

# Up Converter Frequency Mixer

## ZX05-U742MH+

Level 13 (LO Power +13 dBm) 0.1 to 7400 MHz



### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
IF Power	50mW
Permanent damage may occur if any of these limits are exceeded.	

### Coaxial Connections

LO	2
IF (IN)	1
RF (OUT)	3

### Features

- up converter mixer
- low conversion loss, 8.3 dB typ.
- high IP3, 20 dBm typ.
- rugged construction
- small size
- protected by US patents, 6,790,049 and 7,027,795

### Applications

- instrumentation
- wide band receivers
- ISM

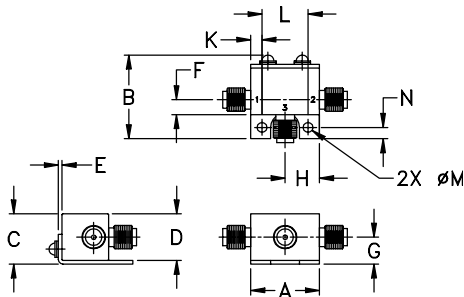
CASE STYLE: FL905

Connectors	Model	Price	Qty.
SMA	ZX05-U742MH-S+	\$47.95	(1-24)

**+ 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.

### 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

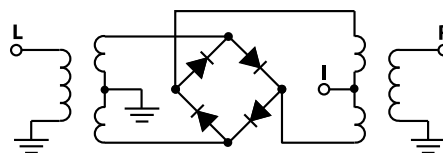
FREQUENCY (MHz)			CONVERSION LOSS* (dB)			LO-IF (IN) ISOLATION (dB)		LO-RF (OUT) ISOLATION (dB)		IP3 at center band (dBm)
IF (IN)	LO	RF (OUT)	Typ.	$\sigma^{**}$	Max.	Typ.	Min.	Typ.	Min.	Typ.
0.1-3300	2300-7400	2300-7400	8.3	0.2	9.9	23	10	25	11	20

1 dB COMPR. +9 dBm typ.  
\* Conversion Loss at 4075 MHz RF  
\*\*  $\sigma$  is a standard deviation

### Typical Performance Data

Frequency (MHz)			Conversion Loss (dB)	Freq. (MHz)	Isolation L-I (dB)	Isolation L-R (dB)	VSWR LO Port (:1)	VSWR RF (OUT) Port (:1)
IF (IN)	LO	RF (OUT)	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
10.10	4085.10	4075.00	5.57	2300.10	21.13	38.74	2.92	2.95
100.10	4175.10	4075.00	5.36	2600.10	26.47	35.51	2.17	3.33
300.10	4375.10	4075.00	5.43	2900.10	28.02	30.76	1.89	3.40
500.10	4575.10	4075.00	5.56	3200.10	26.53	27.62	1.82	3.19
700.10	4775.10	4075.00	5.99	3500.10	23.07	27.19	1.96	2.47
900.10	4975.10	4075.00	6.27	3800.10	23.29	26.81	2.17	2.35
1100.10	5175.10	4075.00	7.07	4100.10	28.75	25.94	2.69	2.47
1300.10	5375.10	4075.00	7.99	4400.10	23.50	23.80	3.31	2.61
1500.10	5575.10	4075.00	8.41	4700.10	15.33	22.60	3.80	2.51
1700.10	5775.10	4075.00	8.80	5000.10	13.50	21.09	4.23	3.21
1900.10	5975.10	4075.00	8.78	5300.10	13.95	20.80	4.70	3.40
2100.10	6175.10	4075.00	8.45	5600.10	15.79	20.24	4.55	3.49
2300.10	6375.10	4075.00	7.73	5900.10	19.40	19.04	3.76	3.29
2500.10	6575.10	4075.00	7.42	6200.10	24.99	17.57	2.67	3.31
2700.10	6775.10	4075.00	7.02	6500.10	31.86	16.35	1.87	3.10
2900.10	6975.10	4075.00	6.74	6800.10	32.02	15.61	1.88	2.67
3100.10	7175.10	4075.00	6.89	7100.10	26.63	15.09	3.00	2.72
3200.10	7275.10	4075.00	7.13	7300.10	20.91	15.81	4.08	3.21
3250.10	7325.10	4075.00	7.33	7350.10	19.57	15.70	4.32	2.68
3300.10	7375.10	4075.00	7.70	7400.10	19.47	16.10	4.73	3.67

### Electrical Schematic



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ISO 9001 ISO 14001 AS 9100 CERTIFIED

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For detailed performance specs & shopping online see web site

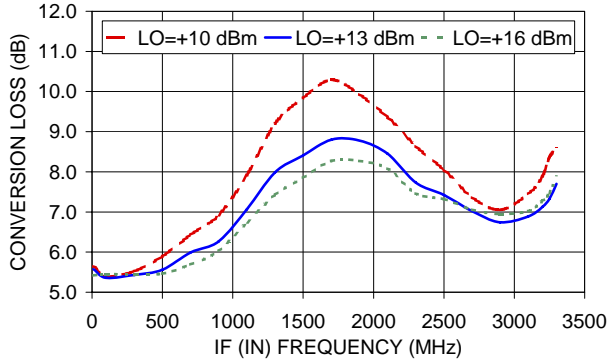
**Notes:** 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuit's 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-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

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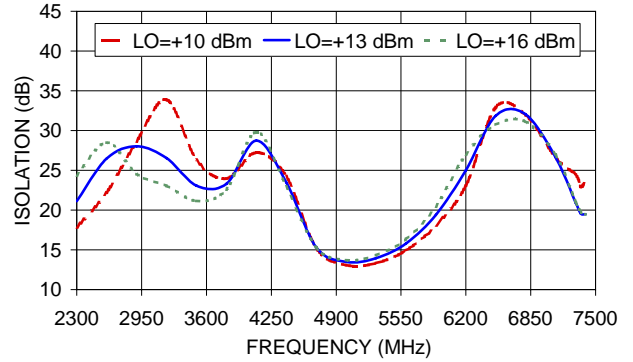
# Performance Charts

# ZX05-U742MH+

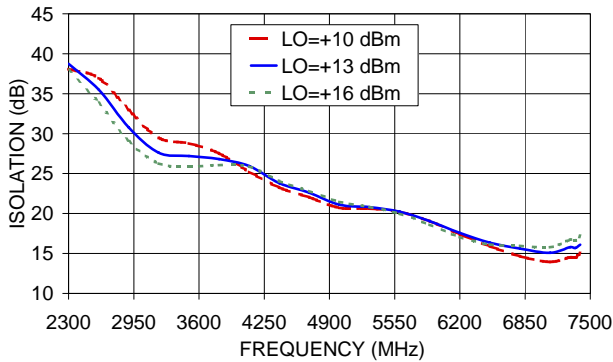
ZX05-U742MH+  
CONVERSION LOSS



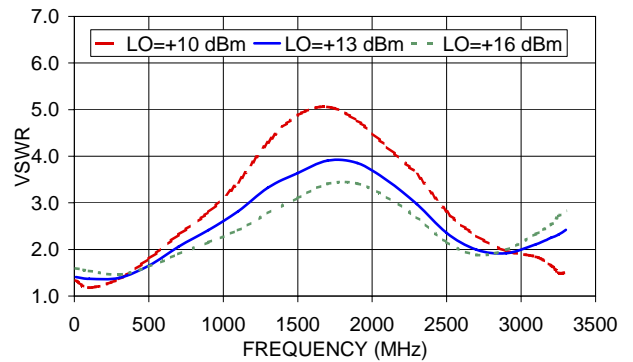
ZX05-U742MH+  
L-I (IN) ISOLATION



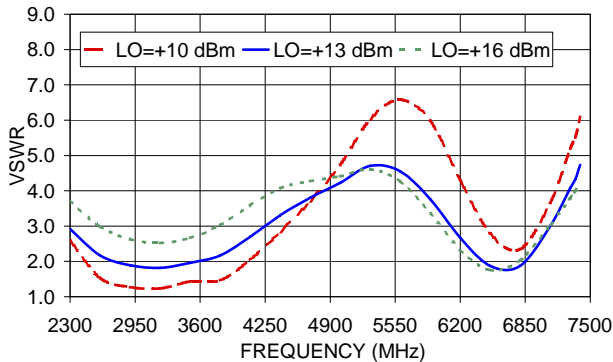
ZX05-U742MH+  
L-R (OUT) ISOLATION



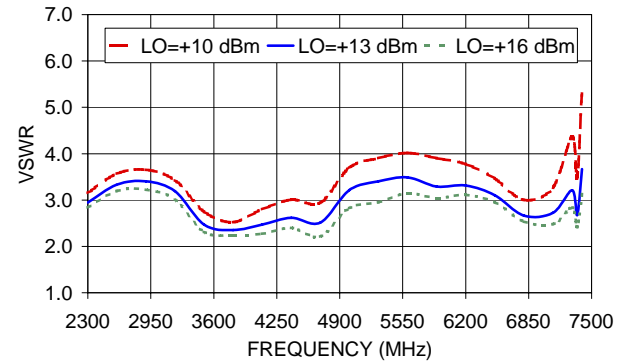
ZX05-U742MH+  
IF (IN) VSWR



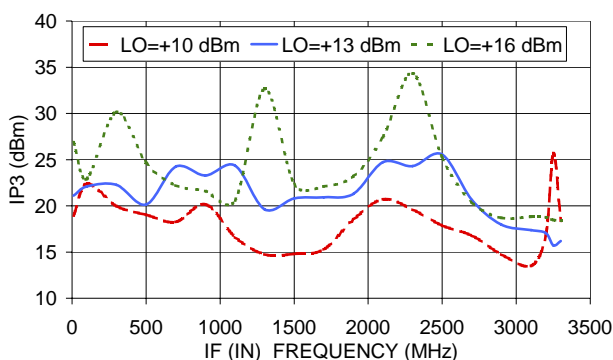
ZX05-U742MH+  
LO VSWR



ZX05-U742MH+  
RF (OUT) VSWR



ZX05-U742MH+  
IP3



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