

Plug-In Frequency Mixer

TAK-6+

Level 7 (LO Power +7 dBm) 0.5 to 600 MHz



Generic photo used for illustration purposes only

CASE STYLE: A04

+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	8
RF	1
IF	3,4 [^]
GROUND	2,5,6,7
CASE GROUND	2

[^] pins must be connected together externally

Features

- low conversion loss, 5.58 dB typ.
- excellent isolation, 50 dB typ. L-R, 45 dB typ. L-I
- rugged welded construction
- hermetically sealed

Applications

- VHF/UHF
- instrumentation
- defense & federal communications

Electrical Specifications

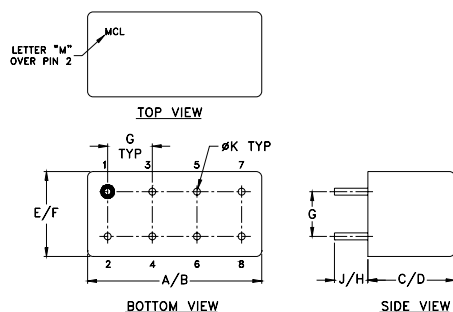
FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)								
LO/RF	IF	Mid-Band		Total Range	L	M	U	L	M	U							
f_L - f_U		\bar{X}	σ	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.							
0.5-600	DC-600	5.58	0.04	7.5	8.5	60	50	50	30	40	25	55	45	45	30	30	20

1 dB COMP.: +1 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 $f_U/2$]

Outline Drawing



Outline Dimensions (inch/mm)

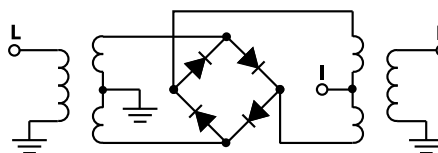
A	B	C	D	E	F
.770	.800	.200	.210	.370	.400
19.56	20.32	5.08	5.33	9.40	10.16

G	H	J	K	wt
.200	.20	.14	.031	grams
5.08	5.08	3.56	0.79	3.7

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 +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
0.50	30.50	7.38	>67.00	>67.00	1.26	2.80
1.00	31.00	6.75	>67.00	>67.00	1.18	2.76
2.00	32.00	6.13	>67.00	>67.00	1.16	2.60
5.00	35.00	5.55	>67.00	>67.00	1.18	2.87
10.00	40.00	5.53	>67.00	>67.00	1.18	2.55
20.00	50.00	5.57	61.27	58.72	1.18	2.50
40.47	70.47	5.59	53.48	51.73	1.18	2.48
60.45	90.45	5.51	49.77	48.51	1.18	2.46
100.30	70.00	5.45	45.73	44.74	1.19	2.48
140.38	110.38	5.45	42.94	42.35	1.19	2.51
200.00	170.00	5.64	40.43	39.87	1.20	2.49
240.30	210.30	5.67	38.69	38.10	1.23	2.50
280.26	250.26	5.58	38.77	37.77	1.28	2.51
360.19	330.19	5.95	36.13	35.08	1.31	2.58
400.16	370.16	5.94	36.07	34.75	1.36	2.63
480.09	450.09	6.48	35.09	31.56	1.49	2.66
500.08	470.08	6.59	34.94	30.74	1.52	2.72
540.04	510.04	6.43	35.12	30.07	1.61	2.90
580.01	550.01	6.37	36.24	31.22	1.66	3.09
600.00	570.00	6.51	36.75	32.22	1.67	3.11

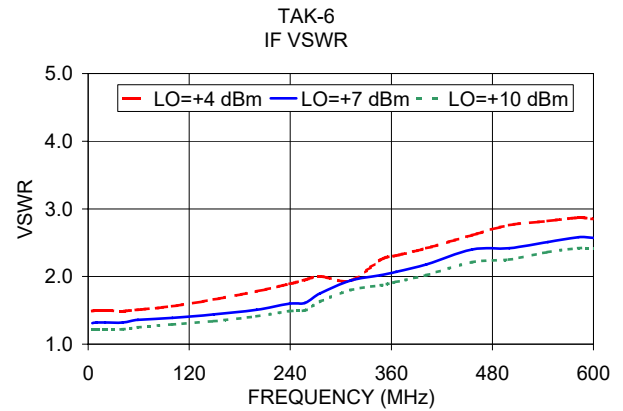
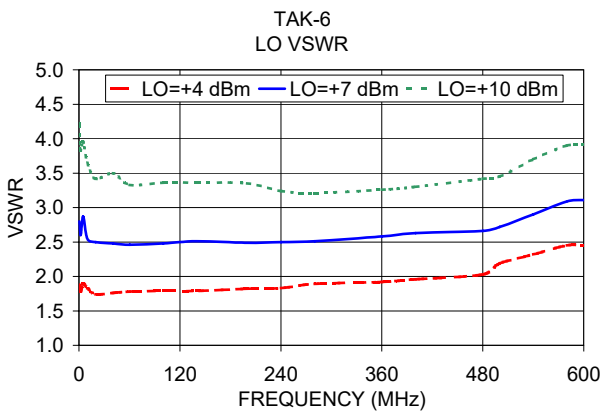
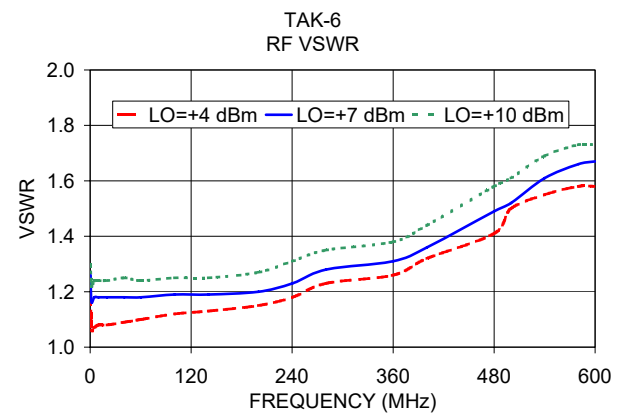
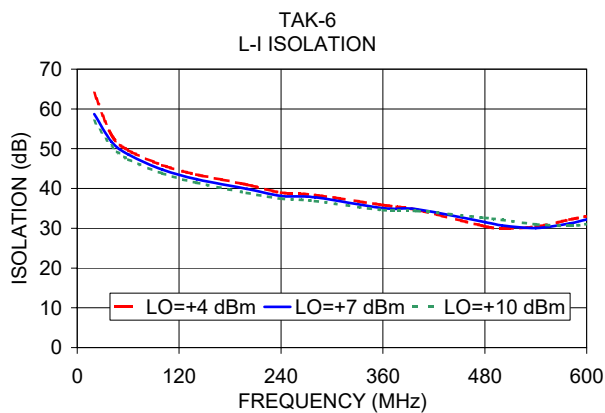
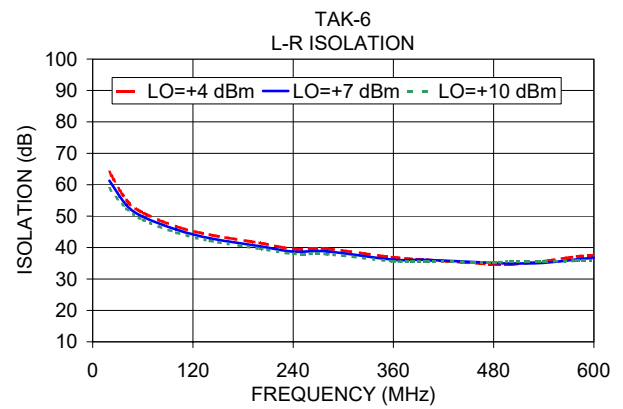
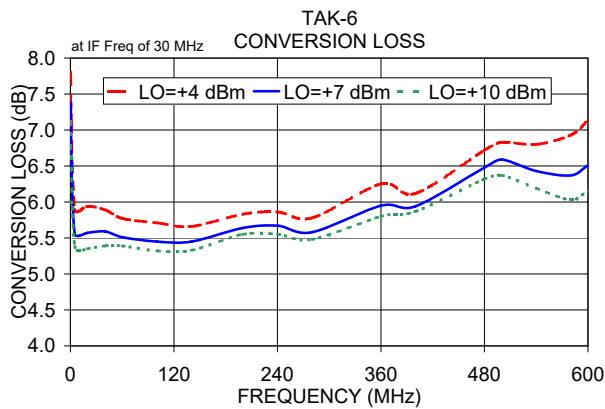
Electrical Schematic



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.
- The parts covered by this specification document 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





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

