

X4 Frequency Multiplier

RKK-4-23+

50Ω Output 1280 to 2000 MHz



Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Input Power	20dBm
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

INPUT	2
OUTPUT	10
GROUND	1,3,4,5,6,7,8,9,11,12,13,14,15,16

Features

- broadband
- high rejection F1, 27 dBc typ; F2, 34 dBc typ; F3, 38 dBc typ; F5, 30 dBc typ.
- aqueous washable

Applications

- synthesizers
- local oscillators
- satellite up and down converters

CASE STYLE: CK1246
PRICE: \$8.95 ea. QTY. (10-49)

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

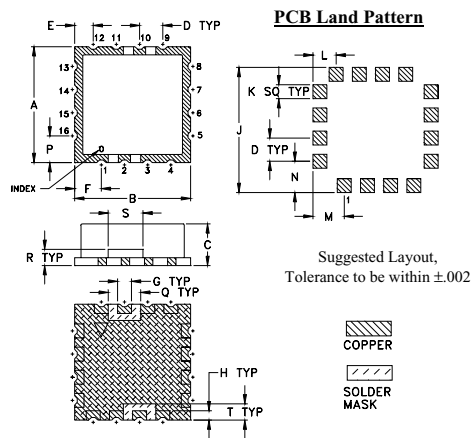
The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications

MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)							
	F1 Input	F4 Output	Min.	Max.	Typ.	Max.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.				
4	320-500	1280-2000	11	15	24.5	30	27	21	34	20	38	23	30	24

* Harmonics of input frequency below the power level of F4, at RF in +11dBm

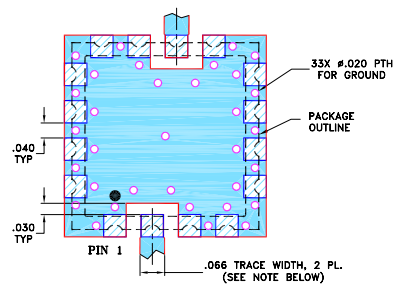
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	wt.
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060	grams
12.70	12.70	4.57	2.54	2.03	2.92	1.52	1.02	13.72	1.52	1.0
L	M	N	P	Q	R	S	T			
.100	.135	.135	.115	.140	.070	.150	.070			
2.54	3.43	3.43	2.92	3.56	1.78	3.81	1.78			

Demo Board MCL P/N: TB-435+ Suggested PCB Layout (PL-267)



- 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

Typical Performance Data

Input Frequency (MHz)	INPUT RF= 11dBm					INPUT RF= 15dBm				
	Conversion Loss (dB) F4	Harmonic Output Below F4 (-dBc) F1	Harmonic Output Below F4 (-dBc) F2	Harmonic Output Below F4 (-dBc) F3	Harmonic Output Below F4 (-dBc) F5	Conversion Loss (dB) F4	Harmonic Output Below F4 (-dBc) F1	Harmonic Output Below F4 (-dBc) F2	Harmonic Output Below F4 (-dBc) F3	Harmonic Output Below F4 (-dBc) F5
320.00	26.27	28.75	35.44	46.96	39.24	24.49	32.70	36.15	53.13	29.02
330.00	25.74	29.02	35.84	45.50	38.71	24.13	32.82	36.44	58.48	30.17
335.00	25.55	29.08	35.82	44.71	37.64	24.02	32.98	36.35	65.96	30.87
340.00	25.45	29.06	35.66	44.05	36.39	23.95	32.94	36.20	61.74	31.54
345.00	25.33	29.05	35.69	42.56	34.90	23.95	32.81	36.13	49.78	31.55
350.00	25.28	29.00	35.66	39.96	32.82	25.04	31.50	34.98	43.15	29.58
355.00	25.19	29.15	35.56	37.85	31.09	23.96	32.74	35.95	41.46	30.36
360.00	25.26	29.04	35.16	37.33	30.67	24.01	32.75	35.63	39.65	30.79
365.00	25.33	28.90	34.95	37.50	30.62	24.17	32.51	35.48	38.36	31.20
370.00	25.27	28.86	34.86	38.33	30.62	24.19	32.39	35.37	37.62	31.45
375.00	25.34	28.66	34.55	38.52	30.48	24.27	32.23	35.03	37.06	31.55
380.00	25.38	28.53	34.31	38.82	30.47	24.38	32.05	34.79	36.74	31.65
385.00	25.36	28.39	34.31	39.11	30.30	24.50	31.78	34.64	36.00	31.39
390.00	25.32	28.33	34.27	39.37	29.51	24.60	31.50	34.62	35.39	30.46
395.00	25.20	28.37	34.17	39.84	29.08	24.61	31.45	34.47	34.75	29.84
400.00	25.05	28.50	34.06	40.22	28.91	24.59	31.42	34.32	34.27	29.48
450.00	24.23	28.24	31.41	39.88	28.38	25.04	29.90	32.51	36.06	26.57
475.00	24.36	27.26	28.05	46.24	28.68	25.67	28.48	31.61	35.95	26.34
487.50	24.60	26.34	25.91	44.43	28.49	26.04	27.39	30.40	32.60	26.39
500.00	24.81	25.80	23.75	38.79	28.73	26.54	26.04	28.27	30.25	27.07

Mini-Circuits
 ISO 9001 ISO 14001 AS 9100 CERTIFIED
 IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

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