

Plug-In

# Frequency Mixer

## TFM-12MH+

Level 13 (LO Power +13 dBm) 0.5 to 2000 MHz



CASE STYLE: B13  
PRICE: \$52.50 ea. QTY (1-9)

**+RoHS Compliant**

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

### Maximum Ratings

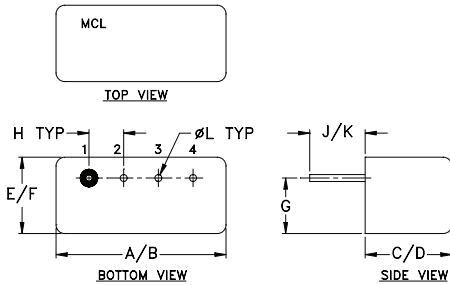
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

Permanent damage may occur if any of these limits are exceeded.

### Pin Connections

LO	4
RF	1
IF	2
GROUND	3
CASE GROUND	3

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F
.480	.500	.390	.405	.210	.230
12.19	12.70	9.91	10.29	5.33	5.84
G	H	J	K	L	wt
.16	.100	.14	.20	.020	grams
4.06	2.54	3.56	5.08	0.51	2.3

### Features

- low conversion loss, 6.99 dB typ.
- wideband, 0.5 to 2000 MHz
- rugged welded construction
- hermetically sealed

### Applications

- satellite distribution
- cellular
- GPS
- defense & federal communications

### Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
LO/RF	IF	Mid-Band		Total Range	L		M		U		L		M		U	
$f_L$ - $f_U$		$\bar{X}$	$\sigma$	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
0.5-2000	0.2-600	6.99	0.16	8.0	9.5	60	45	35	30	30	25	55	40	30	25	20

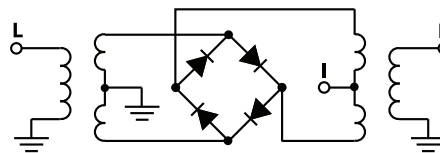
1 dB COMP.: +9 dBm typ.

L = low range [ $f_L$  to  $10 f_L$ ]  
M = mid range [ $10 f_L$  to  $f_U/2$ ]  
U = upper range [ $f_U/2$  to  $f_U$ ]  
m = mid band [ $2f_L$  to  $f_U/2$ ]

### Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
0.50	30.50	5.54	61.48	64.69	4.43	1.96
5.00	35.00	5.64	61.51	64.42	4.51	1.88
20.00	50.00	5.60	61.26	63.51	4.59	2.04
50.00	80.00	5.85	58.01	56.01	4.43	1.91
100.00	70.00	5.85	55.76	52.77	4.31	1.86
222.67	192.67	6.55	47.09	43.57	4.70	1.78
370.78	340.78	7.22	43.20	40.28	4.92	1.67
500.00	470.00	7.60	39.53	35.85	4.52	1.58
592.94	562.94	7.49	38.74	33.96	4.48	1.56
741.06	711.06	7.43	37.61	32.39	3.42	1.43
889.17	859.17	6.76	33.34	29.78	2.40	1.27
1037.30	1007.30	6.12	34.59	30.40	1.85	1.19
1111.30	1081.30	6.07	35.77	31.30	1.61	1.18
1259.40	1229.40	6.35	37.02	32.22	1.35	1.24
1333.50	1303.50	6.58	36.62	31.95	1.25	1.31
1481.60	1451.60	7.15	35.23	34.09	1.32	1.42
1555.70	1525.70	7.34	34.20	39.23	1.43	1.43
1703.80	1673.80	7.82	35.34	39.62	1.79	1.53
1851.90	1821.90	8.07	38.03	35.98	2.62	1.59
2000.00	1970.00	8.50	32.12	36.12	3.22	1.58

### Electrical Schematic



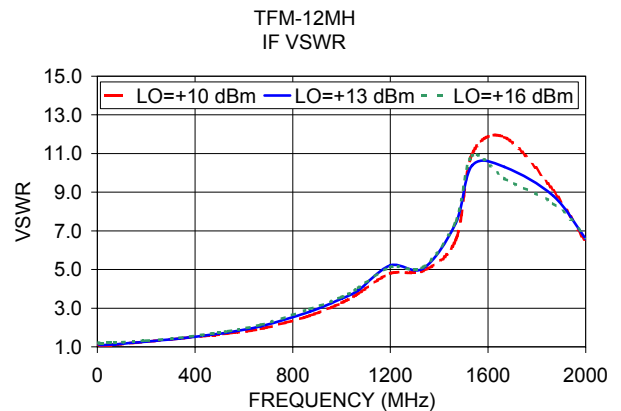
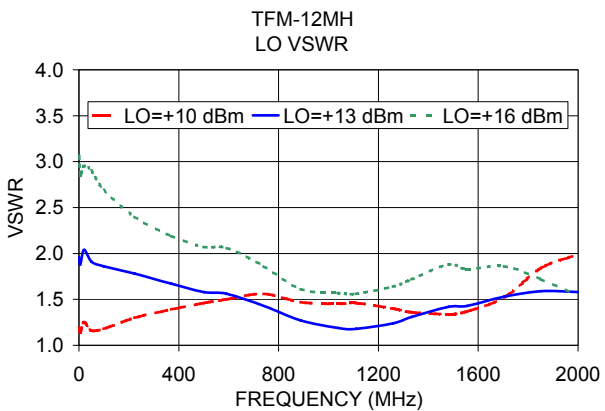
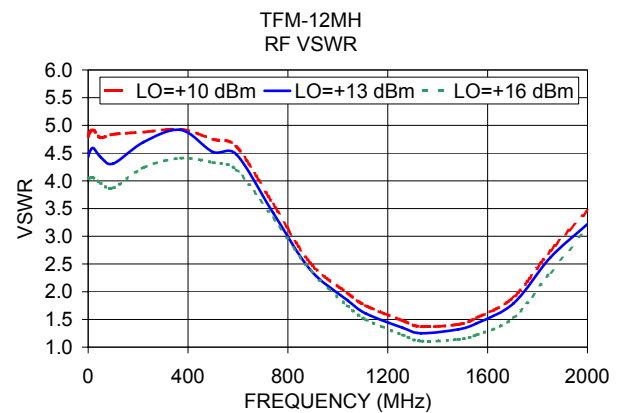
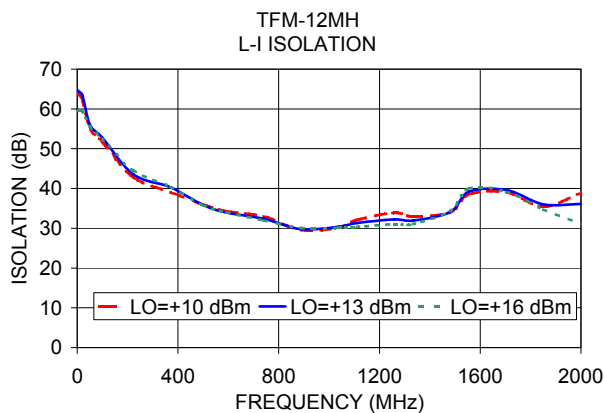
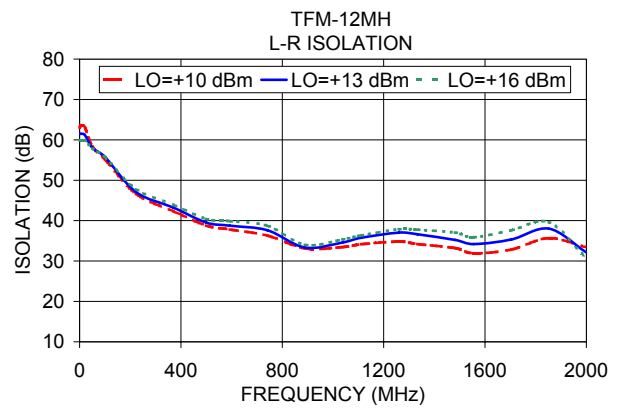
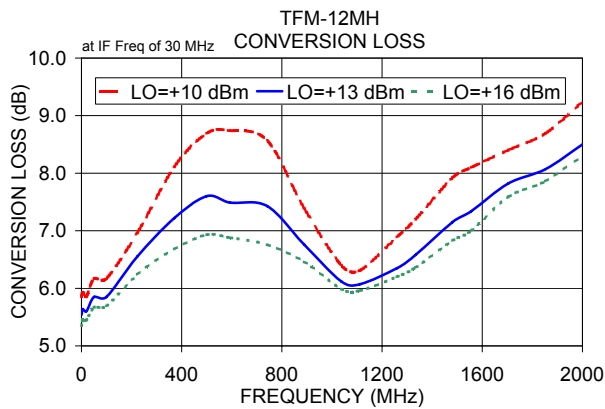
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ISO 9001 ISO 14001 AS 9100 CERTIFIED

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