

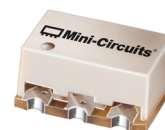
X3 Frequency Multiplier

RMK-3-1262+

50Ω Output 6750 to 12600 MHz

The Big Deal

- Broadband, output frequency 6750 to 12600 MHz
- High rejection of adjacent harmonics, 45dB below the carrier, F3
- Small package size, 0.25" x 0.3"
- Low cost \$9.45, quantity of 1000



CASE STYLE: TT1224

Product Overview

The RMK-3-1262+ is a self contained frequency tripler that does not require external components. It is constructed using a specially designed diode quad ring configuration to enable high rejection of adjacent harmonics. The tripler is packaged in a miniature 0.3" x 0.25" case, with wrap-around terminations to enable convenient high density assembly.

Key Features

Feature	Advantages
Low conversion loss, 22.5 dB typ.	With a low conversion loss, RKK-4-112+ produces higher output power, reducing the need for amplification.
Very good harmonic suppression • F3, 30 dBc	Reduces spurious signals and the need for additional filtering.
Broadband, 800 to 1100 MHz output	With an output frequency range spanning 3600 to 4400 MHz, this multiplier covers a wide range of applications.
Wide input power range, +17 to +23 dBm	Wide input power signal range accommodates different input signal levels while still maintaining a low conversion loss.
Low cost	Provides an easy, cost-effective solution for generating high-frequency signals from a lower frequency signal source.
Small size, 0.50 x 0.50 x 0.18"	Saves space in crowded PCB layouts.

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



X3 Frequency Multiplier

50Ω Output 6750 to 12600 MHz

RMK-3-1262+



CASE STYLE: TT1224

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Input Power	17 dBm
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

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

Features

- broadband
- high rejection F2, -45 dBc typ.; F4, -50 dBc typ.
- low cost
- aqueous washable

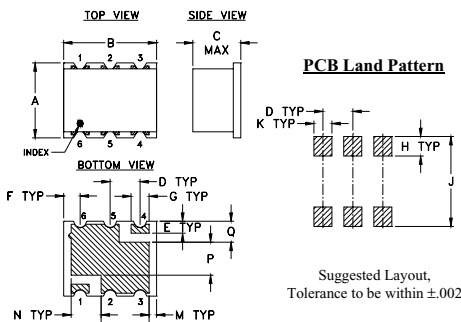
Applications

- synthesizers
- local oscillators
- satellite up and down converters

+RoHS Compliant

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

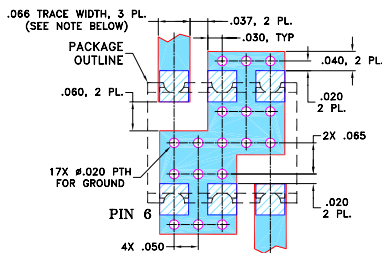
Outline Drawing



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

- 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.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp



www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

Electrical Specifications

MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)	*HARMONIC OUTPUT (dB)					
	F1 Input	F3 Output	Min.	Max.		F1 Typ.	F1 Min.	F2 Typ.	F2 Min.	F4 Typ.	F4 Min.
3	2250-4200	6750-12600	7	11	15.5 20	5	-7	45	31	50	35

* Harmonics of input frequency below the power level of F3

Typical Performance Data

INPUT RF= 7 dBm					INPUT RF= 11 dBm			
Input Frequency (MHz)	Conversion Loss (dB) F3	Harmonic Output Below F3 (-dBc) F1	Harmonic Output Below F3 (-dBc) F2	Harmonic Output Below F3 (-dBc) F4	Conversion Loss (dB) F3	Harmonic Output Below F3 (-dBc) F1	Harmonic Output Below F3 (-dBc) F2	Harmonic Output Below F3 (-dBc) F4
2250.00	17.34	4.37	55.37	56.83	15.75	8.87	57.56	54.38
2350.00	16.73	4.35	55.50	60.18	15.55	8.39	57.41	56.26
2450.00	15.78	4.68	55.43	55.15	14.93	8.40	58.27	54.07
2550.00	14.89	4.94	55.55	63.09	14.04	8.62	58.28	54.02
2650.00	14.49	4.64	55.10	63.33	14.26	7.69	57.02	51.50
2750.00	14.17	4.37	54.22	58.10	14.47	6.93	54.77	51.98
2850.00	14.53	3.57	52.72	56.68	14.77	6.12	53.26	53.23
2955.00	14.96	2.65	51.53	55.20	14.78	5.53	52.64	52.86
3065.00	13.93	2.97	51.62	53.77	15.19	4.58	51.48	52.28
3175.00	14.25	2.18	49.82	52.00	16.00	3.32	49.38	50.78
3285.00	14.62	1.52	47.86	51.01	15.68	3.29	48.08	50.55
3395.00	15.16	0.63	46.51	48.13	15.54	3.04	47.61	48.80
3505.00	14.96	0.35	46.85	48.16	15.22	2.79	48.25	47.53
3615.00	15.24	0.40	47.10	47.46	15.91	1.75	47.39	46.11
3725.00	15.75	-1.31	41.54	50.15	16.72	0.54	43.14	46.61
3835.00	15.96	-1.78	40.06	53.41	16.62	-0.31	42.91	50.32
3945.00	15.77	-1.88	39.53	53.18	16.04	-0.63	43.09	53.97
4050.00	16.41	-3.10	38.50	52.62	16.11	-0.06	42.56	57.35
4150.00	15.90	-3.04	38.51	56.51	15.75	-0.15	42.83	59.83
4200.00	15.81	-3.06	38.43	60.50	15.82	-0.36	42.58	60.83

