

X2 Frequency Multiplier

AMK-2-13+

50Ω Output 20 to 1000 MHz



Maximum Ratings

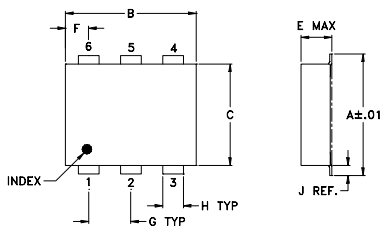
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Input Power	23 dBm

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

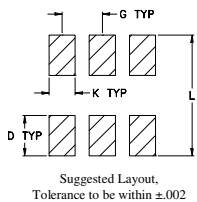
Pin Connections

INPUT	3
OUTPUT	6
GROUND	1,4,5
NOT USED	2

Outline Drawing



PCB Land Pattern



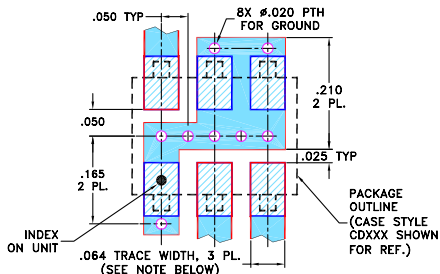
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.112	.055	.100
6.91	7.87	5.59	2.54	2.84	1.40	2.54

H	J	K	L	wt
.030	.026	.065	.300	grams
0.76	0.66	1.65	7.62	0.20

Demo Board MCL P/N: TB-03 Suggested PCB Layout (PL-052)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- broadband
- low conversion loss, 11.4 dB typ.
- high rejection F1 and F3, -45 dBc typ.
- low cost
- aqueous washable

Applications

- synthesizers
- local oscillators
- satellite up and down converters

CASE STYLE: CD542
PRICE: \$5.95 ea. QTY (10-49)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications

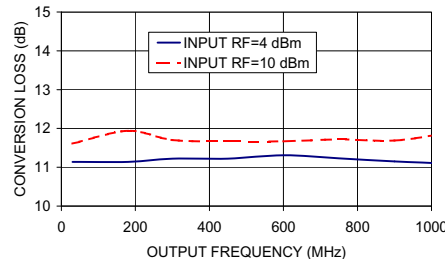
MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)					
	F1 Input	F2 Output	Min.	Max.	Typ.	Max.	F1		F3		F4	
2	10-500	20-1000	4	10	11.4	14.5	45	20	45	25	22	12

* Harmonics of input frequency below the power level of F2

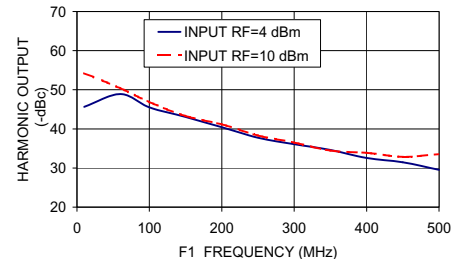
Typical Performance Data

Input Frequency (MHz)	INPUT RF= 4 dBm				INPUT RF= 10 dBm			
	Conversion Loss (dB) F2	F1	F3	F4	Conversion Loss (dB) F2	F1	F3	F4
10.00	11.14	45.65	50.28	15.24	11.61	54.24	65.09	21.97
60.00	11.14	48.90	66.44	15.25	11.94	50.38	65.74	21.45
100.00	11.22	45.52	65.65	15.06	11.70	46.86	61.85	20.36
150.00	11.22	43.05	59.50	14.95	11.67	43.30	55.49	20.72
200.00	11.31	40.43	53.67	15.06	11.67	41.16	50.45	22.99
250.00	11.23	37.72	49.84	15.65	11.72	38.29	47.40	25.43
300.00	11.15	36.08	47.09	16.63	11.69	36.49	44.07	30.03
350.00	11.09	34.61	45.52	18.06	11.88	34.46	41.61	31.49
400.00	11.09	32.56	42.50	19.34	11.97	33.87	39.61	36.48
450.00	11.16	31.45	43.20	20.09	12.21	32.85	39.01	25.48
500.00	11.41	29.56	43.75	20.71	12.72	33.56	39.13	25.56

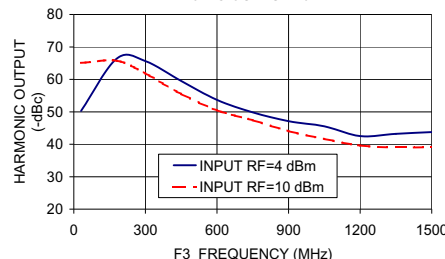
AMK-2-13+
CONVERSION LOSS



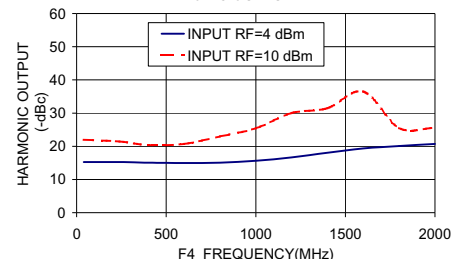
AMK-2-13+
HARMONIC OUTPUT F1



AMK-2-13+
HARMONIC OUTPUT F3



AMK-2-13+
HARMONIC OUTPUT F4



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IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

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ED-11679/1
DJ/CP/AM
081229

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