerances: 2 Pl. ±.03; 3 Pl. ±.015

PRODUCT MARKING*: ZV47-E673RMS+

*Marking may contain other features or characters for internal lot control.

Mini-Circuits®

www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

PAGE 9 OF 10



COAXIAL

Power Detector

ZV47-E673RMS+

Mini-Circuits

50Ω -35 dBm to +0 dBm 0.1 to 67 GHz 1.85 mm Female

ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD

[CLICK HERE](#)

Performance Data & Graphs	Data Graphs S-Parameter (S2P Files) Data Set (.zip file)
Case Style	AV2578-4
RoHS Status	Compliant
Environmental Ratings	ENV28T5

Mini-Circuits®

www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

PAGE 10 OF 10

Power Detector

ZV47-E673RMS+

Typical Performance Data

OUTPUT VOLTAGE VS INPUT POWER @ +25°C											
POWER IN (dBm)	@0.1 GHz (V)	@0.5 GHz (V)	@1 GHz (V)	@5 GHz (V)	@10 GHz (V)	@20 GHz (V)	@30 GHz (V)	@40 GHz (V)	@50 GHz (V)	@60 GHz (V)	@67 GHz (V)
-35	0.09	0.17	0.14	0.14	0.13	0.09	0.08	0.09	0.11	0.11	0.08
-30	0.22	0.30	0.28	0.28	0.27	0.23	0.22	0.23	0.26	0.26	0.23
-25	0.37	0.45	0.42	0.42	0.41	0.38	0.38	0.38	0.40	0.40	0.37
-20	0.51	0.59	0.56	0.56	0.56	0.52	0.52	0.52	0.55	0.54	0.52
-15	0.65	0.72	0.70	0.70	0.69	0.66	0.65	0.66	0.68	0.68	0.65
-10	0.78	0.85	0.83	0.83	0.83	0.80	0.79	0.80	0.82	0.82	0.79
-5	0.92	0.97	0.96	0.97	0.96	0.93	0.92	0.93	0.95	0.95	0.92
0	1.06	1.14	1.13	1.13	1.13	1.09	1.08	1.09	1.11	1.08	1.04

FREQ (GHz)	OUTPUT VOLTAGE (V) VS FREQUENCY OVER TEMPERATURE								
	@ INPUT POWER = -35 dBm			@ INPUT POWER = -20 dBm			@ INPUT POWER = 0 dBm		
	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C
0.1	0.10	0.09	0.08	0.50	0.51	0.51	1.05	1.06	1.06
0.5	0.18	0.17	0.16	0.58	0.59	0.58	1.15	1.14	1.13
1	0.15	0.14	0.13	0.55	0.56	0.56	1.13	1.13	1.12
4	0.15	0.14	0.13	0.56	0.57	0.56	1.14	1.14	1.13
7	0.14	0.13	0.12	0.55	0.56	0.56	1.13	1.13	1.12
10	0.13	0.13	0.12	0.55	0.56	0.55	1.13	1.13	1.12
13	0.14	0.13	0.12	0.56	0.57	0.57	1.13	1.13	1.12
16	0.13	0.12	0.11	0.55	0.56	0.55	1.13	1.12	1.11
19	0.12	0.11	0.10	0.54	0.55	0.54	1.10	1.11	1.10
22	0.11	0.10	0.09	0.53	0.54	0.53	1.09	1.10	1.10
25	0.09	0.08	0.07	0.51	0.52	0.52	1.07	1.09	1.08
28	0.09	0.08	0.07	0.52	0.52	0.52	1.07	1.08	1.08
31	0.08	0.08	0.06	0.51	0.52	0.52	1.06	1.08	1.08
34	0.07	0.06	0.05	0.50	0.51	0.51	1.04	1.07	1.07
37	0.08	0.07	0.06	0.50	0.51	0.51	1.05	1.07	1.08
40	0.09	0.09	0.08	0.51	0.52	0.52	1.07	1.09	1.09
43	0.09	0.08	0.08	0.52	0.53	0.53	1.06	1.09	1.09
46	0.09	0.09	0.08	0.51	0.52	0.53	1.07	1.09	1.09
49	0.11	0.11	0.10	0.54	0.54	0.55	1.10	1.11	1.09
52	0.11	0.11	0.10	0.54	0.55	0.55	1.10	1.10	1.08
55	0.12	0.12	0.10	0.54	0.55	0.55	1.11	1.10	1.08
58	0.12	0.11	0.09	0.55	0.55	0.53	1.10	1.09	1.06
61	0.13	0.11	0.08	0.55	0.55	0.53	1.09	1.08	1.05
64	0.12	0.10	0.05	0.53	0.52	0.49	1.08	1.06	1.03
67	0.11	0.08	0.03	0.53	0.52	0.48	1.05	1.04	1.01
70	0.08	0.04	0.00	0.51	0.49	0.44	1.02	1.01	0.97

Power Detector

ZV47-E673RMS+

Typical Performance Data

Pin MEASURED	INPUT POWER DEVIATION FROM IDEAL VS INPUT POWER @ +25°C							
	@ 1 GHz		@ 10 GHz					
Vout, MEASURED (V)	Vout, IDEAL (V)	Pin, IDEAL (dBm)	DEVIATION FROM IDEAL (dB)	Vout, MEASURED (V)	Vout, IDEAL (V)	Pin, IDEAL (dBm)	DEVIATION FROM IDEAL (dB)	
-35	0.14	0.14	-35.00	0.00	0.13	0.13	-34.97	0.03
-30	0.28	0.28	-29.97	0.03	0.27	0.27	-30.00	0.00
-25	0.42	0.42	-24.95	0.05	0.41	0.41	-25.04	-0.04
-20	0.56	0.56	-19.92	0.08	0.56	0.55	-19.72	0.28
-15	0.70	0.70	-14.90	0.10	0.69	0.69	-15.11	-0.11
-10	0.83	0.84	-10.23	-0.23	0.83	0.83	-10.14	-0.14
-5	0.96	0.98	-5.56	-0.56	0.96	0.97	-5.53	-0.53
0	1.13	1.12	0.54	0.54	1.13	1.12	0.50	0.50

Pin MEASURED	INPUT POWER DEVIATION FROM IDEAL VS INPUT POWER @ +25°C							
	@ 20 GHz		@ 30 GHz					
Vout, MEASURED (V)	Vout, IDEAL (V)	Pin, IDEAL (dBm)	DEVIATION FROM IDEAL (dB)	Vout, MEASURED (V)	Vout, IDEAL (V)	Pin, IDEAL (dBm)	DEVIATION FROM IDEAL (dB)	
-35	0.09	0.09	-35.06	-0.06	0.08	0.09	-35.21	-0.21
-30	0.23	0.23	-30.12	-0.12	0.22	0.23	-30.25	-0.25
-25	0.38	0.38	-24.82	0.18	0.38	0.37	-24.58	0.42
-20	0.52	0.52	-19.88	0.12	0.52	0.51	-19.62	0.38
-15	0.66	0.66	-14.94	0.06	0.65	0.65	-15.02	-0.02
-10	0.80	0.80	-10.00	0.00	0.79	0.79	-10.06	-0.06
-5	0.93	0.94	-5.41	-0.41	0.92	0.93	-5.46	-0.46
0	1.09	1.08	0.24	0.24	1.08	1.07	0.21	0.21

Pin MEASURED	INPUT POWER DEVIATION FROM IDEAL VS INPUT POWER @ +25°C							
	@ 40 GHz		@ 50 GHz					
Vout, MEASURED (V)	Vout, IDEAL (V)	Pin, IDEAL (dBm)	DEVIATION FROM IDEAL (dB)	Vout, MEASURED (V)	Vout, IDEAL (V)	Pin, IDEAL (dBm)	DEVIATION FROM IDEAL (dB)	
-35	0.09	0.09	-35.06	-0.06	0.11	0.12	-35.24	-0.24
-30	0.23	0.23	-30.12	-0.12	0.26	0.26	-29.92	0.08
-25	0.38	0.38	-24.82	0.18	0.40	0.40	-24.95	0.05
-20	0.52	0.52	-19.88	0.12	0.55	0.54	-19.63	0.37
-15	0.66	0.66	-14.94	0.06	0.68	0.68	-15.02	-0.02
-10	0.80	0.80	-10.00	0.00	0.82	0.82	-10.05	-0.05
-5	0.93	0.94	-5.41	-0.41	0.95	0.96	-5.44	-0.44
0	1.09	1.08	0.24	0.24	1.11	1.10	0.24	0.24

Pin MEASURED	INPUT POWER DEVIATION FROM IDEAL VS INPUT POWER @ +25°C							
	@ 60 GHz		@ 67 GHz					
Vout, MEASURED (V)	Vout, IDEAL (V)	Pin, IDEAL (dBm)	DEVIATION FROM IDEAL (dB)	Vout, MEASURED (V)	Vout, IDEAL (V)	Pin, IDEAL (dBm)	DEVIATION FROM IDEAL (dB)	
-35	0.11	0.12	-35.36	-0.36	0.08	0.09	-35.48	-0.48
-30	0.26	0.26	-29.95	0.05	0.23	0.23	-30.03	-0.03
-25	0.40	0.40	-24.90	0.10	0.37	0.37	-24.95	0.05
-20	0.54	0.54	-19.85	0.15	0.52	0.51	-19.50	0.50
-15	0.68	0.67	-14.79	0.21	0.65	0.64	-14.78	0.22
-10	0.82	0.81	-9.74	0.26	0.79	0.78	-9.69	0.31
-5	0.95	0.95	-5.05	-0.05	0.92	0.92	-4.97	0.03
0	1.08	1.09	-0.36	-0.36	1.04	1.06	-0.61	-0.61



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 • Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site
www.minicircuits.com

IF/RF MICROWAVE COMPONENTS



REV. OR
ZV47-E673RMS+
6/21/2023
Page 2 of 4

Power Detector

ZV47-E673RMS+

Typical Performance Data

Pin (dBm)	SLOPE (mV/dB) VS INPUT POWER OVER TEMPERATURE								
	RANGE @ FREQUENCY 0.1 GHz			RANGE @ FREQUENCY 30 GHz			RANGE @ FREQUENCY 67 GHz		
	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C
-30	26.56	27.26	28.28	28.97	29.94	30.83	28.43	29.48	30.63
-25	27.66	28.54	29.12	28.59	29.42	30.04	28.01	28.97	29.67
-20	27.26	28.12	28.67	26.79	27.59	28.13	27.30	28.14	28.92
-15	26.57	27.27	27.72	26.35	27.03	27.46	26.82	27.47	28.02
-10	26.55	26.89	27.09	26.64	27.14	27.40	26.46	26.88	26.96
-5	28.20	28.12	27.26	28.16	28.77	28.61	25.71	25.32	24.71

FREQUENCY (GHz)	SLOPE (mV/dB) VS FREQUENCY OVER TEMPERATURE								
	@ INPUT POWER = -30 dBm			@ INPUT POWER = -20 dBm			@ INPUT POWER = -5 dBm		
	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C
0.1	26.56	27.26	28.28	27.26	28.12	28.67	28.20	28.12	27.26
0.5	26.69	27.38	28.17	26.19	27.11	27.72	32.01	29.16	27.60
1	26.99	27.72	28.51	26.71	27.60	28.18	31.87	29.84	28.44
4	27.25	28.06	28.79	26.90	27.77	28.32	32.40	30.21	28.77
7	27.84	28.67	29.41	26.62	27.46	28.01	31.53	29.97	28.66
10	27.82	28.69	29.41	27.09	27.93	28.53	31.63	30.01	28.67
13	28.57	29.47	30.22	26.18	26.98	27.51	31.49	29.85	28.53
16	28.66	29.57	30.32	26.87	27.70	28.26	31.21	29.72	28.51
19	28.47	29.40	30.15	26.89	27.69	28.25	30.08	29.42	28.50
22	28.58	29.51	30.30	27.08	27.87	28.42	29.54	29.30	28.58
25	28.82	29.79	30.65	26.86	27.67	28.23	29.26	29.54	29.13
28	28.56	29.50	30.38	27.12	27.91	28.44	28.47	28.86	28.57
31	29.09	30.07	30.98	26.48	27.24	27.76	28.27	28.90	28.71
34	28.89	29.89	30.80	27.08	27.86	28.40	27.84	28.61	28.58
37	28.55	29.50	30.43	27.43	28.21	28.75	28.03	28.86	28.78
40	28.18	29.08	29.90	27.57	28.33	28.87	28.76	29.32	28.64
43	28.93	29.94	30.69	26.84	27.63	28.11	28.42	29.14	28.41
46	28.05	29.03	29.74	27.56	28.37	28.87	28.38	29.08	28.00
49	28.34	29.33	29.97	27.22	27.99	28.49	30.08	29.03	26.86
52	28.69	29.67	30.36	26.88	27.64	28.13	29.53	28.42	26.21
55	28.13	29.10	29.75	27.35	28.11	28.64	29.64	27.64	25.15
58	28.55	29.55	30.30	26.92	27.68	28.27	28.74	27.00	24.98
61	28.54	29.54	30.33	26.80	27.55	28.18	27.60	25.90	24.18
64	27.40	28.41	29.32	28.06	28.91	29.70	26.65	25.64	24.59
67	28.43	29.48	30.63	27.30	28.14	28.92	25.71	25.32	24.71
70	28.56	29.72	28.91	27.08	27.96	28.79	24.59	24.83	24.76



ISO 9001 ISO 14001 AS 9100 CERTIFIED

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 • Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site
www.minicircuits.com

The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

IF/RF MICROWAVE COMPONENTS



REV. OR

ZV47-E673RMS+

6/21/2023

Page 3 of 4

Power Detector

ZV47-E673RMS+

Typical Performance Data

OUTPUT VOLTAGE DEVIATION (mV) VS INPUT POWER AT FREQUENCY = 0.1 GHz			
POWER IN (dBm)	TEMP = +25C	OUTPUT VOLTAGE DEVIATION @-40°C RELATIVE TO +25°C	OUTPUT VOLTAGE DEVIATION @+85°C RELATIVE TO +25°C
-35	0	3.19	-15.19
-30	0	0.67	-7.77
-25	0	-3.83	-5.01
-20	0	-8.20	-1.98
-15	0	-12.38	0.49
-10	0	-15.18	2.59
-5	0	-15.69	2.58
0	0	-14.35	-5.98

OUTPUT VOLTAGE DEVIATION (mV) VS INPUT POWER AT FREQUENCY = 30 GHz			
POWER IN (dBm)	Temp = +25C	OUTPUT VOLTAGE DEVIATION @-40°C RELATIVE TO +25°C	OUTPUT VOLTAGE DEVIATION @+85°C RELATIVE TO +25°C
-35	0	6.47	-12.33
-30	0	1.05	-6.58
-25	0	-3.26	-3.44
-20	0	-7.26	-0.35
-15	0	-11.28	1.93
-10	0	-14.08	3.93
-5	0	-16.25	4.63
0	0	-20.23	2.25

OUTPUT VOLTAGE DEVIATION (mV) VS INPUT POWER AT FREQUENCY = 67 GHz			
POWER IN (dBm)	Temp = +25C	OUTPUT VOLTAGE DEVIATION @-40°C RELATIVE TO +25°C	OUTPUT VOLTAGE DEVIATION @+85°C RELATIVE TO +25°C
-35	0	28.38	-52.28
-30	0	22.85	-43.80
-25	0	17.88	-40.76
-20	0	13.27	-36.73
-15	0	9.43	-33.02
-10	0	6.81	-31.27
-5	0	5.18	-32.19
0	0	10.77	-37.36

RL vs. FREQUENCY OVER TEMPERATURE			
FREQ (GHz)	-40°C (dB)	+25°C (dB)	+85°C (dB)
0.1	-28.94	-28.52	-28.48
0.5	-29.24	-28.80	-28.78
1	-28.28	-27.85	-27.72
4	-17.38	-17.13	-16.81
7	-12.26	-12.12	-11.92
10	-9.71	-9.74	-9.67
13	-12.63	-12.72	-12.66
16	-9.60	-9.52	-9.37
19	-7.40	-7.50	-7.48
22	-8.04	-8.23	-8.27
25	-8.64	-8.71	-8.64
28	-9.03	-9.14	-9.19
31	-9.56	-9.92	-10.08
34	-7.77	-8.01	-8.05
37	-9.46	-9.63	-9.76
40	-18.54	-20.04	-21.57
43	-10.28	-10.45	-10.52
46	-9.61	-10.14	-10.60
49	-53.56	-30.98	-24.91
52	-11.67	-11.80	-12.10
55	-17.09	-19.68	-24.62
58	-13.93	-13.76	-13.48
61	-13.89	-14.80	-15.54
64	-27.44	-21.96	-18.30
67	-16.05	-18.28	-20.43
70	-8.75	-8.53	-8.09

 **Mini-Circuits®**

ISO 9001 ISO 14001 AS 9100 CERTIFIED

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 • Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

IF/RF MICROWAVE COMPONENTS

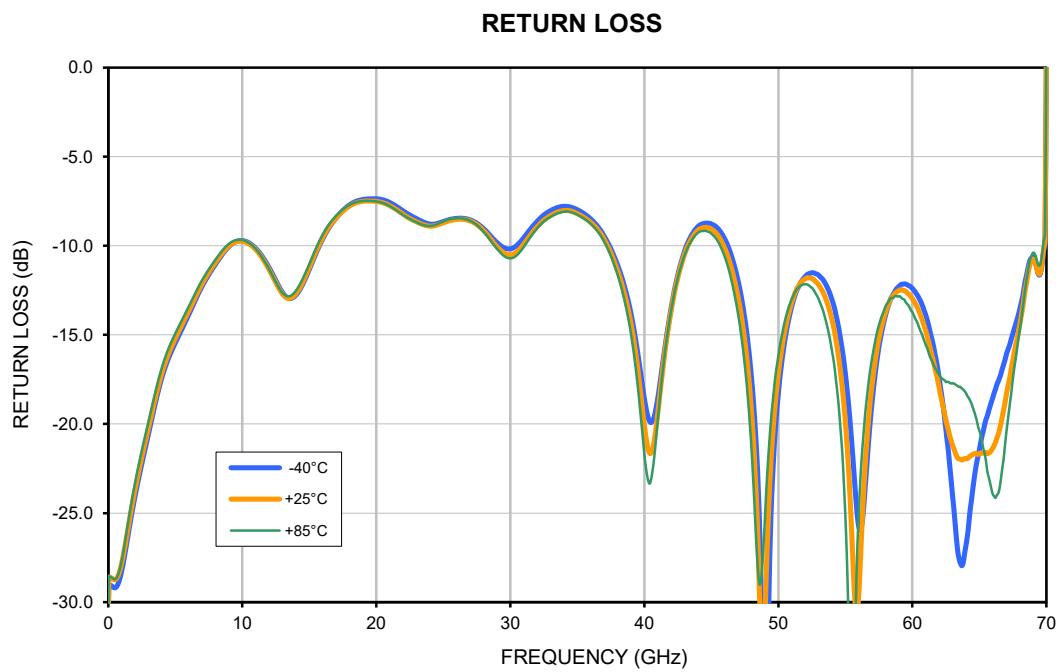
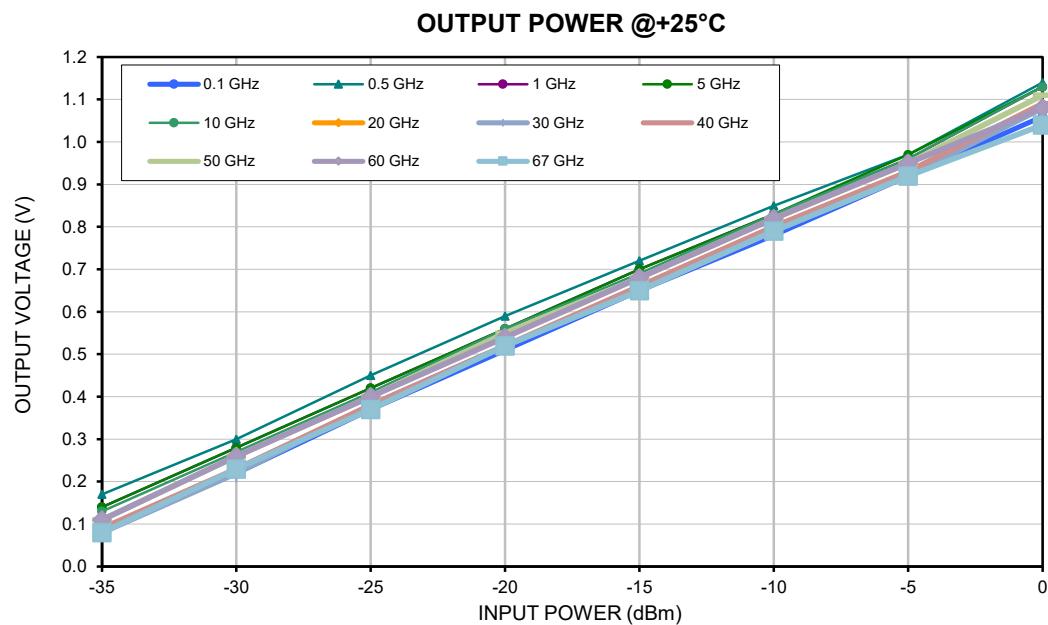
 minicircuits.com

REV. OR
ZV47-E673RMS+
6/21/2023
Page 4 of 4

Power Detector

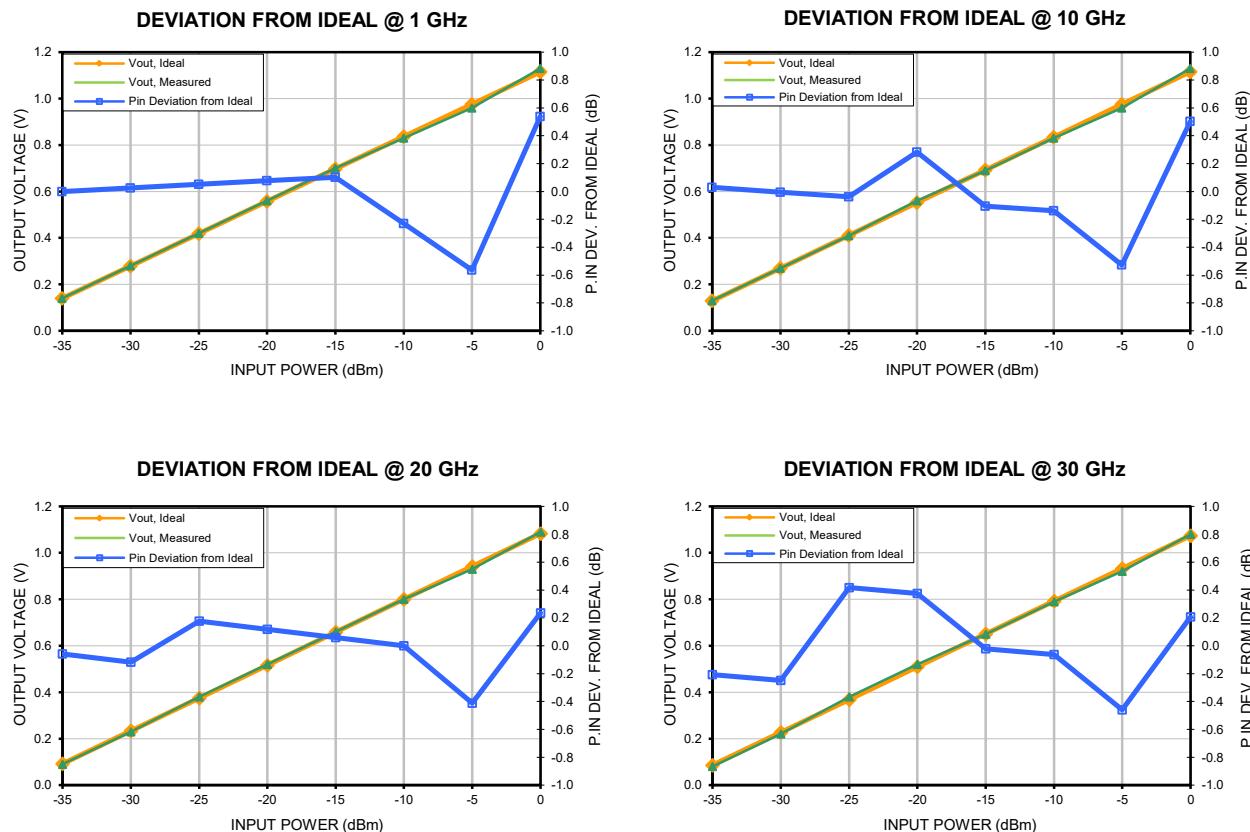
ZV47-E673RMS+

Typical Performance Curves



Typical Performance Curves

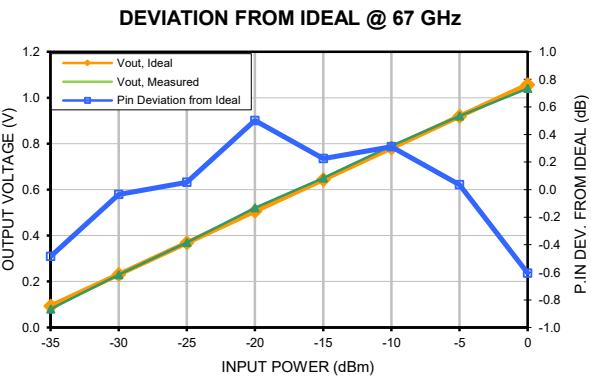
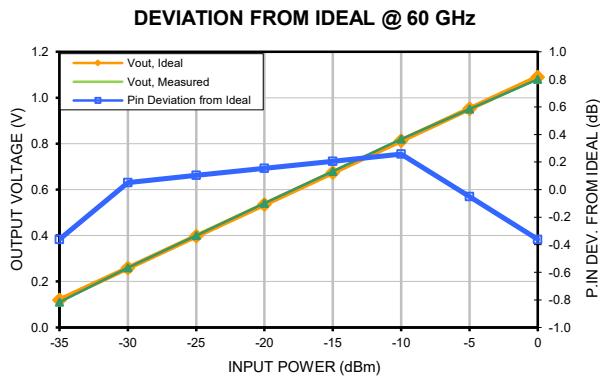
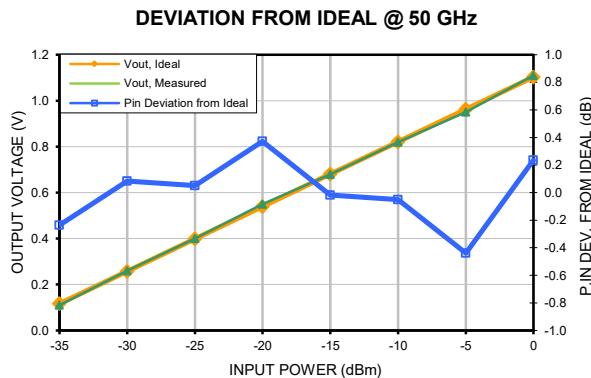
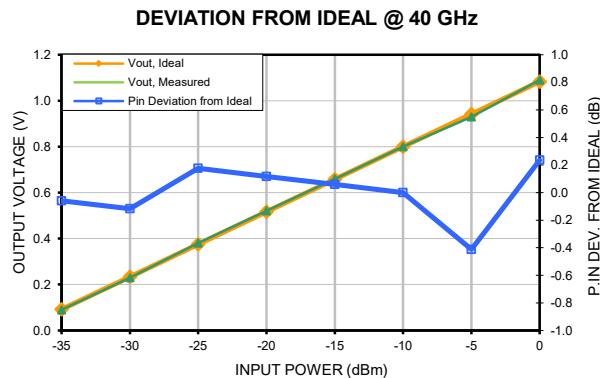
The following charts show measured output voltage as a function of input power at a fixed frequency (green), plotted alongside an ideal linear voltage curve (orange) for comparison. Also shown is the difference of measured and ideal voltage represented as an error in input power (blue).



Power Detector

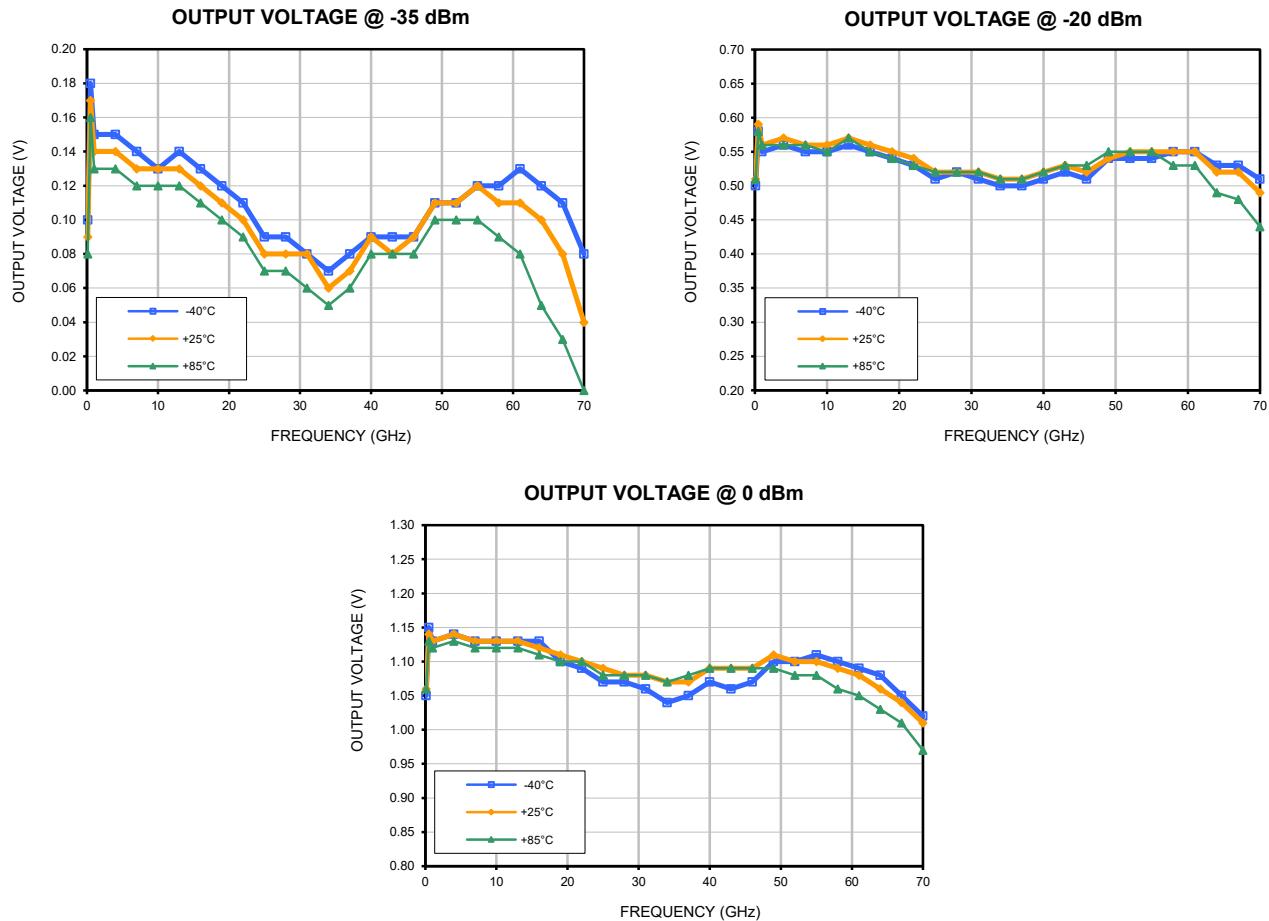
ZV47-E673RMS+

Typical Performance Curves



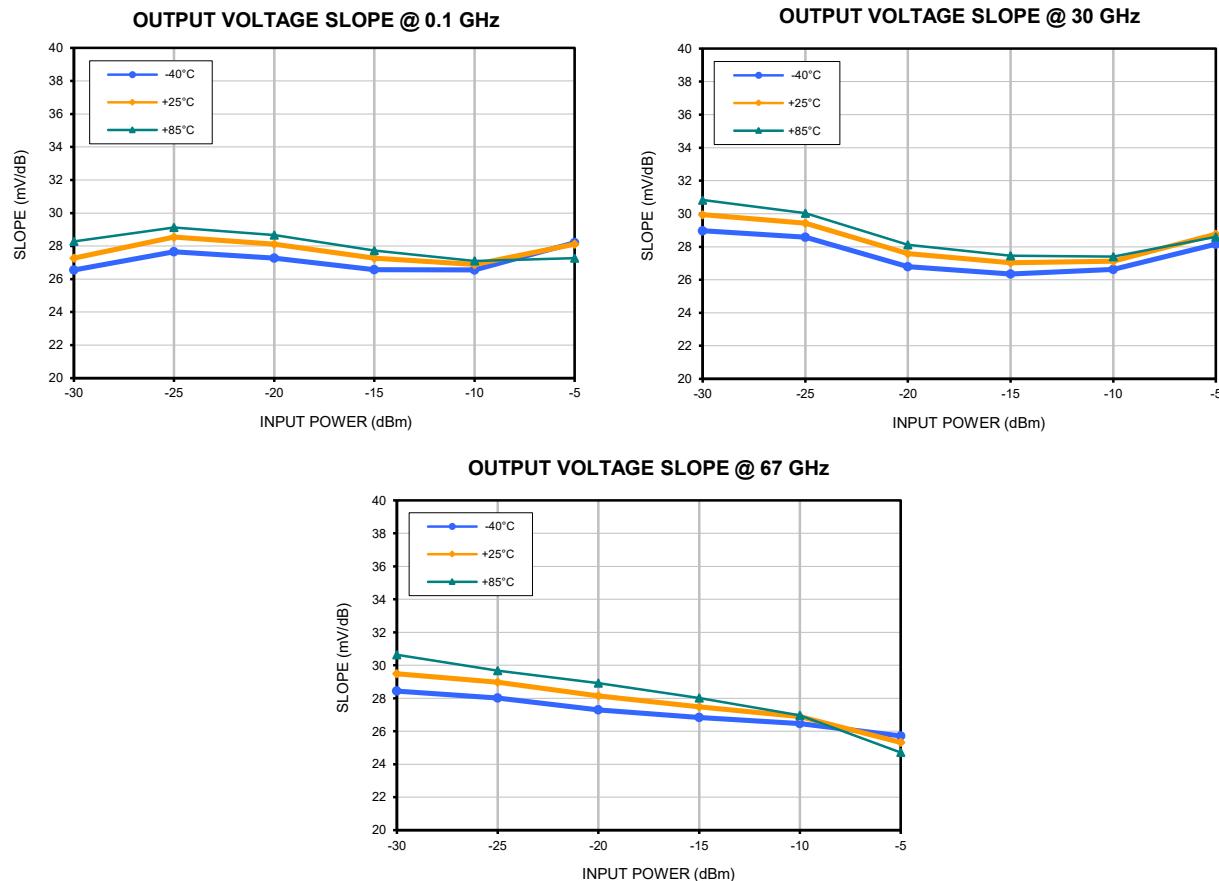
Typical Performance Curves

The following charts show measured output voltage at various temperatures as a function of frequency at a fixed input power.



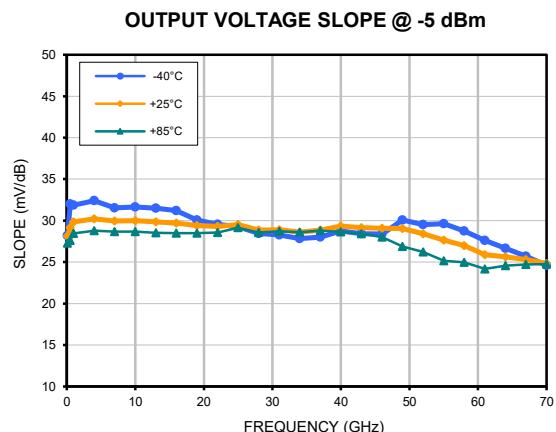
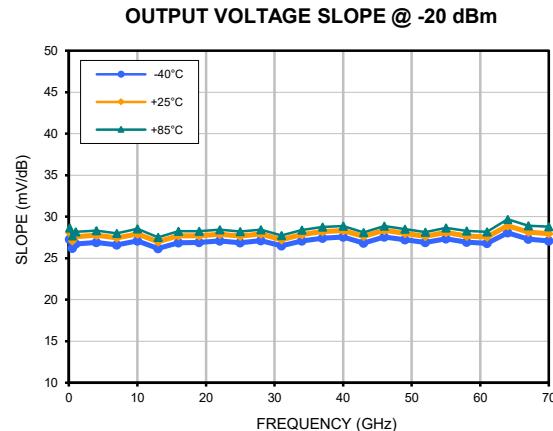
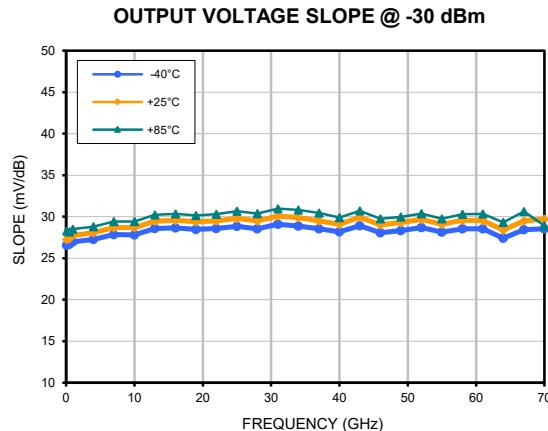
Typical Performance Curves

The following charts show output voltage slope at various temperatures as a function of input power at a fixed frequency. The output voltage slope at a given input power is obtained by using linear regression over the range from -35 dBm to 0 dBm.



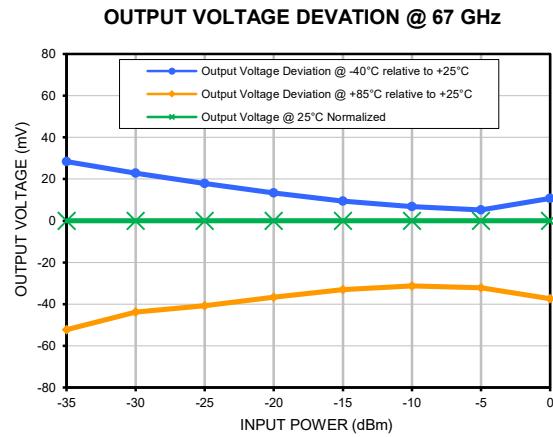
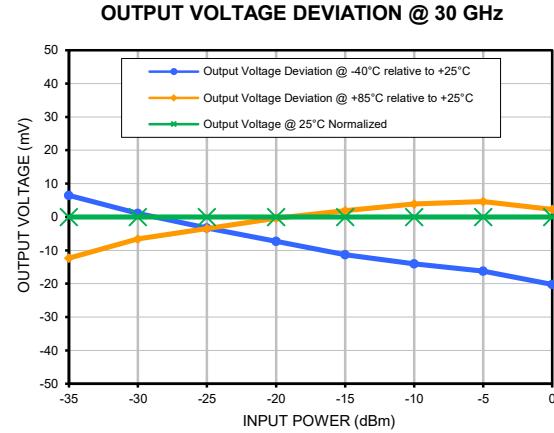
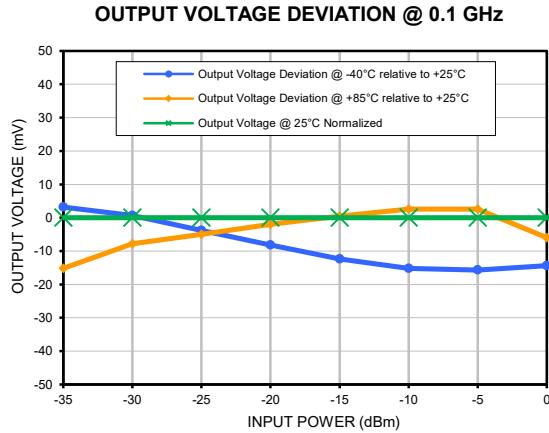
Typical Performance Curves

The following charts show output voltage slope at various temperatures as a function of frequency at a fixed input power. The output voltage slope at a given input power is obtained by using linear regression over the range from -35 dBm to 0 dBm.



Typical Performance Curves

The following charts show measured output voltage deviation at -40°C relative to +25°C (blue) and measured output voltage deviation at +85°C relative to +25°C (orange). Also shown is the measured output voltage measured at +25°C normalized (green) for comparison.

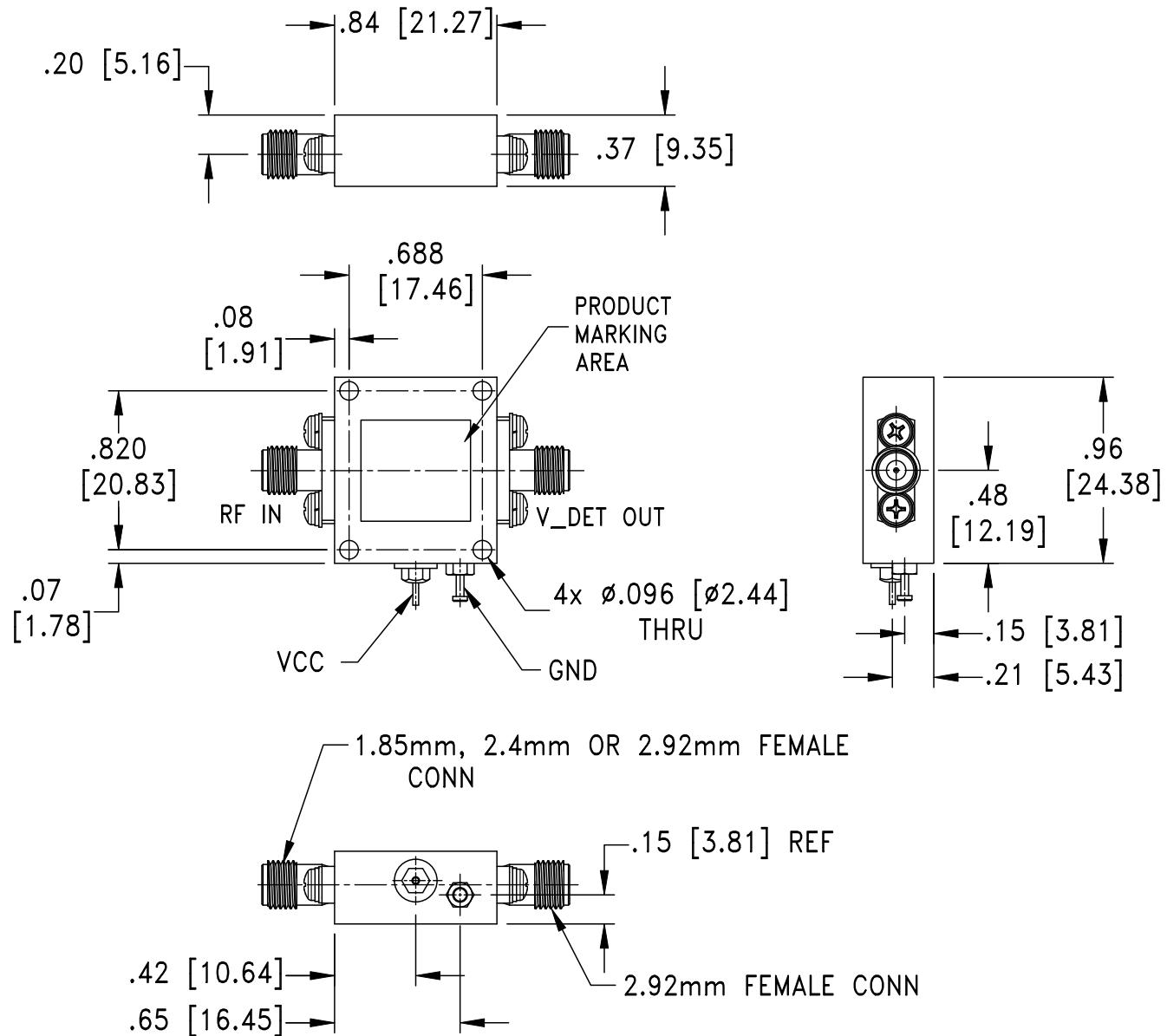


Case Style

AV

Outline Dimensions

AV2578-4



Weight: 45 grams

Dimensions are in inches (mm). Tolerances: 2 Pl. \pm .03; 3 Pl. \pm .015

Notes:

1. Case material: Brass alloy
2. Case finish: Gold plating 20 μ inches, over Nickel plating 100 μ inches.

 **Mini-Circuits®**
ISO 9001 ISO 14001 CERTIFIED

ALL NEW
minicircuits.com

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

RF/IF MICROWAVE COMPONENTS



Environmental Specifications

ENV28T5

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-40° to 85°C	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I