

Coaxial Phase Detector

50Ω High Output 1 to 100 MHz

ZRPD-1+



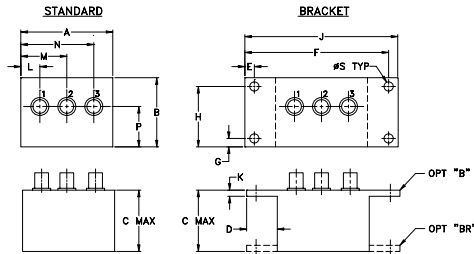
Maximum Ratings

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.	

Coaxial Connections

RF REF (RF2)	1
RF IN (RF1)	3
DC OUT (I)	2

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
2.25	1.38	1.24	.50	.150	3.100	.138	1.238
57.15	35.05	31.50	12.70	3.81	78.74	3.51	31.45
J	K	L	M	N	P	S	wt
3.25	.10	.40	1.15	1.86	.64	.150	grams
82.55	2.54	10.16	29.21	47.24	16.26	3.81	74.0

Features

- wideband, 1 to 100 MHz
- low DC offset, 0.2 mV typ.
- high DC output, 1000 mV typ.

Applications

- monitoring circuits
- leveling circuits
- PLL

Connectors	Model	Price	Qty.
BNC	ZRPD-1+	\$57.95	(1-9)
BRACKET (OPTION "B")		\$5.00	(1-9)
BRACKET (OPTION "BR")		\$1.50	(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.

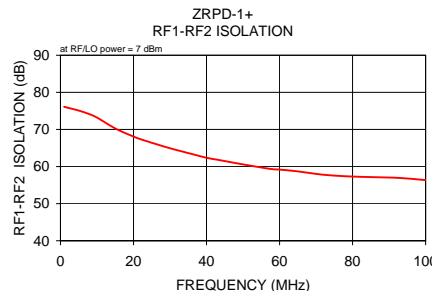
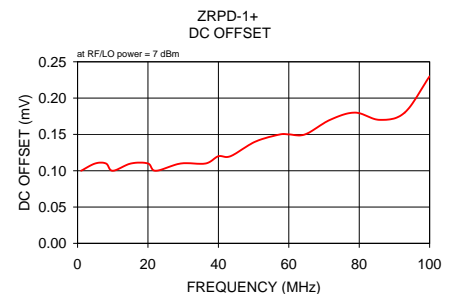
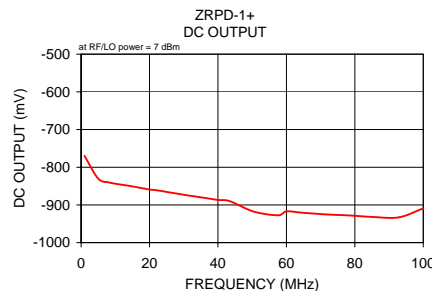
Phase Detector Electrical Specifications

FREQUENCY (MHz)	POWER IN	SCALE FACTOR	IMPEDANCE (ohms)	ISOLATION (dB)	OUTPUT POLARITY	DC OUTPUT (mV)		FIGURE OF MERIT			
						Max.	Offset				
RF1	RF1		I	RF1/RF2	RF1/RF2	Typ.	Min.	Typ.	Max.	1	143
RF2	RF2	mV/deg.									
1-100	DC-50	7	500	40	neg.	1000	700	0.2	1		

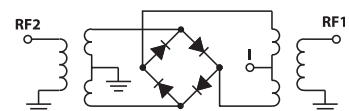
DC output decreases to 550mV over 1-10 MHz as temperature decreases to -55°C

Typical Performance Data

Frequency (MHz)	DC Output mV		DC Offset mV		RF1-RF2 Isolation (dB)
	\bar{X}	σ	\bar{X}	σ	
1.00	-769.98	14.85	0.10	0.16	76.12
5.00	-830.34	8.90	0.11	0.18	75.09
8.07	-840.24	14.44	0.11	0.18	74.07
10.00	-843.71	14.61	0.10	0.18	73.19
15.14	-851.12	17.01	0.11	0.19	70.19
20.00	-859.20	18.91	0.11	0.19	68.10
22.21	-861.26	20.52	0.10	0.20	67.28
29.29	-872.02	22.55	0.11	0.21	65.14
36.36	-881.57	24.77	0.11	0.22	63.29
40.00	-886.86	25.39	0.12	0.23	62.38
43.43	-889.93	26.41	0.12	0.23	61.76
50.50	-917.82	25.99	0.14	0.25	60.51
57.57	-927.50	28.69	0.15	0.27	59.35
60.00	-917.14	33.08	0.15	0.26	59.18
64.64	-920.62	38.60	0.15	0.27	58.73
71.71	-925.22	45.18	0.17	0.31	57.82
78.79	-928.03	51.83	0.18	0.31	57.35
85.86	-932.34	57.31	0.17	0.31	57.15
92.93	-932.98	60.65	0.18	0.38	56.93
100.00	-909.17	74.27	0.23	0.43	56.36



electrical schematic



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ISO 9001 ISO 14001 AS 9100 CERTIFIED

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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

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