

Coaxial Frequency Mixer

Level 13 (LO Power +13 dBm) 10 to 2400 MHz

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.

Coaxial Connections

LO	3
RF	2
IF	1

Features

- low conversion loss, 6.9 dB typ.
- excellent isolation, 43 dB typ. L-R, 44 dB typ. L-I
- wideband, 10 to 2400 MHz

Applications

- VHF/UHF
- cellular
- GPS

ZEM-M2TMH+



Generic photo used for illustration purposes only

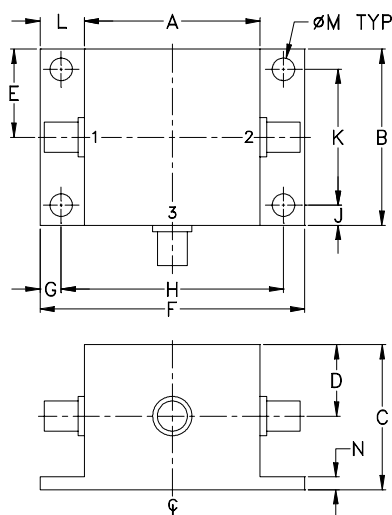
CASE STYLE: V37

Connectors	Model
SMA	ZEM-M2TMH+

+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	G
.83	.83	.75	.37	.42	1.25	.10
21.08	21.08	19.05	9.40	10.67	31.75	2.54
H	J	K	L	M	N	wt
1.050	.10	.640	.21	.106	.06	grams
26.67	2.54	16.26	5.33	2.69	1.52	22.0

Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
LO/RF	IF	Mid-Band m		Total Range		L		M		U		L		M		U	
f_L - f_U		$\bar{X}$	σ	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
10-2400	10-1000	6.9	0.10	9.0	9.5	49	40	43	35	42	35	49	40	44	30	40	30

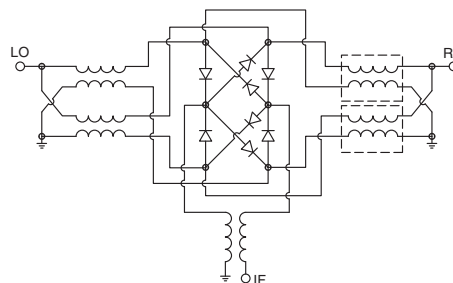
1 dB COMP.: +9 dBm typ.

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	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
10.00	40.00	6.87	48.7	47.5	1.06	1.43
25.00	55.00	6.77	48.7	47.4	1.02	1.43
40.00	70.00	6.83	48.9	47.3	1.02	1.43
70.00	100.00	6.69	48.9	47.0	1.04	1.39
100.00	130.00	6.64	49.1	46.9	1.06	1.41
200.00	230.00	6.44	47.6	45.9	1.13	1.44
400.00	430.00	6.25	44.0	43.4	1.31	1.56
600.00	630.00	6.31	40.9	41.7	1.40	1.59
700.00	730.00	6.37	40.6	41.2	1.51	1.58
800.00	830.00	6.39	40.6	40.3	1.53	1.59
1000.00	1030.00	6.45	43.2	37.9	1.46	1.62
1200.00	1230.00	6.40	41.9	37.3	1.42	1.74
1300.00	1330.00	6.46	40.3	37.5	1.42	1.81
1500.00	1530.00	6.73	38.5	36.9	1.43	1.80
1700.00	1730.00	6.98	38.8	37.4	1.45	1.83
1800.00	1830.00	7.26	39.3	37.0	1.57	1.85
2000.00	2030.00	7.60	40.2	36.3	1.84	1.73
2200.00	2230.00	7.88	42.3	36.4	1.92	1.56
2300.00	2330.00	7.91	44.9	35.8	1.83	1.50
2400.00	2430.00	7.74	49.9	34.2	1.65	1.44

Electrical Schematic



Notes

- A. 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.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document 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

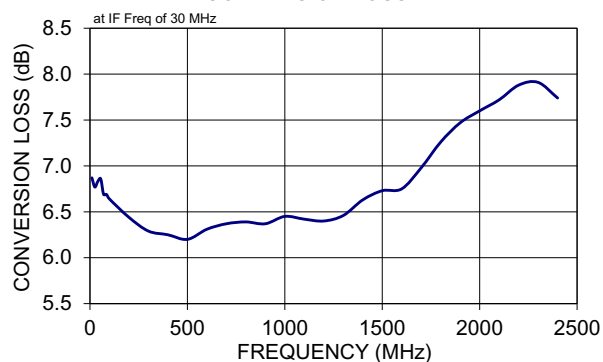


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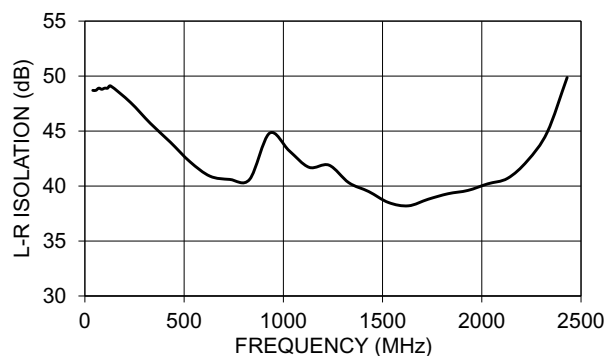
REV. C
M151107
ZEM-M2TMH+
DJ/TD/CP/AM
200828

Performance Charts

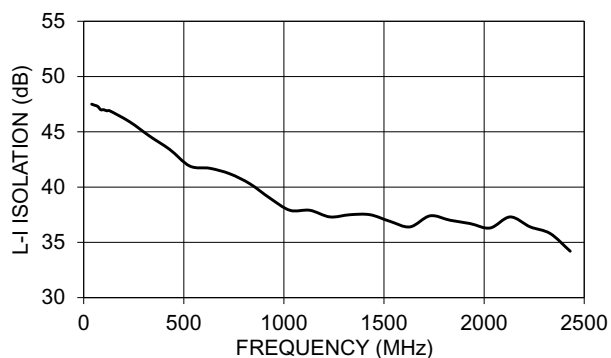
ZEM-M2TMH+
CONVERSION LOSS



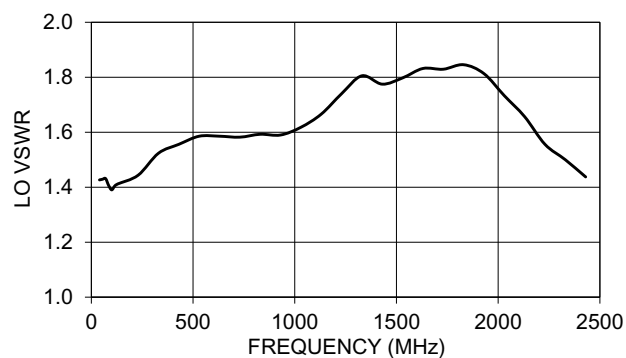
ZEM-M2TMH+
L-R ISOLATION



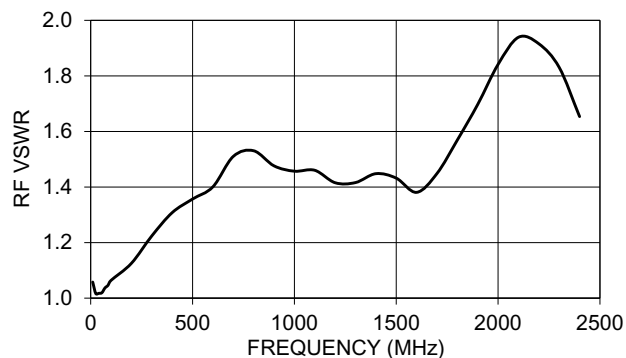
ZEM-M2TMH+
L-I ISOLATION



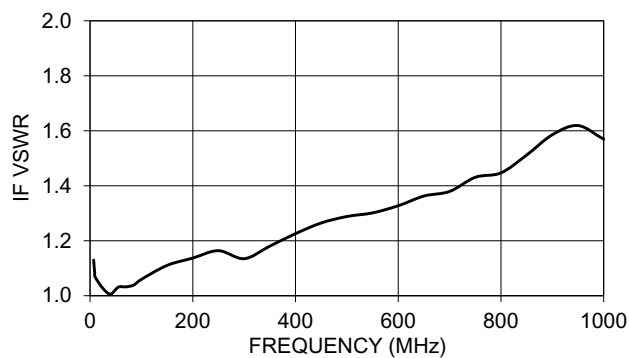
ZEM-M2TMH+
LO VSWR



ZEM-M2TMH+
RF VSWR



ZEM-M2TMH+
IF VSWR



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