



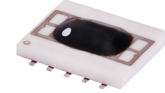
**THE DATASHEET OF  
KC2-11+**



# X2 Frequency Multiplier

## KC2-11+

50Ω Output 1000 to 2200 MHz



Generic photo used for illustration purposes only

CASE STYLE: DZ885

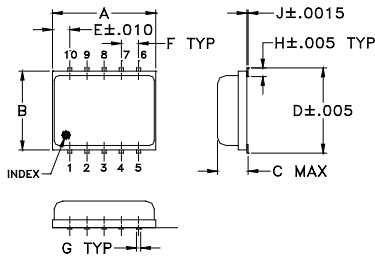
### Maximum Ratings

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.	

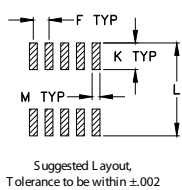
### Pin Connections

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

### Outline Drawing



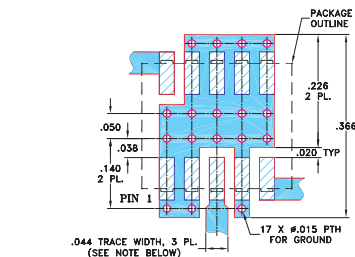
### PCB Land Pattern



### 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	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, 10.5 dB typ.
- LTCC design
- low profile, 0.085"
- low cost

### Applications

- synthesizers
- local oscillators

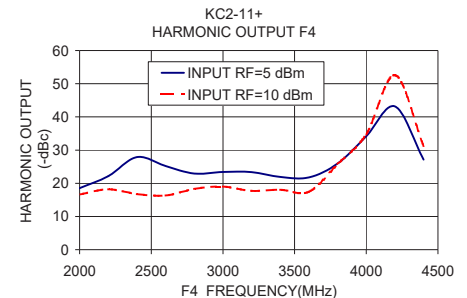
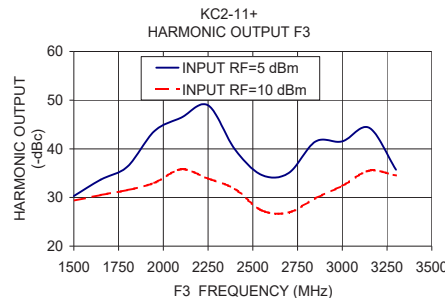
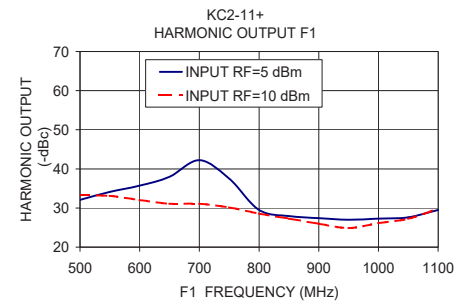
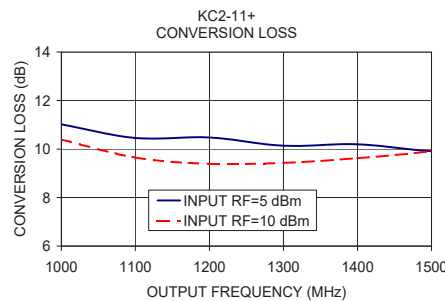
### Electrical Specifications

MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)					
	F1 Input	F2 Output	Min.	Max.	Typ.	Max.	F1 Typ.	F1 Min.	F3 Typ.	F3 Min.	F4 Typ.	F4 Min.
2	500-1100	1000-2200	5	10	10.5	13.5	27	18	34	20	21	12
	550-750	1100-1500	5	10	10.0	13.5	30	21	34	21	21	12

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

### Typical Performance Data

Input Frequency (MHz)	INPUT RF= 5 dBm				INPUT RF= 10 dBm			
	Conversion Loss (dB) F2	Harmonic Output Below F2 (-dBc) F1	Harmonic Output Below F2 (-dBc) F3	Harmonic Output Below F2 (-dBc) F4	Conversion Loss (dB) F2	Harmonic Output Below F2 (-dBc) F1	Harmonic Output Below F2 (-dBc) F3	Harmonic Output Below F2 (-dBc) F4
500.00	11.02	32.07	30.29	18.52	10.39	33.22	29.34	16.59
550.00	10.46	34.11	33.67	22.15	9.65	33.10	30.50	18.18
600.00	10.48	35.71	36.35	27.92	9.39	32.02	31.53	16.77
650.00	10.14	37.99	43.65	25.22	9.43	31.11	33.01	16.33
700.00	10.20	42.23	46.39	22.94	9.62	31.08	35.78	18.30
750.00	9.91	37.54	48.95	23.42	9.91	30.15	33.90	19.01
800.00	9.83	29.48	39.88	23.38	10.35	28.56	31.75	17.73
850.00	9.96	27.93	34.61	21.93	11.04	27.29	27.33	18.07
900.00	10.27	27.40	35.02	21.75	11.29	25.98	26.91	17.41
950.00	10.02	26.99	41.50	25.97	10.69	24.88	29.84	25.84
1000.00	10.21	27.27	41.54	34.18	10.38	26.16	32.38	34.74
1050.00	11.02	27.61	44.32	43.17	11.15	27.23	35.50	52.58
1100.00	12.37	29.48	35.70	27.14	12.06	29.84	34.52	31.25




### Notes

- A. 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.  
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