

# X2 Frequency Multiplier

50Ω Output 2 to 1000 MHz

AK-2+



CASE STYLE: A03

## Maximum Ratings

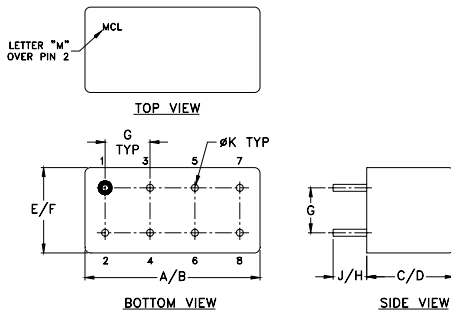
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Input Power	200mW
Permanent damage may occur if any of these limits are exceeded.	

## Pin Connections

INPUT	1,3,4 <sup>^</sup>
OUTPUT	8
GROUND	2,5,6,7
CASE GROUND	2,5,6,7

<sup>^</sup> pins must be connected together externally

## Outline Drawing



## Outline Dimensions (inch/mm)

A	B	C	D	E	F
.480	.500	.390	.405	.210	.230
12.19	12.70	9.91	10.29	5.33	5.84
G	H	J	K	wt	
.100	.20	.14	.020	grams	
2.54	5.08	3.56	0.51	2.3	

## Features

- wideband, 2 to 1000 MHz
- low conversion loss, 13.5 dB typ.
- hermetic case

## Applications

- synthesizers
- local oscillators
- military, hi-rel applications

**+RoHS Compliant**

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

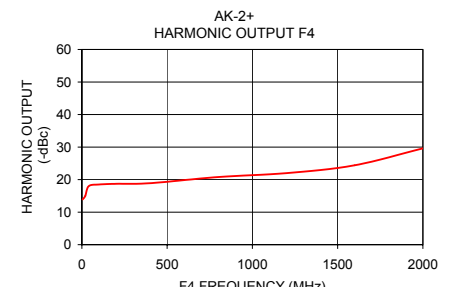
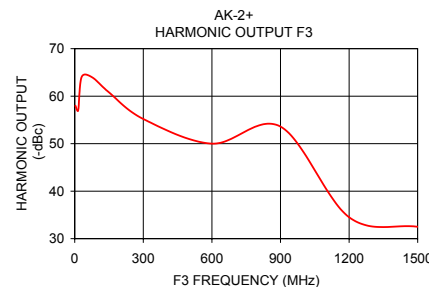
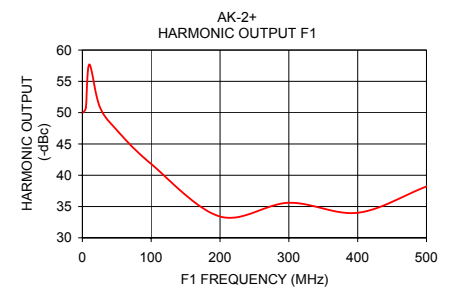
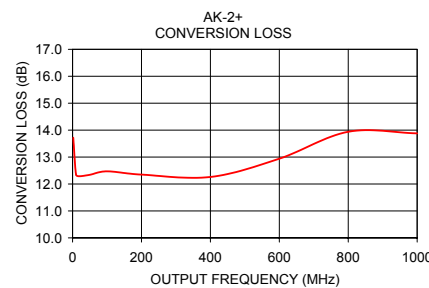
## Electrical Specifications

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	1-100	2-200	1	10	13.0	15.0	40	30	50	40	16	12
	100-300	200-600	1	10	13.5	15.5	25	20	40	30	16	12
	300-500	600-1000	1	10	14.0	17.5	20	15	30	25	16	12

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

## Typical Performance Data

Input Frequency (MHz)	Conversion Loss (dB) F2	Harmonic Output (-dBc)		
		F1	F3	F4
1.00	13.72	50.00	58.00	13.90
5.00	12.35	50.80	57.00	15.00
10.00	12.29	57.70	64.00	18.00
25.00	12.34	51.00	64.00	18.50
50.00	12.47	47.20	60.80	18.70
100.00	12.35	41.80	55.20	18.90
200.00	12.26	33.40	50.00	20.80
300.00	12.94	35.60	53.60	22.00
400.00	13.94	34.00	34.50	24.40
500.00	13.88	38.20	32.50	29.60



### 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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