

Plug-In

# Frequency Mixer

TFM-150+

Level 10 (LO Power +10 dBm) 10 to 2000 MHz



CASE STYLE: B13

## Maximum Ratings

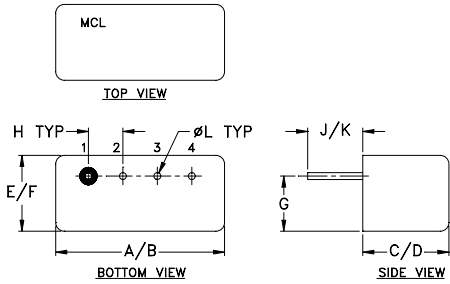
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

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

## Pin Connections

LO	1
RF	4
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, 6.19 dB typ.
- wideband, 10 to 2000 MHz
- rugged welded construction
- hermetically sealed

## Applications

- satellite distribution
- cellular
- GPS
- ISM/GSM

## +RoHS Compliant

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

## Electrical Specifications

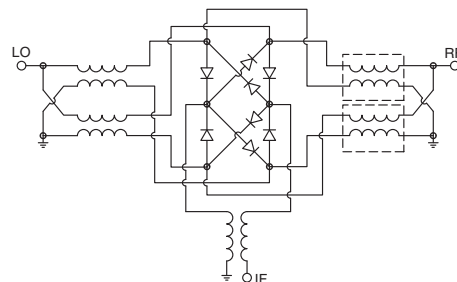
FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
LO/RF	IF	Mid-Band		Total Range Max.	L	M	U	L	M	U	L	M	U	L	M	U	
$f_L$ - $f_U$		$\bar{X}$	$\sigma$														Typ.
10-2000	DC-1000*	6.19	0.11	8.0	8.0*	32	25	35	25	35	25	33	20	30	20	30	20

1 dB COMP.: +5 dBm typ.  
 \*Below 10 MHz IF, conversion loss increases up to 6 dB higher as frequency decreases to DC  
 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	+10dBm	+10dBm	+10dBm	LO +10dBm	LO +10dBm
10.00	40.00	6.45	25.80	24.40	1.62	1.69
20.00	50.00	6.61	30.46	29.11	1.29	1.49
130.61	100.61	6.30	36.94	35.84	1.29	1.39
251.21	221.21	6.42	37.51	37.82	1.34	1.36
432.12	402.12	6.38	36.22	37.58	1.38	1.34
500.00	470.00	6.61	35.79	36.42	1.49	1.30
552.73	522.73	6.47	35.50	35.14	1.60	1.29
673.33	643.33	6.53	34.67	33.34	1.62	1.28
793.94	763.68	6.64	34.16	31.81	1.70	1.26
914.55	884.43	6.67	32.34	30.81	1.79	1.26
974.85	944.91	6.11	31.59	30.10	1.89	1.22
1035.20	1005.40	7.04	30.74	29.56	2.02	1.20
1155.80	1125.60	7.24	30.26	30.08	2.07	1.20
1276.40	1246.50	6.75	29.72	30.93	2.13	1.18
1397.00	1366.80	6.57	28.85	31.94	2.13	1.13
1517.60	1487.50	6.59	28.61	31.80	2.05	1.07
1638.20	1608.00	6.63	27.94	29.65	1.88	1.12
1758.80	1728.70	6.91	28.39	26.17	1.45	1.18
1879.40	1849.50	7.01	30.98	26.61	1.43	1.21
2000.00	1970.00	7.24	32.51	24.79	1.55	1.26

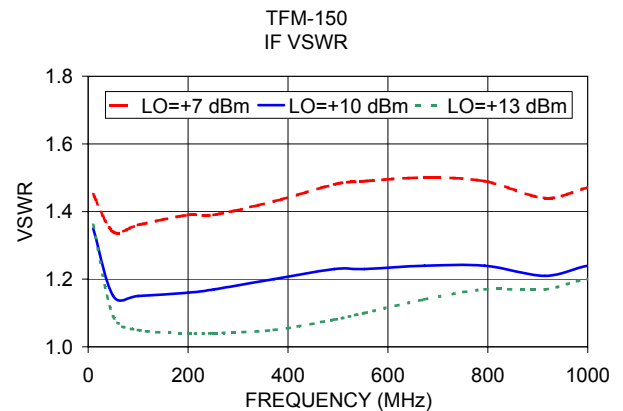
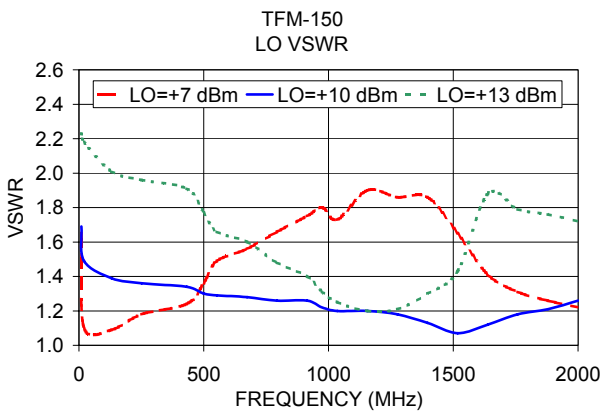
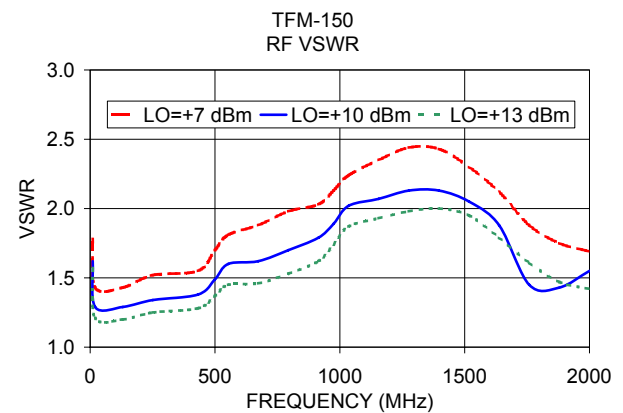
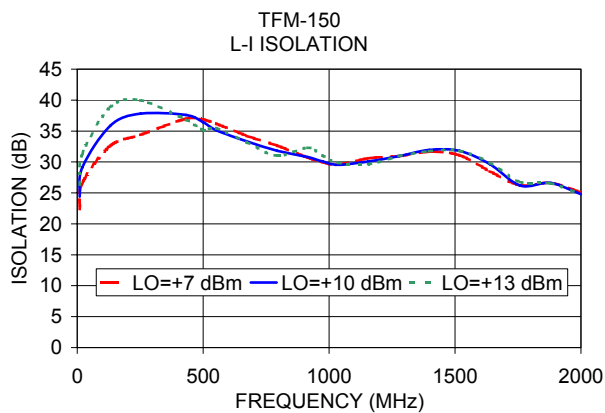
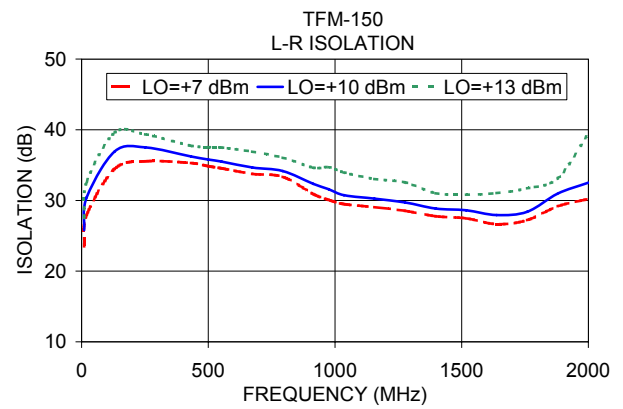
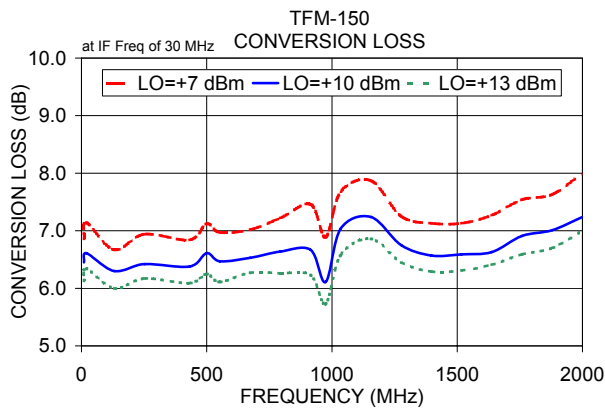
## Electrical Schematic



## 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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