

X3 Frequency Multiplier

50Ω Output 450 to 900 MHz

RMK-3-92+



Generic photo used for illustration purposes only
CASE STYLE: TT1224

+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200
13"	500

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Input Power	20 dBm

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

Pin Connections

INPUT	1
OUTPUT	4
GROUND	2,3,5,6

Features

- low conversion loss, 14 dB typ.
- high rejection of adjacent harmonics, 66 dBc typ.
- aqueous washable

Applications

- synthesizers
- local oscillators
- satellite up and down converters

Electrical Specifications at 25°C

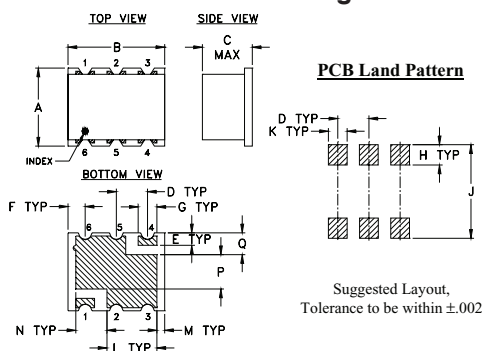
Parameter	Min.	Typ.	Max.	Unit
Multiplier Factor		3		
Frequency Range, Input (F1)	150	—	300	MHz
Frequency Range, Output (F3)	450	—	900	MHz
Input Power	12	—	17	dBm
Conversion Loss	—	14	19	dB
Harmonic Output*	F1	-13	-1	dB
	F2	40	66	
	F4	40	67	

* Harmonics of input frequency below the power level of F3

Typical Performance Data

Frequency		Conv. Loss (dB) F3	Harmonic Rejection Below F3, (-dBc) at RF Input Power 17 dBm		
Input (MHz)	Output (MHz)		F1	F2	F4
150.00	450.00	15.47	8.55	77.81	83.80
160.00	480.00	14.88	8.06	75.12	76.81
180.00	540.00	14.09	6.59	73.46	80.89
200.00	600.00	14.14	4.67	69.31	78.91
220.00	660.00	14.08	2.94	68.16	74.84
240.00	720.00	14.17	1.07	68.79	71.74
250.00	750.00	14.29	0.21	68.64	71.11
260.00	780.00	14.47	-0.72	66.50	69.28
280.00	840.00	14.78	-2.47	71.34	66.85
300.00	900.00	15.01	-4.15	75.10	63.85

Outline Drawing

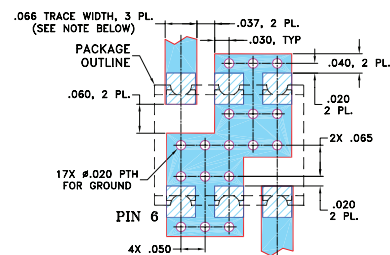


Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch)

A	B	C	D	E	F	G	H
.25	.31	.16	.100	.040	.055	.060	.065
6.35	7.87	4.06	2.54	1.02	1.40	1.52	1.65
J	K	L	M	N	P	Q	wt.
.300	.060	.160	.025	.100	.110	.070	grams
7.62	1.52	4.06	0.64	2.54	2.79	1.78	0.16

Demo Board MCL P/N: TB-393 Suggested PCB Layout (PL-258)



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.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Notes

- 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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