Coaxial

Phase Detector

ZRPD-1+

50Ω High Output 1 to 100 MHz

CASE STYLE: M22

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

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

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

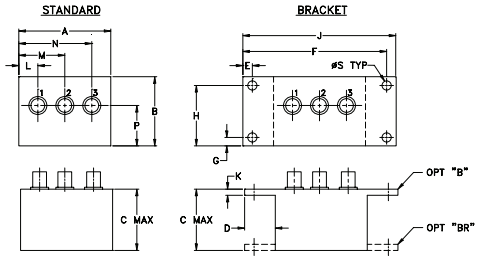
Features

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

Applications

- monitoring circuits
- leveling circuits
- PLL

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

Phase Detector Electrical Specifications

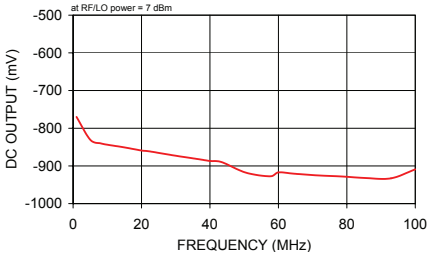
FREQUENCY (MHz) RF1 / RF2		POWER IN RF1 / RF2 (dBm)	SCALE FACTOR mV/deg.	IMPEDANCE (ohms) Output Load I	ISOLATION (dB) RF1/RF2 Min.	OUTPUT POLARITY RF1/RF2 In-Phase	DC OUTPUT (mV) Max. Typ.	Max. Min.	Offset Typ.	Offset Max.	FIGURE OF MERIT Typ.
1-100	DC-50	7	8	500	40	neg.	1000	700	0.2	1	143

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

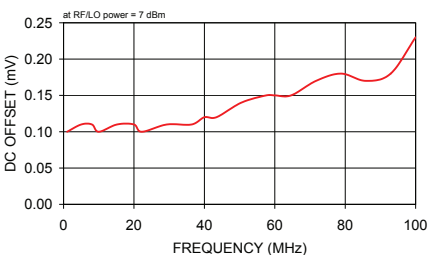
Typical Performance Data

Frequency (MHz)	DC Output mV $\overline{X}$	DC Output mV σ	DC Offset mV $\overline{X}$	DC Offset mV σ	RF1-RF2 Isolation (dB) $\overline{X}$
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

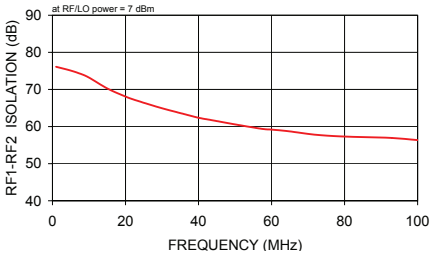
ZRPD-1+
DC OUTPUT



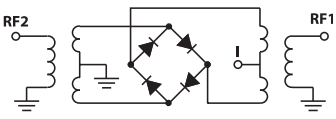
ZRPD-1+
DC OFFSET



ZRPD-1+
RF1-RF2 ISOLATION



electrical schematic



Notes

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