

# X2 Frequency Multiplier

50Ω Output 140 to 3000 MHz

## AK-3000+



CASE STYLE: A03

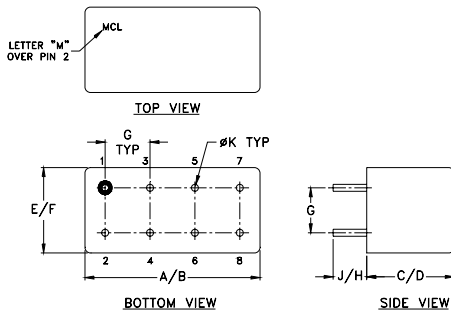
### Maximum Ratings

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
OUTPUT	8
GROUND	2,3,4,5,6,7
CASE GROUND	2,3,4,5,6,7

### 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, 140 to 3000 MHz
- low conversion loss, 11 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

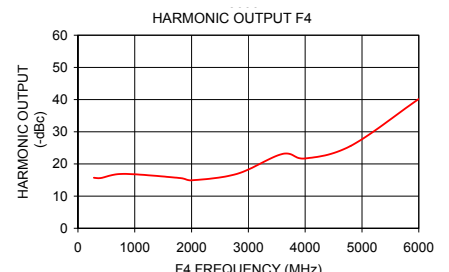
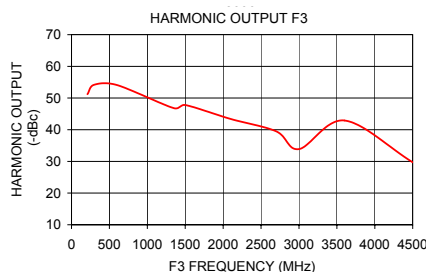
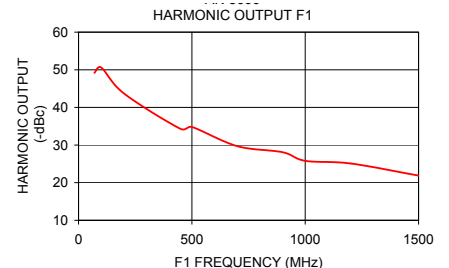
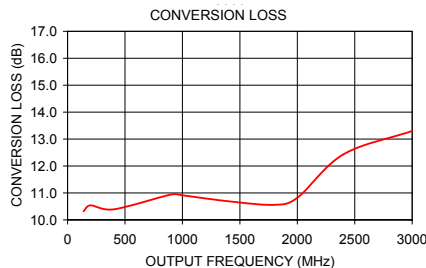
### Electrical Specifications

MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)						
	F1 Input	F2 Output	Min.	Max.	Typ.	Max.	F1		F3		F4		
								Typ.	Min.	Typ.	Min.	Typ.	Min.
2	70-1000	140-2000	12	15	10.5	14.0	31	20	40	25	14	10	
	1000-1500	2000-3000	12	15	11.5	16.0	22	15	30	20	30	14	

\* 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
70.00	10.32	49.20	51.20	15.70
100.00	10.54	50.60	54.20	15.60
200.00	10.39	43.70	54.10	16.90
450.00	10.94	34.30	46.80	15.60
500.00	10.91	34.80	47.80	14.90
700.00	10.69	29.70	43.40	16.90
900.00	10.56	28.10	39.50	23.10
1000.00	10.82	25.80	33.90	21.70
1200.00	12.43	25.10	42.90	25.60
1500.00	13.30	21.90	29.70	40.20



### 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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