

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

Available Tape and Reel at no extra cost	
Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200
13"	500

Maximum Ratings

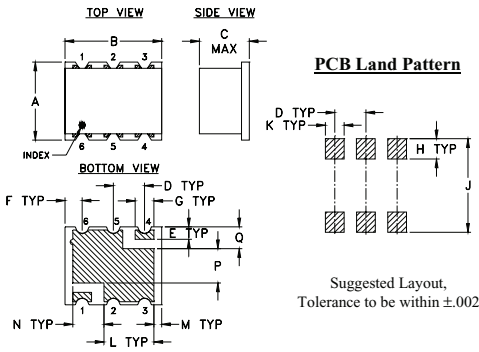
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Input Power	20 dBm

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

Pin Connections

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

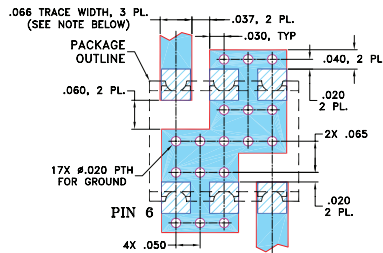
Outline Drawing



Outline Dimensions (inch/mm)

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

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document 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

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	—
	F2	40	66	dB
	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

