

Plug-In

# Frequency Mixer

Level 10 (LO Power +10 dBm) 10 to 3000 MHz

TFM-15+



CASE STYLE: B13

## Maximum Ratings

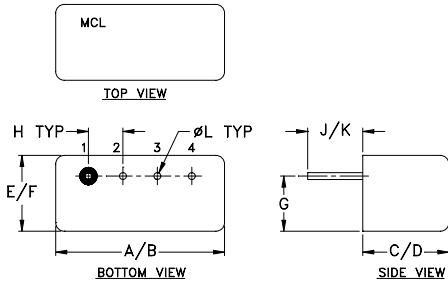
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

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, 6.75 dB typ.
- excellent L-R isolation, 35 dB typ.
- wideband, 10 to 3000 MHz
- rugged welded construction
- hermetically sealed

## Applications

- cellular
- ISM/GSM
- PCN
- MMDS

## Electrical Specifications

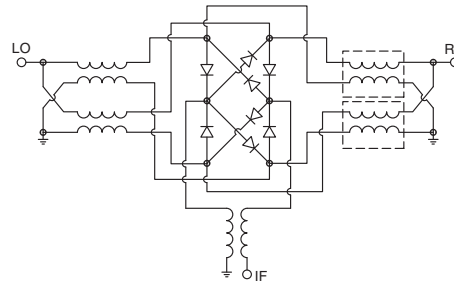
FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)	
LO/RF	IF	Mid-Band		Total Range	Max.	Typ.	Min.	Typ.	Min.
$f_L-f_U$		$\bar{X}$	$\sigma$						
10-3000	10-800	6.75	0.08	8.0	8.5	35	25	30	20

1 dB COMP.: +5 dBm typ.  
m = mid band [ $f_L$  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 +10dBm	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm
10.00	40.00	6.53	26.10	25.08	1.84	1.71
20.00	50.00	6.60	30.38	29.74	1.54	1.51
100.00	70.00	6.55	35.82	35.93	1.50	1.37
200.00	170.00	6.60	37.35	38.21	1.55	1.44
400.00	370.00	6.74	36.49	39.50	1.72	1.40
500.00	470.00	6.52	35.42	38.00	1.99	1.34
790.00	760.00	6.70	32.94	33.60	2.45	1.33
920.00	890.00	6.76	32.80	33.97	2.70	1.36
1180.00	1150.00	7.30	31.62	32.89	2.85	1.36
1310.00	1280.00	7.30	31.27	34.31	2.75	1.38
1500.00	1470.00	6.54	29.76	32.85	2.28	1.30
1700.00	1670.00	6.91	28.49	30.87	1.94	1.27
1830.00	1800.00	6.97	29.46	28.22	1.44	1.29
2000.00	1970.00	7.07	28.32	27.77	1.25	1.34
2200.00	2170.00	6.97	27.89	27.68	1.42	1.34
2480.00	2450.00	6.93	28.37	24.64	1.97	1.44
2610.00	2580.00	7.08	27.10	23.13	2.18	1.52
2740.00	2710.00	7.45	26.79	21.95	2.37	1.93
2870.00	2840.00	7.56	26.23	21.25	2.09	2.25
3000.00	2970.00	8.31	29.30	20.32	2.18	2.63

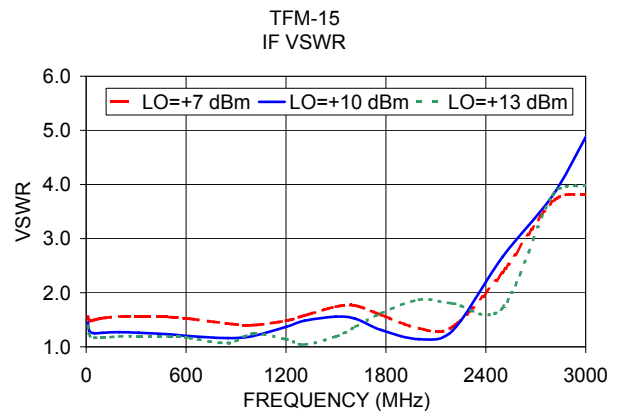
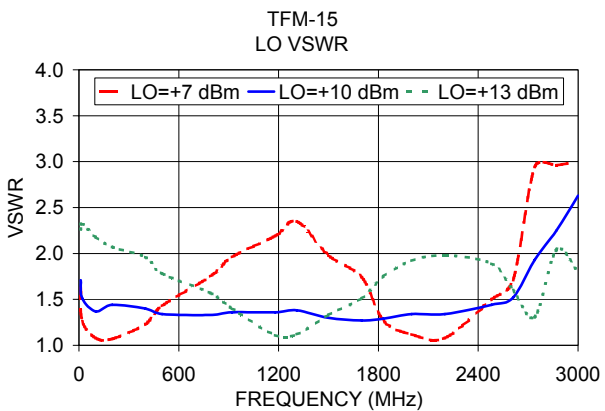
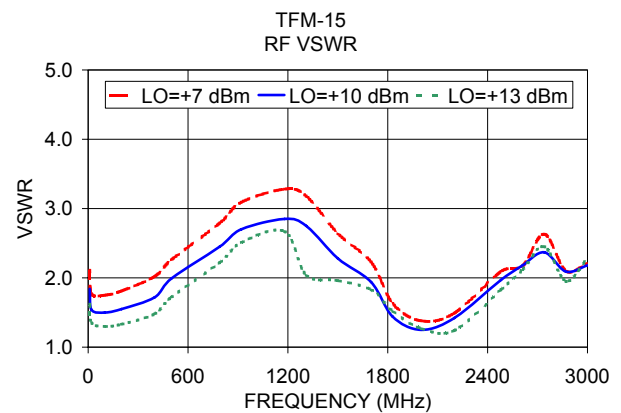
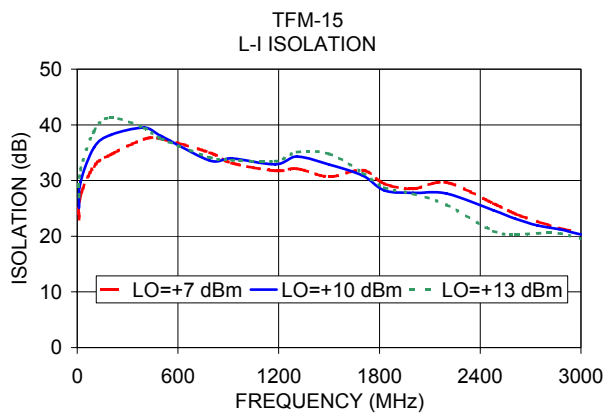
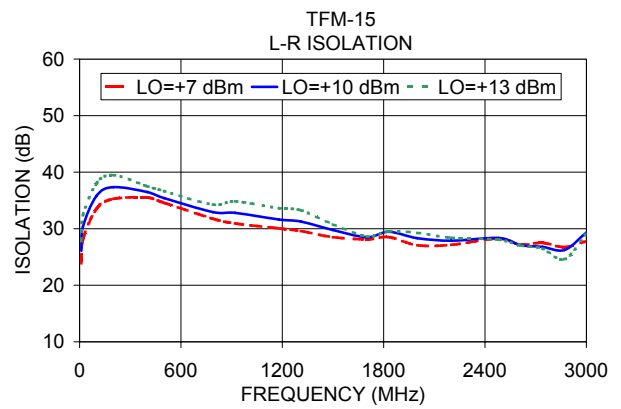
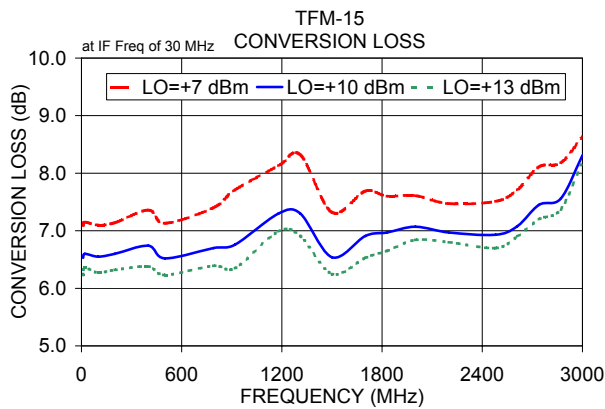
## Electrical Schematic



## 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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