

# Surface Mount Frequency Multiplier

**NEW!**  
**KC2-50**

Output 7 to 10 GHz

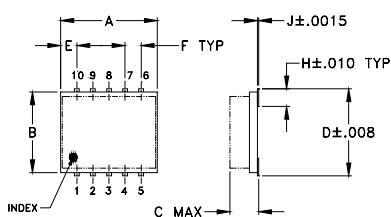
## Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C

## Pin Connections

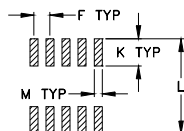
INPUT	10
OUTPUT	5
50Ω TERMINATED	3
GROUND	1,2,4,6,7,8,9

## Outline Drawing



TOLERANCES  
2 PL DECIMALS ±.01  
3 PL DECIMALS ±.005  
UNLESS OTHERWISE SPECIFIED

G TYP



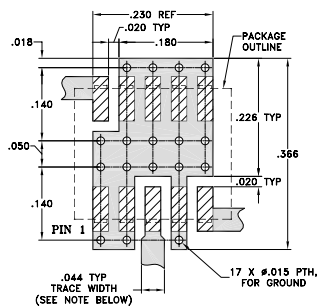
SUGGESTED LAYOUT FOR PCB LAND PATTERN

## Outline Dimensions (inch)

A	B	C	D	E	F	G
.30	.250	.085	.274	.050	.050	.012
7.62	6.35	2.16	6.96	1.27	1.27	0.30

H	J	K	L	M	wt.
.057	.004	.085	2.96	.030	grams
1.45	0.10	2.16	7.52	0.76	0.25

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



NOTE: TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS 0.020" ± 0.0015", COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

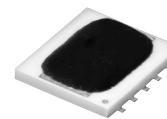
- DENOTES PCB COPPER LAYOUT
- ▨ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

## Features

- low conversion loss, 12.5 dB typ.
- LTCC design
- low profile, 0.085"
- low cost

## Applications

- synthesizers
- local oscillators



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CASE STYLE: DZ885  
PRICE:\$6.95 ea. QTY (10-49)

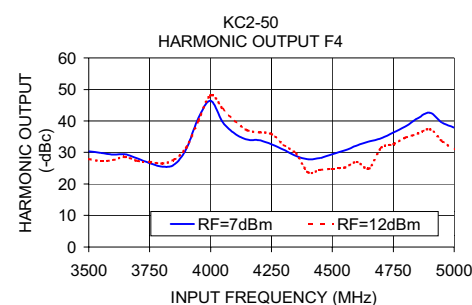
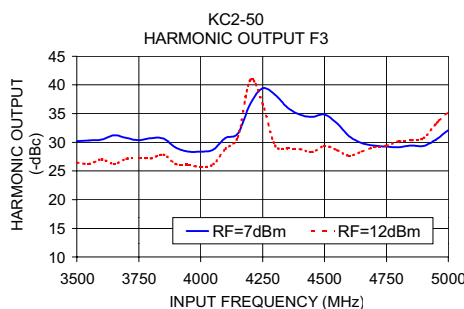
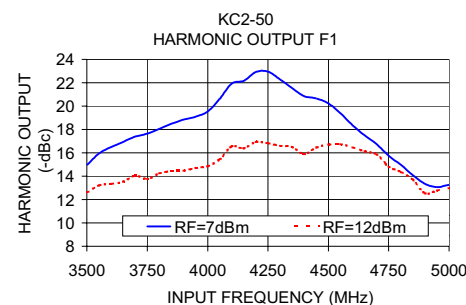
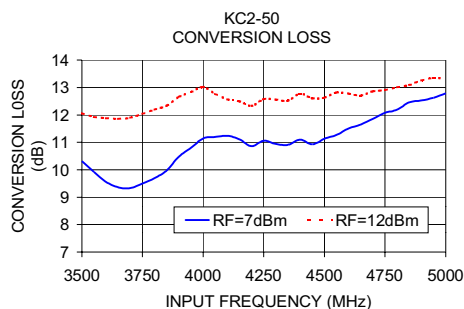
## Frequency Multiplier Electrical Specifications

MODEL NO.	MULTIPLICATION FACTOR	FREQUENCY (GHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)					
		Input	Output	Min.	Max.	Typ.	Max.	F1 Typ.	F3 Typ.	F4 Typ.			
KC2-50	2	3.5 - 5.0	7.0 - 10.0	7	12	12.5	16.0	15	8	28	20	30	17
		3.8 - 4.5	7.6 - 9.0	7	12	11.3	14.8	20	10	30	20	30	17

\*Harmonic output below power level of F2

## Typical Performance Data

Input Frequency (MHz)	RF=7dBm		Harmonic Output (-dBc)			RF=12dBm		Harmonic Output (-dBc)		
	Conversion Loss (dB)		F1	F3	F4	Conversion Loss (dB)		F1	F3	F4
3500.00	10.32		14.96	30.18	30.40	12.06		12.62	26.45	27.92
3700.00	9.33		17.40	30.75	28.08	11.90		14.05	27.10	27.25
3800.00	9.70		18.06	30.71	25.52	12.20		14.25	27.20	26.48
4000.00	11.14		19.55	28.37	46.43	13.02		14.86	25.74	48.15
4100.00	11.24		21.94	30.76	35.98	12.57		16.55	28.84	40.09
4200.00	10.86		22.93	36.69	33.86	12.33		16.93	40.86	36.40
4300.00	10.94		22.29	38.29	30.85	12.56		16.60	29.41	32.35
4500.00	11.13		20.24	34.83	29.44	12.63		16.71	29.36	24.84
4600.00	11.51		18.37	31.04	32.23	12.78		16.48	27.63	26.98
4700.00	11.86		16.75	29.43	34.50	12.86		15.88	29.13	31.46
4800.00	12.19		14.98	29.14	38.31	13.01		14.38	30.17	34.73
4900.00	12.53		13.36	29.37	42.60	13.26		12.55	30.72	37.35
5000.00	12.79		13.28	32.10	37.90	13.32		13.00	35.23	30.94



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