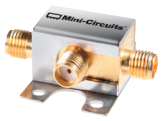
Coaxial

Frequency Mixer WIDE BAND

ZX05-24MH+

Level 13 (LO Power +13 dBm) 7500 to 20000 MHz



CASE STYLE: FL905

Connectors	Model
SMA	ZX05-24MH-S+

+RoHS Compliant

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

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW

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

Coaxial Connections

LO	1
RF	2
IF	3

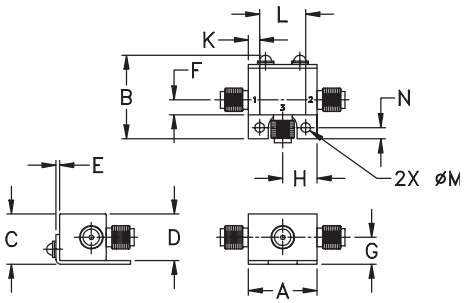
Features

- wide bandwidth, 7500 to 20000 MHz
- low conversion loss, 7.0 dB typ.
- high L-R isolation, 30 dB typ.
- excellent IF BW, DC to 7500 MHz
- rugged construction
- small size
- useable as up and down converter
- protected by US patents, 6,790,049 and 7,027,795

Applications

- fixed satellite
- mobile
- radio location

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.74	.90	.54	.50	.04	.16	.29
18.80	22.86	13.72	12.70	1.02	4.06	7.37

H	J	K	L	M	N	wt
.37	--	.122	.496	.106	.122	grams
9.40	--	3.10	12.60	2.69	3.10	20.0

Electrical Specifications at 25°C

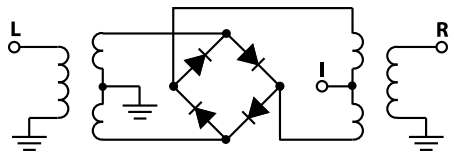
Parameter	Min.	Typ.	Max.	Unit
Frequency Range, RF	7500	—	20000	MHz
Frequency Range, LO	7500	—	20000	MHz
Frequency Range, IF	DC	—	7500	MHz
Conversion Loss*	—	7.0	10.3	dB
LO to RF Isolation	18	30	—	dB
LO to IF Isolation	10	15	—	dB
IP3	—	16	—	dBm
RF Input at 1 dB Compression	—	+9	—	dBm

* Conversion loss at 30 MHz IF. Increases with IF frequency.

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
7500.00	7530.10	8.46	40.41	21.74	3.06	8.51
8000.00	8030.10	7.70	36.22	23.68	2.00	7.40
8500.00	8530.10	8.75	37.33	23.23	2.83	4.18
9000.00	9030.10	7.92	38.23	23.77	3.46	2.94
9500.00	9530.10	7.13	39.48	20.00	2.42	3.41
10000.00	10030.10	6.78	39.32	18.07	2.58	2.45
10500.00	10530.10	6.47	38.67	16.58	5.47	2.30
11000.00	11030.10	6.34	35.84	14.09	4.33	2.42
12000.00	12030.10	6.35	33.65	13.26	2.84	2.52
13000.00	13030.10	6.38	45.90	24.74	1.66	3.87
14000.00	14030.10	6.28	42.13	32.80	1.58	2.47
15000.00	15030.10	7.15	28.76	22.33	4.66	1.34
16000.00	16030.10	8.88	26.43	34.65	2.41	2.50
17000.00	17030.10	8.39	24.99	25.15	1.53	2.77
18000.00	18030.10	7.36	25.03	28.20	2.98	1.79
19000.00	19030.10	8.82	25.45	29.65	4.43	2.43
20000.00	20030.10	7.63	26.02	27.15	4.29	4.93

Electrical Schematic

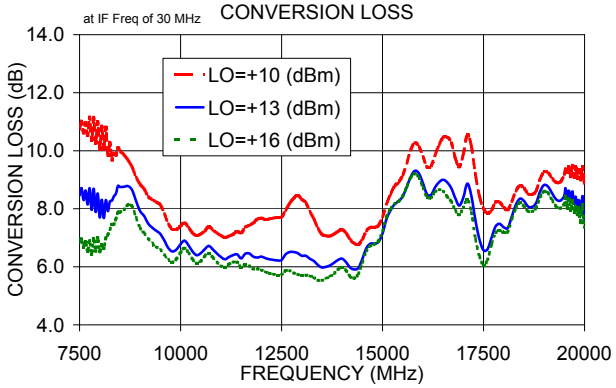


Notes

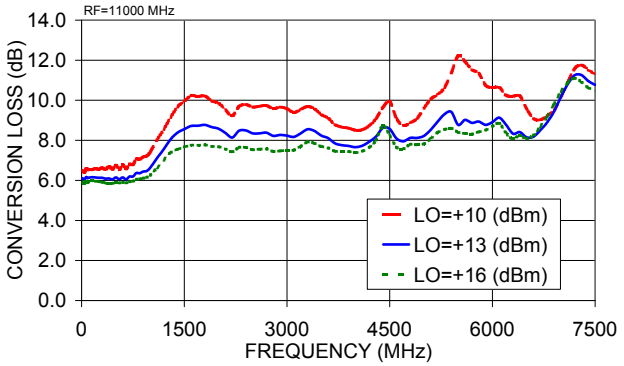
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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

REV. A
M151107
ZX05-24MH+
ED-14424/1
DJ/CP/AM
151009

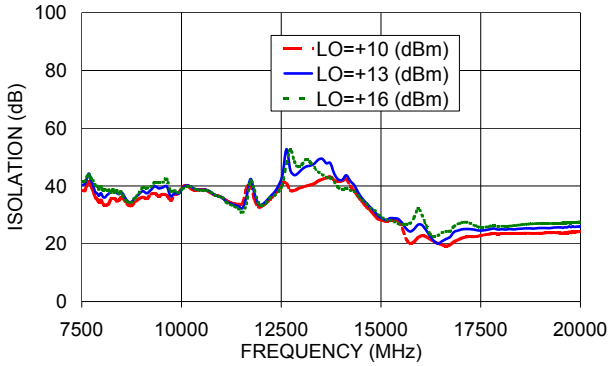
ZX05-24MH+
CONVERSION LOSS
at IF Freq of 30 MHz



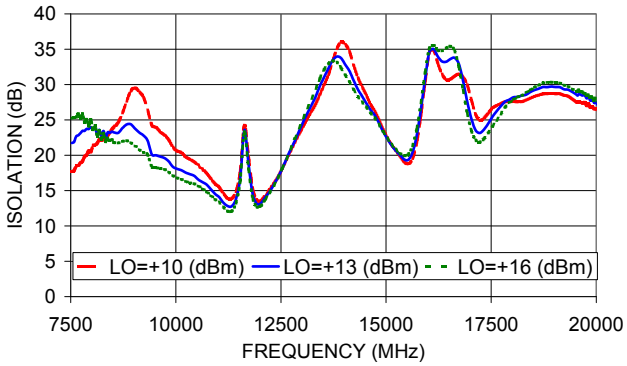
ZX05-24MH+
CONVERSION LOSS VARIABLE IF
RF=11000 MHz



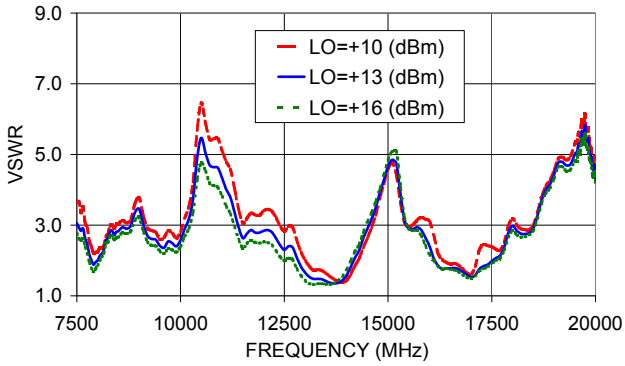
ZX05-24MH+
L-R ISOLATION



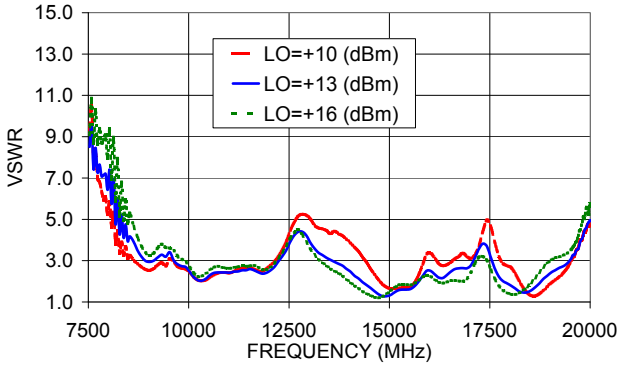
ZX05-24MH+
L-I ISOLATION



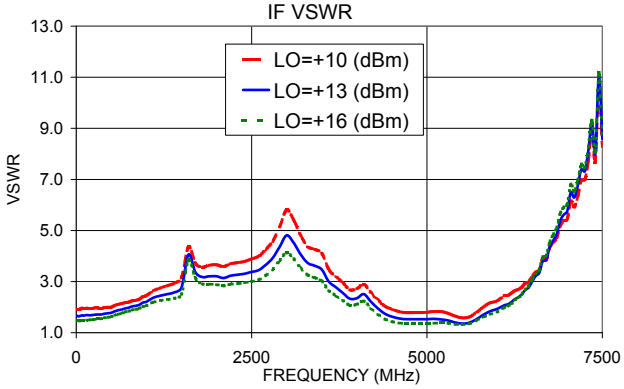
ZX05-24MH+
RF VSWR



ZX05-24MH+
LO VSWR



ZX05-24MH+
IF VSWR



ZX05-24MH+
IP3