

# Plug-In Phase Detector

## RPD-2+

50Ω High Output 5 to 150 MHz

### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Input Power	50mW
Peak IF current	20mA

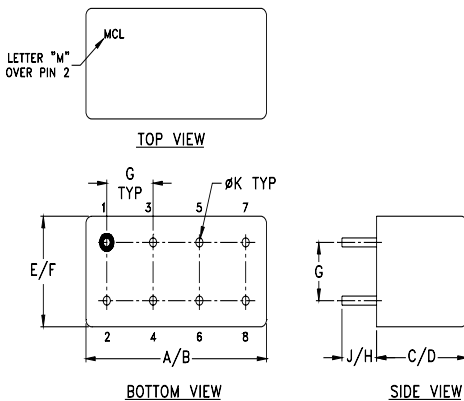
Permanent damage may occur if any of these limits are exceeded.

### Pin Connections

RF REF (RF2)	8
RF IN (RF1)	1
DC OUT (I)	3,4^
GROUND	2,5,6,7
CASE GROUND	2

^ pins must be connected together externally

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F
.770	.800	.385	.400	.370	.400
19.56	20.32	9.78	10.16	9.40	10.16
G	H	J	K	wt	
.200	.20	.14	.031	grams	
5.08	5.08	3.56	0.79	5.2	

### Features

- wideband, 5 to 150 MHz
- hermetic case
- low DC offset, 0.3 mV typ.
- high DC output, 1000 mV typ.

### Applications

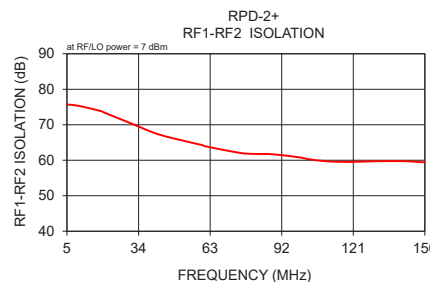
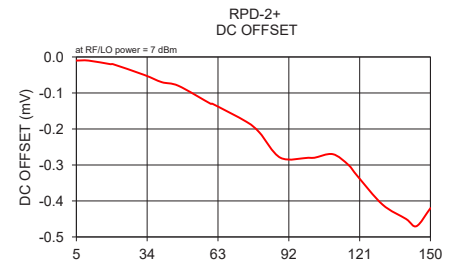
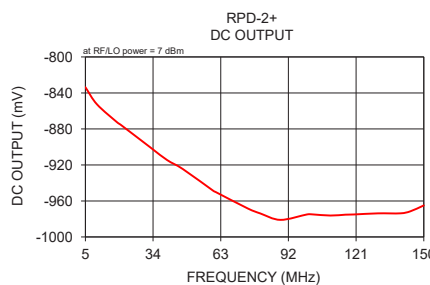
- monitoring circuits
- leveling circuits
- PLL

### Phase Detector Electrical Specifications

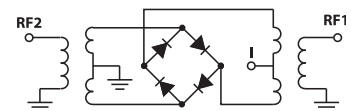
FREQUENCY (MHz)	POWER IN	SCALE FACTOR	IMPEDANCE (ohms) Output Load I	ISOLATION (dB)	OUTPUT POLARITY	DC OUTPUT (mV)		FIGURE OF MERIT	
						Max. Typ.	Offset Typ. Max.		
5-150	DC-50	7	8	500	40	neg.	1000 700	0.3 1	143

### Typical Performance Data

Frequency (MHz)	DC Output mV		DC Offset mV		RF1-RF2 Isolation (dB)
	$\bar{X}$	$\sigma$	$\bar{X}$	$\sigma$	
5.00	-833.63	2.72	-0.01	0.26	75.70
10.00	-852.76	1.95	-0.01	0.27	75.30
18.93	-873.33	1.77	-0.02	0.26	73.81
20.00	-875.10	1.78	-0.02	0.26	73.45
32.86	-900.53	2.55	-0.05	0.24	69.84
40.00	-914.52	3.03	-0.07	0.24	67.79
46.79	-924.59	3.49	-0.08	0.23	66.39
60.00	-949.07	4.67	-0.13	0.23	64.23
60.71	-949.90	4.72	-0.13	0.23	63.98
74.64	-968.41	6.47	-0.18	0.22	62.11
80.00	-973.90	7.19	-0.21	0.22	61.80
88.57	-981.00	8.49	-0.28	0.23	61.68
100.00	-974.94	9.96	-0.28	0.26	60.73
102.50	-974.94	10.38	-0.28	0.27	60.33
110.00	-976.18	11.49	-0.27	0.25	59.71
116.43	-975.23	12.62	-0.30	0.23	59.57
120.00	-975.00	13.37	-0.33	0.22	59.53
130.36	-973.76	16.20	-0.41	0.19	59.73
140.00	-973.73	19.18	-0.45	0.22	59.76
144.29	-971.46	20.99	-0.47	0.25	59.67
150.00	-964.95	23.54	-0.42	0.33	59.40



### electrical schematic



### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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CASE STYLE: A01

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