

Plug-In

Frequency Mixer

TFM-150+

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



CASE STYLE: B13
PRICE: \$49.70 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. See our web site for RoHS Compliance methodologies and qualifications.

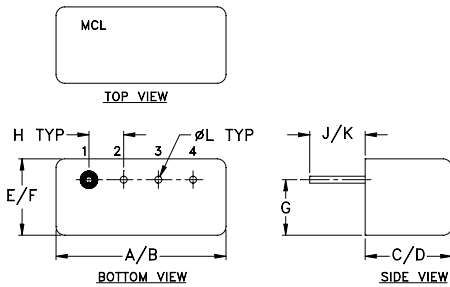
Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	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

Electrical Specifications

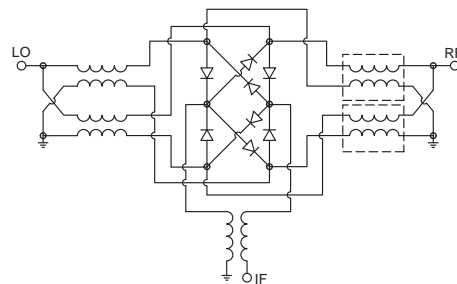
FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
LO/RF f_L-f_U	IF	Mid-Band m				L		M		U		L		M		U	
		\bar{X}	σ	Max.	Total Range Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
10-2000	DC-1000*	6.19	0.11	8.0	8.0*	32	25	35	25	35	25	33	20	30	20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

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	6.45	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



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 *The Design Engineers Search Engine* Provides ACTUAL Data Instantly at minicircuits.com

For detailed performance specs & shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

REV. A
M98898
TFM-150+
DJ/TD/CP/AM
091006
Page 1 of 2

