

# X2 Frequency Multiplier

## KC2-36+

50Ω Output 3400 to 7200 MHz



### Maximum Ratings

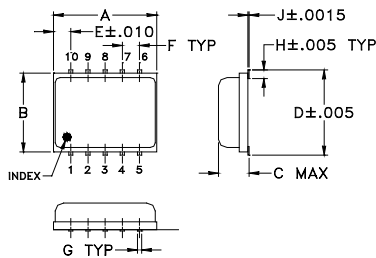
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Input, 25°C	200mW

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

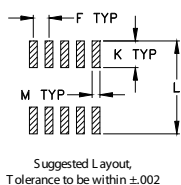
### Pin Connections

INPUT	10
OUTPUT	5
50Ω TERMINATE EXT.	3
GROUND	1,2,4,6,7,8,9

### Outline Drawing



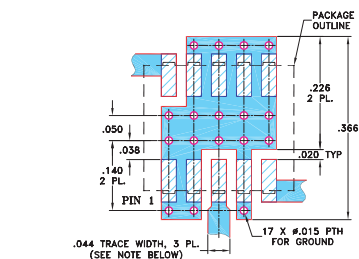
### PCB Land Pattern



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.30	.250	.085	.266	.050	.050	.012
7.62	6.35	2.16	6.76	1.27	1.27	0.30
H	J	K	L	M	wt	
.029	.004	.085	.296	.030	grams	
0.74	0.10	2.16	7.52	0.76	grams	0.25

### Demo Board MCL P/N: TB-144 Suggested PCB Layout (PL-045)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; 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.  
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)  
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### Features

- low conversion loss, 11 dB typ.
- LTCC design
- low profile, 0.085"
- low cost

### Applications

- synthesizers
- local oscillators

CASE STYLE: DZ885  
PRICE: \$6.95 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.

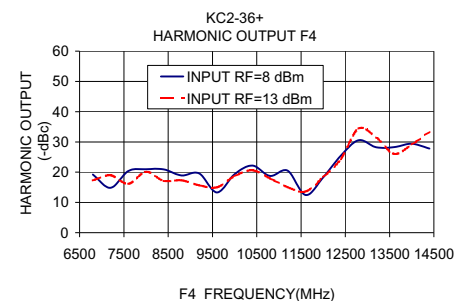
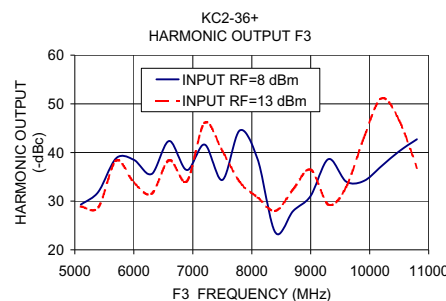
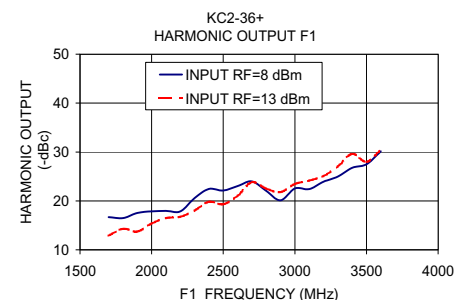
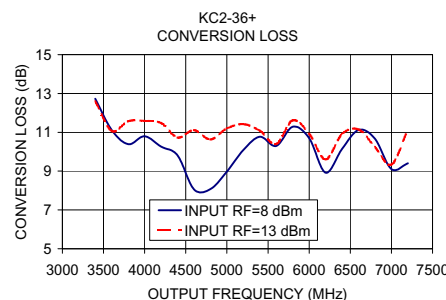
### Electrical Specifications

MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)					
	F1 Input	F2 Output	Min.	Max.	Typ.	Max.	F1 Typ.	F3 Min.	F3 Typ.	F4 Min.	F4 Typ.	
2	1700-3600	3400-7200	8	13	11.0	15.5	18	9	30	17	17	8
	2100-2700	4200-5400	8	13	11.0	14.8	20	12	35	17	17	8

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

### Typical Performance Data

Input Frequency (MHz)	INPUT RF= 8 dBm				INPUT RF= 13 dBm			
	Conversion Loss (dB)	Harmonic Output Below F2 (-dBc)			Conversion Loss (dB)	Harmonic Output Below F2 (-dBc)		
		F1	F3	F4		F1	F3	F4
1700.00	12.73	16.68	29.28	19.21	12.59	12.88	28.90	17.27
1900.00	10.39	17.55	38.81	20.40	11.57	13.73	38.30	16.13
2100.00	10.26	17.96	35.56	20.93	11.48	16.50	31.51	17.12
2300.00	8.06	20.57	36.41	19.59	11.11	18.03	34.08	15.65
2500.00	8.97	22.13	34.37	19.35	11.20	19.32	40.32	18.67
2700.00	10.77	24.00	38.60	18.73	11.08	23.82	30.77	17.97
2900.00	11.29	20.11	27.97	12.47	11.61	21.78	32.40	13.59
3100.00	8.92	22.40	38.64	25.49	9.60	24.16	29.28	24.36
3300.00	11.12	24.98	34.14	28.23	11.15	27.05	43.00	31.47
3500.00	9.10	27.48	40.25	29.40	9.34	28.00	46.57	29.15
3600.00	9.40	30.15	42.70	27.81	11.14	30.40	36.82	33.33



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IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

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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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