

# Plug-In Frequency Mixer

## TFM-150+

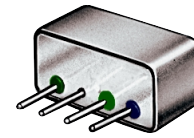
Level 10 (LO Power +10dBm) 10 to 2000 MHz

### 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



CASE STYLE: B13  
PRICE: \$47.45 ea. QTY (1-9)

**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

*The +suffix has been added in order to identify RoHS Compliance. There has been no change to the model's material, form, fit, or function. See our web site for RoHS Compliance methodologies and qualifications.*

### Mixer Electrical Specifications

MODEL NO.	FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
	LO/RF $f_L - f_U$	IF	Mid-Band		Total Range	L	M		U	L	M		U	L	M		U	
			$\bar{x}$	$\sigma$			Max.	Max.			Typ. Min.	Typ. Min.			Typ. Min.	Typ. Min.		Typ. Min.
TFM-150+	10-2000	DC-1000*	6.19	.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  $f_U/2$ ]

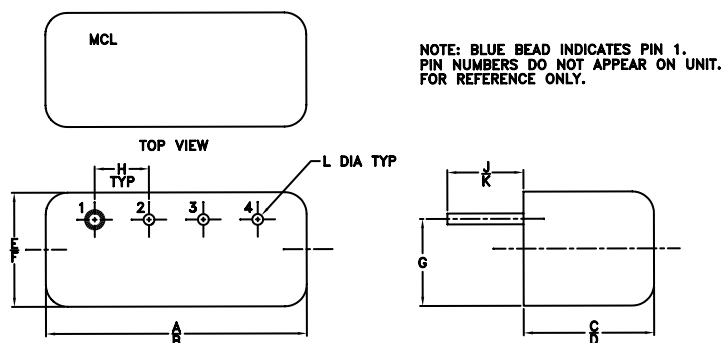
### Pin Connections

LO	1
RF	4
IF	2
GROUND	3
CASE GROUND	3

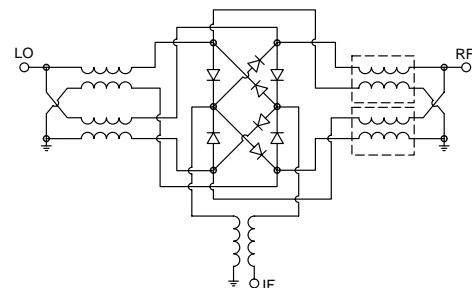
### Maximum Ratings

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

### Outline Drawing



### electrical schematic



### Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J	K	L	wt.
.480	.500	.390	.405	.210	.230	.16	.100	.14	.20	.020	grams
12.19	12.70	9.91	10.29	5.33	5.84	4.06	2.54	3.56	5.08	.51	2.3



Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

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REV. A  
M98898  
TFM-150+  
DJ/TD/CP  
050916  
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## Typical Performance Data

Frequency		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF port (:1)	VSWR LO port (:1)
RF MHz	LO MHz	LO +10dBm	LO +10dBm	LO +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

## Performance Charts

