

Frequency Mixers

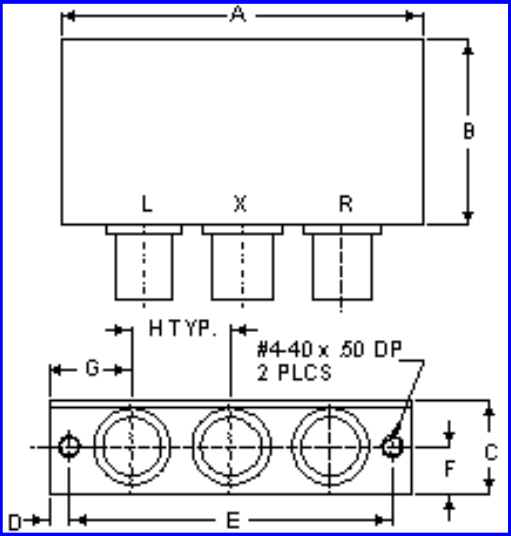
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LO Power Level 10 dBm

Pin Configuration

Port	LO	RF	IF	Gnd Ext.	Case Gnd	Not Used
ag	L	R	X	-	-	-

Outline Drawing



Case Style - GG60 (inch,mm) weight: 75 grams.

A	B	C	D	E	F	G	H	J
2.31	1.20	.60	.125	2.062	.30	.53	.63	
58.674	30.480	15.240	3.175	52.375	7.620	13.462	16.002	
K	L	M	N	P	Q	R	S	T

Tolerance: .x ± .1 .xx ± .03 .xxx ± .015 inch.

Material and Finish:

Case material: aluminum alloy. Finish: grey paint or yellow iridite.

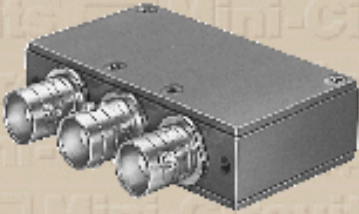
Connectors:

Connectors: BNC standard. SMA on request, consult factory.

Notes:

- +10 dBm LO, up to +5 dBm RF
- Absolute maximum power, voltage and current ratings:
 - a. RF power, 50mW
 - b. Peak IF current, 40mA
- L = 50-100 MHz; M = 100-500 MHz
- General Quality Control Procedures and Environmental Specifications are given in [Mini-Circuits Guarantees Quality](#).
- Hi-Rel, MIL description are given in [Hi-Rel and MIL](#)
- Prices and Specifications subjects to change without notice.

ZP-2LH



Electrical Specifications

ZP-2LH LO Power Level 10 dBm									
Frequency MHz		Max. Conversion Loss dB		Min. LO-RF Isolation dB			Min. LO-IF Isolation dB		
LO/RF	IF	Mid-Band Total Range		L	M	U	L	M	U
50-1000	DC-1000	7.0	8.5	40	30	25	35	25	20

L=low range(f_L to $10f_L$) M=mid range($10f_L$ to $f_U/2$) U=upper range($f_U/2$ to f_U)

Typical Performance Data

ZP-2LH		Conversion Loss (dB)			ISO	Isolation L-R (dB)			Isolation L-I (dB)		
RF MHz	LO MHz	LO +7 dBm	LO +10 dBm	LO +13 dBm	LO (MHz)	LO +7 dBm	LO +10 dBm	LO +13 dBm	LO +7 dBm	LO +10 dBm	LO +13 dBm
5.000	35.000	6.35	5.97	5.79	5.000	50.42	52.74	55.33	92.39	87.33	84.57
10.000	40.000	6.27	5.89	5.71	10.000	50.26	52.59	55.18	88.15	81.78	79.01
20.000	50.000	6.25	5.90	5.72	20.000	50.09	52.51	55.01	82.91	76.47	73.93
50.000	80.000	6.35	5.96	5.78	50.000	50.26	52.73	55.34	75.29	68.83	65.98
95.450	65.454	6.45	6.01	5.81	95.450	50.20	52.59	55.11	76.31	68.37	65.72
100.000	70.000	6.47	6.04	5.81	100.000	49.96	52.35	55.06	76.24	67.59	63.42
185.910	155.909	6.23	5.82	5.71	185.910	49.37	52.03	55.00	64.85	63.99	60.35
200.000	170.000	6.06	5.77	5.70	200.000	48.99	52.24	55.94	56.89	62.23	57.60
276.360	246.364	5.99	5.75	5.69	276.360	48.39	51.93	56.47	53.30	58.87	57.65
366.820	336.818	6.00	5.81	5.75	366.820	48.15	52.59	58.42	50.00	53.25	55.12
457.270	427.273	6.15	5.88	5.79	457.270	45.89	47.42	48.34	53.50	55.40	52.82
487.420	457.424	6.12	5.91	5.82	487.420	43.82	45.90	47.93	48.88	49.79	48.91
500.000	470.000	6.15	5.94	5.88	500.000	45.19	48.30	51.48	45.61	46.54	46.57
547.730	517.727	6.24	6.07	6.00	547.730	54.75	57.22	57.14	39.24	40.10	40.86
638.180	608.182	6.79	6.63	6.52	638.180	49.32	48.69	47.24	37.98	37.95	38.10
728.640	698.636	7.42	7.20	6.92	728.640	42.97	42.92	42.20	37.56	36.76	35.98
819.090	789.091	7.81	7.24	6.94	819.090	39.80	41.04	42.19	32.89	32.27	31.54
909.550	879.546	8.19	7.27	6.94	909.550	39.91	41.87	45.54	30.39	29.47	28.88
969.850	939.849	8.82	7.69	7.15	969.850	41.20	44.77	52.60	29.06	28.21	27.71
1000.000	970.000	8.86	7.81	7.32	1000.000	42.93	50.08	45.94	28.12	26.90	26.19

RF/LO	VSWR RF port			VSWR LO port			IF	VSWR IF port			Ø detection		
FREQ. (MHz)	LO +7 dBm	LO +10 dBm	LO +13 dBm	LO +7 dBm	LO +10 dBm	LO +13 dBm	FREQ. (MHz)	LO +7 dBm	LO +10 dBm	LO +13 dBm	FREQ. MHz	max.DC output mV	DC offset mV
5.000	1.19	1.25	1.36	2.01	2.82	3.90	5.000	1.73	1.46	1.19	5.00	-332.70	-2.03
10.000	1.10	1.18	1.30	1.82	2.63	3.70	10.000	1.74	1.47	1.19	10.00	-332.60	-1.99
20.000	1.06	1.16	1.28	1.85	2.68	3.75	20.000	1.73	1.46	1.19	20.00	-329.00	-1.95
50.000	1.08	1.18	1.30	1.81	2.62	3.65	50.000	1.76	1.48	1.21	50.00	-343.00	-2.00
100.000	1.10	1.19	1.31	1.74	2.50	3.48	100.000	1.82	1.54	1.25	95.45	-338.30	-0.06
165.130	1.12	1.21	1.32	1.73	2.50	3.48	165.130	1.91	1.63	1.35	100.00	-331.90	-2.02
200.000	1.13	1.22	1.33	1.68	2.40	3.31	200.000	1.97	1.69	1.42	185.91	-357.00	-1.98
265.220	1.13	1.23	1.33	1.72	2.48	3.42	265.220	2.12	1.84	1.56	200.00	-356.20	-1.92
345.280	1.14	1.23	1.32	1.68	2.38	3.24	345.280	2.38	2.08	1.78	276.36	-342.60	-1.81
425.350	1.13	1.22	1.30	1.72	2.39	3.21	425.350	2.62	2.33	2.02	366.82	-332.00	-1.45
500.000	1.12	1.21	1.28	1.77	2.42	3.21	500.000	2.86	2.55	2.23	457.27	-287.51	-1.36
525.430	1.12	1.20	1.26	1.77	2.42	3.20	525.430	2.92	2.61	2.30	487.42	-273.52	-1.14
552.120	1.12	1.19	1.25	1.80	2.43	3.18	552.120	3.01	2.68	2.36	500.00	-271.37	-1.18
605.500	1.11	1.18	1.23	1.84	2.44	3.16	605.500	3.12	2.79	2.46	547.73	-272.60	-1.49
685.570	1.10	1.15	1.17	1.90	2.49	3.19	685.570	3.15	2.80	2.48	638.18	-282.98	-1.28
765.640	1.08	1.11	1.14	1.93	2.47	3.13	765.640	3.13	2.76	2.44	728.64	-235.17	-0.97
845.700	1.02	1.05	1.12	1.99	2.47	3.05	845.700	3.06	2.67	2.31	819.09	-205.55	-0.81
919.100	1.13	1.15	1.24	2.10	2.57	3.11	919.100	2.95	2.53	2.15	909.55	-207.63	-0.31
972.470	1.28	1.30	1.39	2.13	2.60	3.12	972.470	2.88	2.45	2.04	969.85	-209.87	-0.06
1000.000	1.35	1.38	1.47	2.12	2.59	3.12	1000.000	2.86	2.42	1.99	1000.00	-204.55	0.27

Click Above for Actual Performance Data.



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