

# X2 Frequency Multiplier

50Ω Output 20 to 2000 MHz

## MK-5



CASE STYLE: L19

### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Input Power	200mW

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

### Features

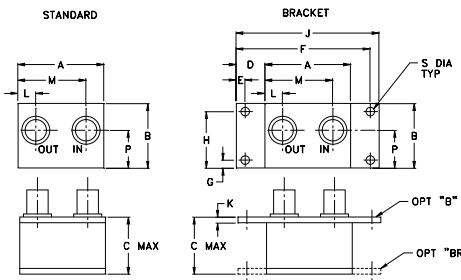
- wideband, 20 to 2000 MHz
- low insertion loss, 13 dB typ.
- rugged shielded case

### Applications

- synthesizers
- local oscillators

Connectors	Model	Price	Qty.
SMA	MK-5	\$76.95	(1-9)
BRACKET (OPTION "B")		\$5.00	(1+)
BRACKET (OPTION "BR")		\$1.50	(1+)

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
1.50	1.13	1.00	.50	.155	2.345	.138	.987
38.10	28.70	25.40	12.70	3.94	59.56	3.51	25.07

J	K	L	M	N	P	S	wt
2.50	.10	.31	1.19	--	.66	.150	grams
63.50	2.54	7.87	30.23	--	16.76	3.81	37.0

### Electrical Specifications

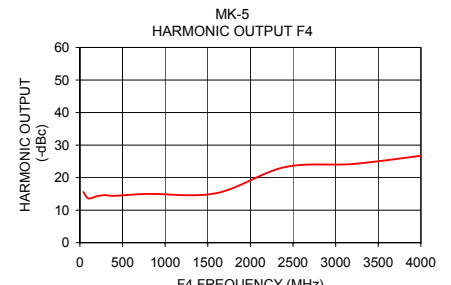
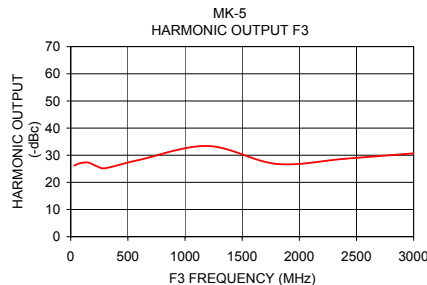
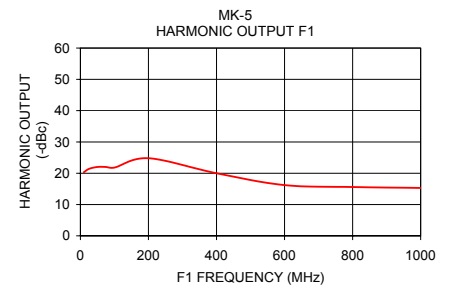
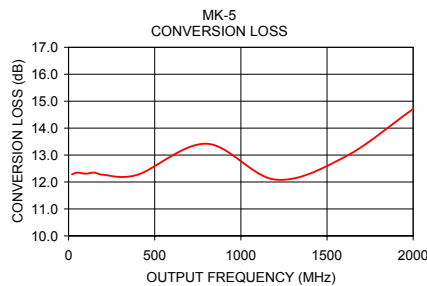
MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)					
	F1	F2					F1		F3		F4	
	Input	Output	Min.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.
2	10-600	20-1200	10**	20	13.0	15.0	20	10	26	20	15	10
	600-1000	1200-2000	10**	20	14.0	17.0	20	10	25	20	25	15

\* Harmonics of input frequency below the power level of F2

\*\* Minimum input power +13 dBm above 700 MHz.

### Typical Performance Data

Input Frequency (MHz)	Conversion Loss (dB) F2	Harmonic Output (-dBc)			
		F1	F3	F4	
10.00	12.28	20.30	26.20	15.60	
25.00	12.35	21.40	27.00	13.60	
50.00	12.31	22.00	27.30	14.30	
75.00	12.35	22.00	26.00	14.60	
100.00	12.27	21.80	25.20	14.40	
200.00	12.27	24.80	28.30	15.00	
400.00	13.42	20.00	33.40	15.20	
600.00	12.09	16.20	26.80	23.20	
800.00	12.92	15.60	28.70	24.20	
1000.00	14.71	15.30	30.70	26.70	



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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-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](http://www.minicircuits.com/MCLStore/terms.jsp).

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