

# Frequency Mixers

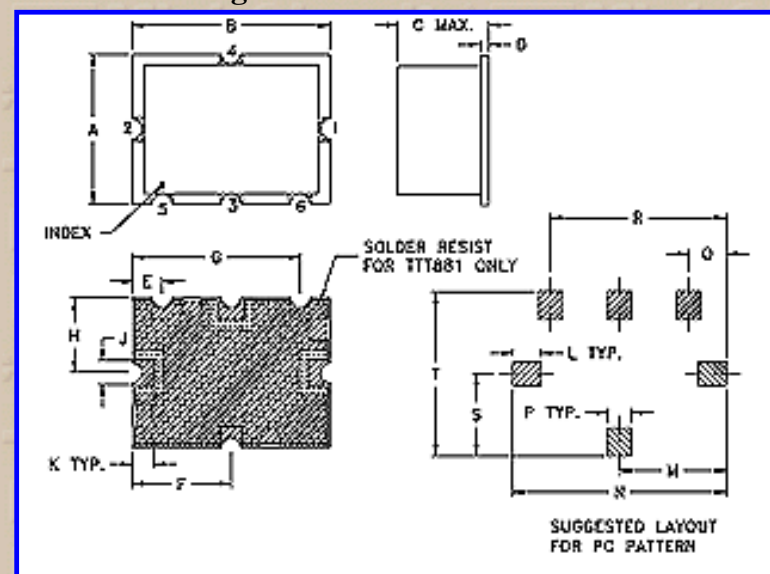
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## LO Power Level 13 dBm

### Pin Configuration

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

### Outline Drawing



### Notes:

- Non-catalog model. Please consult factory for price and delivery.
- For Surface Mount Environmental Specifications, please click [here](#).
- 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-ED9627/1



### Electrical Specifications

#### SYM-ED9627/1

LO Power Level 13 dBm

Frequency MHz	Conversion Loss dB	LO-RF Isolation dB			LO-IF Isolation dB					
		L	M	U	L	M	U			
0.150-3175	0-1575									

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

RF MHz	LO MHz	Conversion Loss (dB)			ISO LO (MHz)	Isolation L-R (dB)			Isolation L-I (dB)		
		LO +10 dBm	LO +13 dBm	LO +16 dBm		LO +10 dBm	LO +13 dBm	LO +16 dBm	LO +10 dBm	LO +13 dBm	LO +16 dBm
0.150	30.150	8.34	8.08	7.87	30.150	38.11	42.21	46.17	57.76	62.67	67.79
0.450	30.450	7.13	6.89	6.60	30.450	38.13	42.35	46.13	57.83	62.74	67.66
0.750	30.750	6.86	6.57	6.39	30.750	38.16	42.22	46.16	57.77	62.65	68.04
1.000	31.000	6.73	6.50	6.27	31.000	38.15	42.31	46.06	57.72	62.71	67.74
3.000	33.000	6.40	6.13	6.01	33.000	38.20	42.15	45.94	57.97	62.59	67.59
5.000	35.000	6.33	6.10	5.90	35.000	38.15	42.00	45.85	58.03	62.71	67.63
10.000	40.000	6.26	6.01	5.86	40.000	38.01	41.88	45.62	58.04	62.87	68.02
50.000	80.000	6.33	6.22	6.09	80.000	37.43	40.91	43.77	58.30	63.83	68.83
100.000	130.000	6.37	6.79	6.14	130.000	37.27	40.33	42.44	59.00	65.95	68.42
500.000	530.000	6.20	5.93	5.84	530.000	36.65	35.45	34.83	50.44	51.76	51.82
700.000	730.000	6.03	5.82	5.74	730.000	34.58	33.08	32.47	43.56	45.39	46.60
900.000	930.000	6.03	5.81	5.72	930.000	32.94	31.89	31.50	39.96	42.93	45.43
1100.000	1130.000	6.09	5.83	5.71	1130.000	32.16	31.15	30.86	38.15	41.44	44.34
1200.000	1230.000	6.19	5.91	5.77	1230.000	32.50	31.27	30.76	38.16	41.92	44.17
1300.000	1330.000	6.32	6.01	5.87	1330.000	32.97	31.51	30.83	38.96	43.73	46.06
1400.000	1430.000	6.51	6.18	6.02	1430.000	33.43	31.72	30.87	39.43	45.17	45.10
1500.000	1530.000	6.74	6.40	6.21	1530.000	34.04	32.78	32.00	39.11	47.27	44.81
1600.000	1630.000	6.94	6.53	6.32	1630.000	34.99	34.75	34.34	39.74	52.53	44.60
1700.000	1730.000	7.14	6.65	6.39	1730.000	35.58	36.66	36.96	40.37	56.20	45.55
1800.000	1830.000	7.30	6.76	6.50	1830.000	34.63	35.39	35.83	40.66	56.63	46.23
1900.000	1930.000	7.36	6.87	6.60	1930.000	32.26	32.12	32.16	41.15	55.31	45.77
2000.000	2030.000	7.45	6.96	6.70	2030.000	30.20	29.49	29.22	41.96	50.88	44.13
2100.000	2130.000	7.49	6.98	6.74	2130.000	28.64	27.60	27.23	41.59	46.59	42.39
2200.000	2230.000	7.55	7.09	6.86	2230.000	27.45	26.44	26.10	39.35	41.06	39.64
2300.000	2330.000	7.63	7.18	6.95	2330.000	26.51	25.38	25.04	35.66	36.31	35.97

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

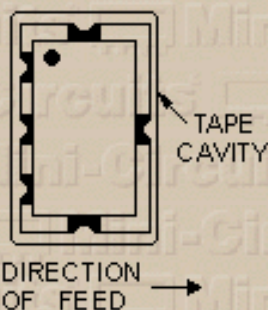
Tolerance: .x ± .1 .xx ± .03 .xxx ± .015 inch.

### 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

2400.000	2430.000	7.63	7.19	6.98	2430.000	25.60	24.38	23.95	33.19	33.74	33.60
2500.000	2530.000	7.79	7.36	7.18	2530.000	24.74	23.46	22.89	31.12	31.74	31.85
2600.000	2630.000	7.99	7.59	7.41	2630.000	24.20	22.82	22.26	30.18	31.13	31.55
2700.000	2730.000	8.07	7.66	7.49	2730.000	24.07	22.64	22.02	29.06	30.71	32.33
2800.000	2830.000	8.39	7.98	7.84	2830.000	24.08	22.52	21.89	26.40	27.85	29.17
2850.000	2880.000	8.50	8.09	7.95	2880.000	24.23	22.54	21.81	25.60	27.01	28.30
2900.000	2930.000	8.72	8.34	8.20	2930.000	24.39	22.54	21.71	24.99	26.38	27.65
2950.000	2980.000	8.93	8.53	8.37	2980.000	24.69	22.65	21.66	24.60	25.97	27.15
3000.000	3030.000	8.96	8.61	8.46	3030.000	25.36	23.08	21.95	24.63	25.96	27.05
3050.000	3080.000	9.43	9.08	8.98	3080.000	25.67	23.26	21.90	24.71	25.94	26.97
3100.000	3130.000	9.59	9.39	9.42	3130.000	25.82	23.37	21.96	25.31	26.38	27.30
3125.000	3155.000	9.81	9.60	9.65	3155.000	25.56	23.20	21.71	25.69	26.66	27.47
3150.000	3180.000	9.83	9.60	9.59	3180.000	25.64	23.17	21.78	26.17	27.11	27.86
3175.000	3205.000	9.95	9.66	9.61	3205.000	25.31	22.99	21.54	26.59	27.46	28.17

RF/LO	VSWR RF port			VSWR LO port			IF	VSWR IF port		
FREQ. (MHz)	LO +10 dBm	LO +13 dBm	LO +16 dBm	LO +10 dBm	LO +13 dBm	LO +16 dBm	FREQ. (MHz)	LO +10 dBm	LO +13 dBm	LO +16 dBm
30.150	1.72	1.90	2.03	1.46	2.07	2.79	0.150	3.25	3.22	3.25
30.450	1.33	1.39	1.43	1.45	2.07	2.80	0.450	1.69	1.68	1.69
30.750	1.23	1.26	1.30	1.45	2.08	2.80	0.750	1.45	1.44	1.45
31.000	1.20	1.21	1.24	1.47	2.07	2.79	1.000	1.37	1.35	1.35
33.000	1.15	1.08	1.09	1.46	2.07	2.79	3.000	1.22	1.15	1.13
35.000	1.14	1.06	1.06	1.46	2.06	2.79	5.000	1.20	1.10	1.07
40.000	1.14	1.04	1.04	1.45	2.06	2.78	10.000	1.19	1.08	1.03
80.000	1.12	1.03	1.05	1.45	2.05	2.72	30.000	1.18	1.07	1.02
130.000	1.14	1.05	1.06	1.45	2.04	2.74	50.000	1.18	1.08	1.04
530.000	1.16	1.16	1.22	1.29	1.69	2.17	150.000	1.23	1.15	1.13
730.000	1.16	1.21	1.27	1.20	1.53	1.98	200.000	1.28	1.20	1.18
930.000	1.13	1.19	1.26	1.17	1.40	1.82	250.000	1.33	1.25	1.22
1130.000	1.08	1.11	1.19	1.14	1.30	1.69	300.000	1.38	1.31	1.28
1230.000	1.10	1.08	1.16	1.13	1.26	1.67	350.000	1.44	1.36	1.33
1330.000	1.12	1.04	1.13	1.14	1.24	1.62	400.000	1.50	1.42	1.38
1430.000	1.15	1.04	1.08	1.18	1.22	1.60	450.000	1.57	1.49	1.44
1530.000	1.20	1.10	1.08	1.25	1.26	1.61	500.000	1.63	1.55	1.49
1630.000	1.27	1.20	1.16	1.33	1.37	1.69	550.000	1.69	1.60	1.54
1730.000	1.44	1.36	1.33	1.39	1.52	1.85	600.000	1.76	1.67	1.60
1830.000	1.63	1.56	1.53	1.46	1.67	2.03	650.000	1.83	1.73	1.66
1930.000	1.78	1.73	1.70	1.50	1.79	2.16	700.000	1.88	1.78	1.70
2030.000	1.87	1.83	1.80	1.51	1.83	2.21	750.000	1.94	1.83	1.75
2130.000	1.89	1.85	1.83	1.50	1.81	2.13	800.000	1.90	1.78	1.71
2230.000	1.86	1.83	1.81	1.51	1.77	2.04	850.000	2.05	1.94	1.84
2330.000	1.84	1.82	1.80	1.57	1.84	2.10	900.000	2.04	1.93	1.83
2430.000	1.88	1.87	1.87	1.70	2.00	2.29	950.000	2.07	1.95	1.86
2530.000	2.04	2.04	2.05	1.90	2.25	2.60	1000.000	2.11	1.99	1.89
2630.000	2.19	2.20	2.22	2.08	2.43	2.79	1050.000	2.15	2.02	1.91
2730.000	2.37	2.38	2.40	2.19	2.52	2.82	1100.000	2.16	2.02	1.91
2830.000	2.46	2.46	2.47	2.22	2.51	2.73	1150.000	2.18	2.04	1.92
2880.000	2.62	2.61	2.63	2.26	2.53	2.75	1200.000	2.20	2.06	1.95
2930.000	2.78	2.76	2.77	2.28	2.55	2.74	1250.000	2.23	2.09	1.97
2980.000	2.85	2.83	2.83	2.25	2.49	2.66	1300.000	2.23	2.09	1.97
3030.000	3.00	2.96	2.95	2.32	2.53	2.73	1350.000	2.23	2.10	1.98
3080.000	3.26	3.18	3.16	2.31	2.49	2.69	1400.000	2.25	2.12	2.00
3130.000	3.18	3.10	3.08	2.39	2.57	2.81	1450.000	2.27	2.13	2.02
3155.000	3.20	3.10	3.08	2.36	2.53	2.77	1500.000	2.26	2.15	2.04

3180.000	3.10	3.01	2.98	2.37	2.53	2.74	1550.000	2.28	2.16	2.06
3205.000	3.14	3.04	3.01	2.47	2.65	2.90	1575.000	2.32	2.19	2.09

RF	LO	IP3
130	132	19.17
130	133	25.08
130	134	24.16
130	136	24.16
130	138	23.72
130	140	23.68
130	142	23.68
130	144	23.61
130	146	23.06
130	150	22.42
130	152	22.05
130	154	21.85
130	156	21.66
130	158	21.67
130	160	21.99

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