

Frequency Mixers

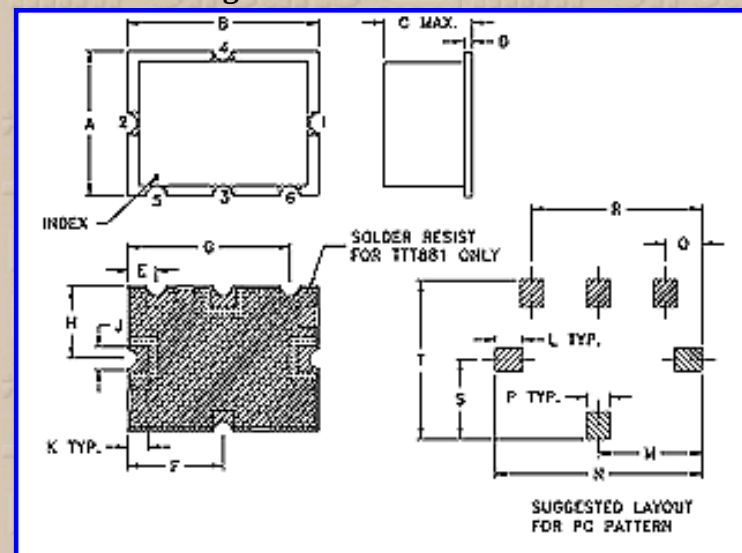
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LO Power Level 17 dBm

Pin Configuration

Port	LO	RF	IF	Gnd	Ext.	Case Gnd	Not Used
x	2	1	3	4,5,6	-	-	-

Outline Drawing



Case Style - TTT167 (inch,mm) weight: 0.8 grams.

A	B	C	D	E	F	G	H	J
.375	.500	.23	.020	.075	.250	.425	.187	.050
9.525	12.700	5.842	0.508	1.905	6.350	10.795	4.750	1.270
K	L	M	N	P	Q	R	S	T
.050	.070	.270	.540	.060	.095	.445	.208	.415
1.270	1.778	6.858	13.716	1.524	2.413	11.303	5.283	10.541

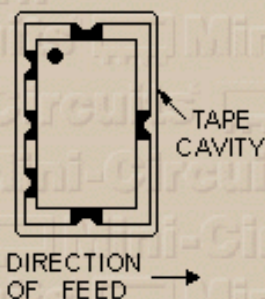
Tolerance: .x ± .1 .xx ± .03 .xxx ± .015 inch.

Material and Finish:

Case material: plastic or copper-nickel alloy, Glass Epoxy
Laminate or ceramic base. Termination finish: tin-lead plate or tin plate.

Packaging:

UNIT ORIENTATION



Packaging information:

Tape Width(mm): 24
Reel Size(inches): 13
Device Cavity Pitch(mm): 12
Devices Per Reel: 500

Notes:

- Absolute maximum power, voltage and current ratings:
 - RF power, 200mW
 - Peak IF current, 40mA

- For Surface Mount Environmental Specifications, please click [here](#).

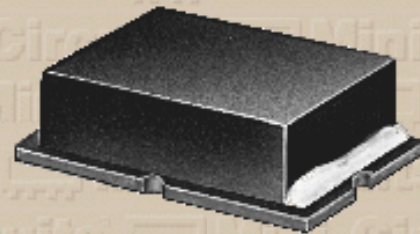
- UP TO +14 dBm RF

- 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.

SYM-10DH



Electrical Specifications

SYM-10DH LO Power Level 17 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
800-1000	20-200		9.3	34	34	34	20	20	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

SYM-10DH		Conversion Loss (dB)			ISO	Isolation L-R (dB)			Isolation L-I (dB)		
RF MHz	LO MHz	LO +14 dBm	LO +17 dBm	LO +20 dBm	LO (MHz)	LO +14 dBm	LO +17 dBm	LO +20 dBm	LO +14 dBm	LO +17 dBm	LO +20 dBm
50.000	80.000	7.20	6.80	6.50	80.000	45.10	49.30	50.80	37.80	41.30	44.20
80.000	110.000	7.00	6.60	6.50	110.000	47.30	50.20	49.30	38.70	41.70	43.70
100.000	130.000	6.99	6.69	6.49	130.000	48.50	49.80	48.00	39.20	42.20	43.20
117.857	147.857	6.98	6.68	6.48	147.857	49.30	48.50	46.60	39.40	41.80	42.10
185.714	215.714	7.11	6.81	6.61	215.714	48.30	45.70	44.20	40.60	41.10	40.10
253.571	283.571	7.32	6.92	6.62	283.571	46.00	43.50	43.00	40.50	39.90	38.40
300.000	330.000	7.25	6.95	6.55	330.000	43.90	42.70	41.30	40.90	38.60	36.10
321.429	351.429	7.36	6.86	6.56	351.429	43.40	42.20	41.40	40.40	37.70	35.70
389.286	419.286	7.74	7.14	6.84	419.286	45.00	43.10	41.40	40.50	36.90	34.60
457.143	487.143	7.65	7.15	6.85	487.143	44.30	42.20	40.90	36.20	34.70	33.80
500.000	530.000	7.63	7.03	6.83	530.000	45.00	43.60	42.80	34.00	33.10	32.50
525.000	555.000	7.63	7.03	6.73	555.000	47.60	47.50	45.50	32.70	32.20	32.00
592.857	622.857	7.85	7.15	6.85	622.857	47.50	51.40	43.90	29.40	29.00	29.30
660.714	690.714	7.64	7.14	6.84	690.714	42.60	43.40	39.70	27.90	27.50	27.60
728.571	758.571	7.74	7.14	6.84	758.571	38.70	40.00	38.60	27.50	27.10	27.10
796.429	826.429	8.09	7.39	7.19	826.429	37.70	40.90	40.20	28.70	27.50	27.00
800.000	830.000	8.14	7.44	7.14	830.000	37.80	41.00	40.60	28.80	27.60	27.00
864.286	894.286	8.13	7.53	7.13	894.286	38.30	43.60	43.20	28.30	26.70	26.10
932.143	962.143	8.63	7.93	7.53	962.143	37.30	41.70	44.00	27.60	25.90	24.90
1000.000	1030.000	9.68	8.38	7.88	1030.000	33.10	37.10	40.40	27.40	25.20	24.00

RF/LO	VSWR RF port			VSWR LO port			IF	VSWR IF port		
FREQ. (MHz)	LO +14 dBm	LO +17 dBm	LO +20 dBm	LO +14 dBm	LO +17 dBm	LO +20 dBm	FREQ. (MHz)	LO +14 dBm	LO +17 dBm	LO +20 dBm
80.000	1.05	1.53	2.30	1.71	1.51	1.38	20.000	1.16	1.17	1.29
110.000	1.06	1.48	2.16	1.71	1.54	1.41	50.000	1.17	1.13	1.26
130.000	1.11	1.54	2.27	1.66	1.51	1.39	75.714	1.18	1.13	1.25
147.857	1.09	1.59	2.40	1.69	1.52	1.41	80.000	1.19	1.13	1.25
215.714	1.20	1.53	2.25	1.71	1.57	1.46	100.000	1.20	1.13	1.24
283.571	1.20	1.50	2.01	1.66	1.53	1.40	131.429	1.22	1.14	1.23
330.000	1.31	1.65	2.55	1.63	1.48	1.32	187.143	1.26	1.15	1.21
351.429	1.27	1.56	2.25	1.64	1.47	1.32	200.000	1.26	1.15	1.20
419.286	1.40	1.65	2.43	1.67	1.46	1.31	242.857	1.30	1.16	1.19
487.143	1.35	1.43	1.96	1.59	1.38	1.24	298.571	1.33	1.16	1.16
530.000	1.36	1.41	1.92	1.55	1.35	1.23	354.286	1.37	1.17	1.14
555.000	1.35	1.30	1.68	1.51	1.34	1.25	410.000	1.40	1.18	1.12
622.857	1.49	1.34	1.78	1.48	1.33	1.26	465.714	1.43	1.19	1.11
690.714	1.80	1.39	1.84	1.40	1.28	1.23	500.000	1.44	1.19	1.10
758.571	1.91	1.37	1.63	1.41	1.29	1.23	521.429	1.45	1.19	1.10
826.429	2.03	1.40	1.46	1.45	1.34	1.27	577.143	1.45	1.19	1.09
830.000	2.04	1.41	1.46	1.46	1.34	1.27	632.857	1.46	1.19	1.09
894.286	2.30	1.46	1.46	1.45	1.36	1.28	688.571	1.46	1.20	1.09
962.143	2.49	1.48	1.37	1.55	1.46	1.40	744.286	1.46	1.20	1.09
1030.000	2.30	1.44	1.24	1.74	1.61	1.55	800.000	1.46	1.20	1.08

Click Above for Actual Performance Data.



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