

Plug-In

Frequency Mixer

TFM-12MH+

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



Generic photo used for illustration purposes only

CASE STYLE: B13

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

Features

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

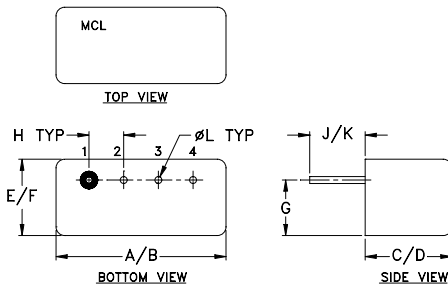
Applications

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

+RoHS Compliant

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

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

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}	σ	Max.	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	25	20

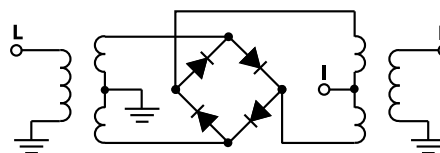
1 dB COMP.: +9 dBm typ.

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

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

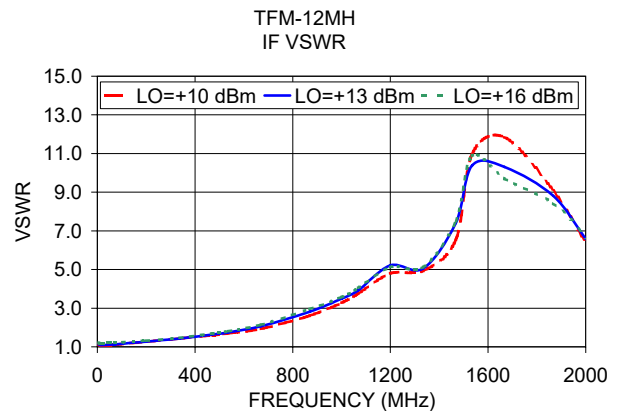
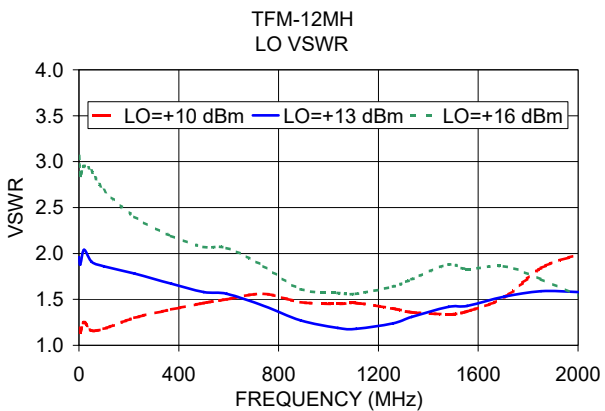
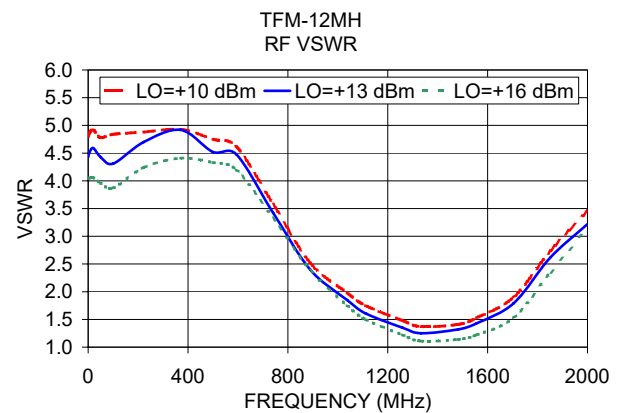
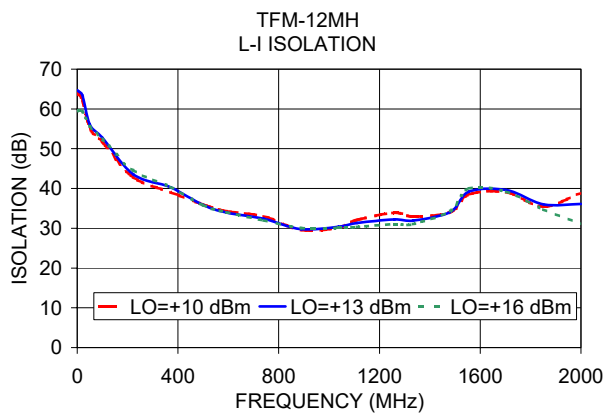
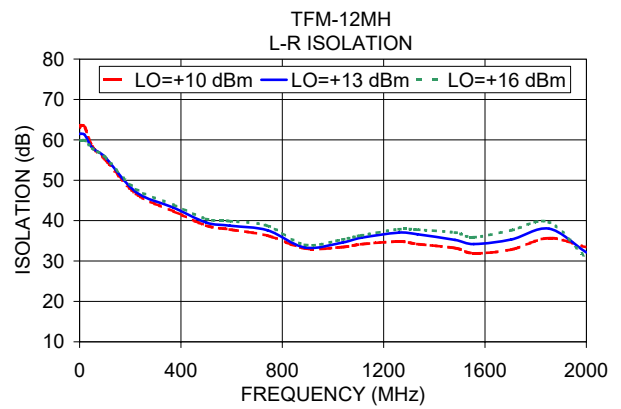
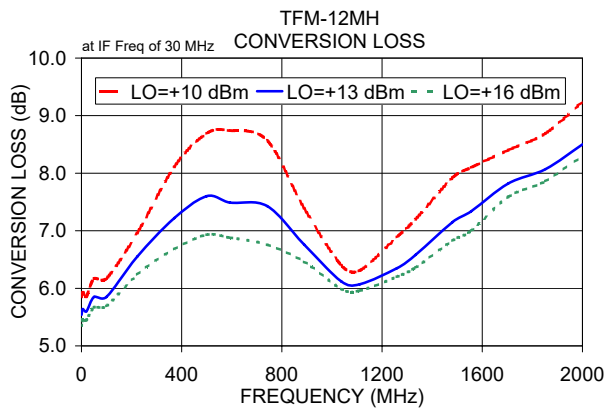
Electrical Schematic



Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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