

# Frequency Mixer

TUF-2+

Level 7 (LO Power +7dBm) 50 to 1000 MHz



Generic photo used for illustration purposes only

CASE STYLE: B02

**+RoHS Compliant**

The +Suffix identifies 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	4
RF	1
IF	2
GROUND	3
CASE GROUND	3

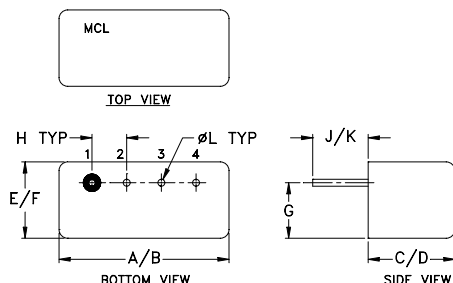
## Features

- low conversion loss, 5.85 dB typ.
- excellent isolation, 47 dB typ. L-R, 44 dB typ. L-I
- wideband, 50 to 1000 MHz
- rugged welded construction

## Applications

- VHF/UHF
- cellular ISM/GSM

## Outline Drawing



## Outline Dimensions (inch/mm)

A	B	C	D	E	F
.480	.500	.240	.255	.210	.230
12.19	12.70	6.10	6.48	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	1.9

## Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			IP3 @ CENTER BAND (dBm)						
		L	M	U	L	M	U							
50-1000	DC-1000	58	40	47	30	42	25	50	35	44	20	29	18	16

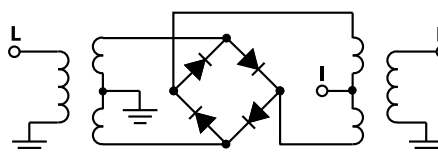
1 dB COMP: +1 dBm typ.

L = 50-100 MHz M = 100-500 MHz U = upper range [ $f_c/2$  to  $f_u$ ]  
m = mid band [ $2f_c$  to  $f_c/2$ ]

## 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
50.00	80.00	6.03	61.24	62.94	1.08	2.52
100.00	70.00	6.12	55.20	58.22	1.10	2.47
129.17	99.17	6.03	53.19	56.36	1.12	2.42
200.00	170.00	5.94	49.63	53.04	1.17	2.35
208.33	178.33	5.97	49.40	52.95	1.22	2.31
287.50	257.50	5.98	46.76	49.61	1.27	2.32
340.28	310.28	5.94	45.51	47.70	1.33	2.34
366.67	336.67	5.91	45.07	46.56	1.36	2.32
445.83	415.83	5.88	43.51	43.99	1.43	2.32
498.61	468.61	5.96	42.80	42.71	1.47	2.34
500.00	470.00	5.98	42.81	42.75	1.50	2.33
551.39	521.39	6.04	42.43	42.00	1.58	2.37
630.56	600.56	6.27	41.96	39.82	1.68	2.38
683.33	653.33	6.36	41.15	38.97	1.76	2.35
709.72	679.72	6.45	40.66	38.42	1.79	2.33
788.89	758.89	6.59	39.89	37.39	1.94	2.34
868.06	838.06	6.81	39.69	36.49	2.11	2.38
947.22	917.22	7.04	39.66	34.99	2.31	2.42
973.61	943.61	7.23	39.91	34.80	2.37	2.42
1000.00	970.00	7.37	39.73	34.55	2.44	2.41

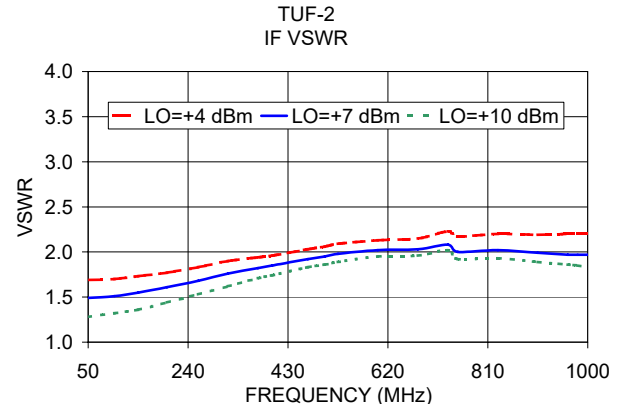
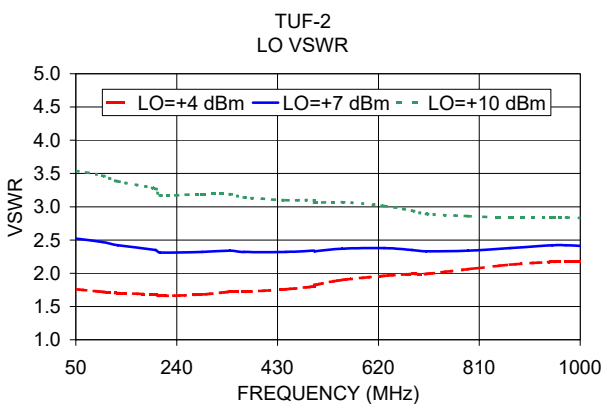
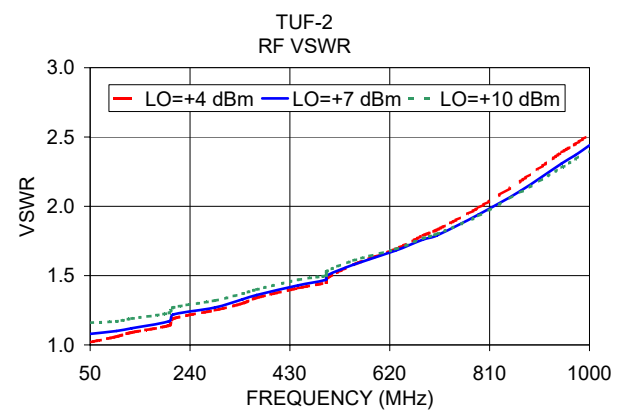
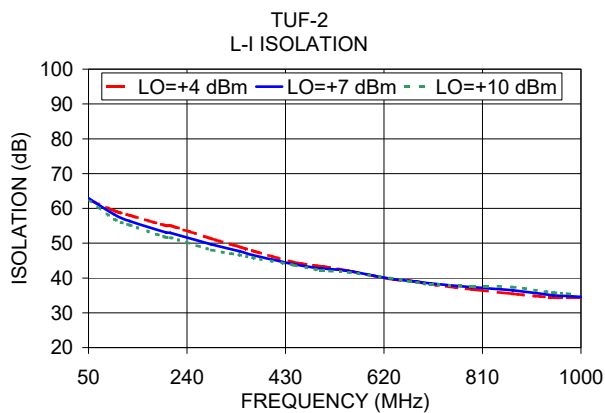
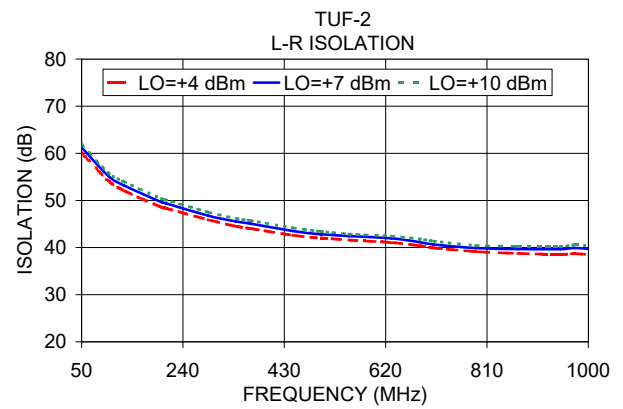
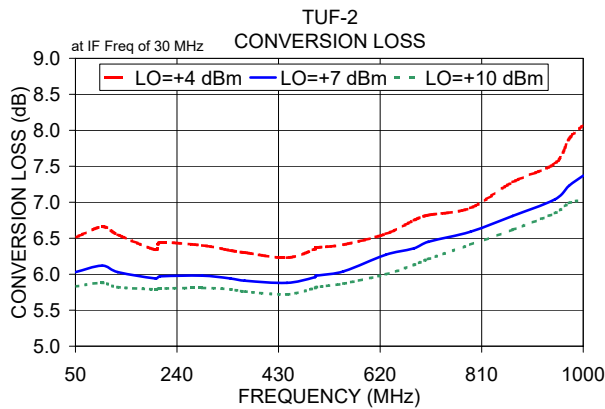
## Electrical Schematic



### Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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