Frequency Multiplier

Output 2100 to 3000 MHz 50Ω

The Big Deal

- Broadband, for 2.1 to 3.0 GHz signal production
- Wide input power range, +12 to +17 dBm
- Low conversion loss, 14.1 dB typ.
- Good harmonic suppression: F2, 47.5 dBc; F4, 43.5 dBc

Product Overview

Mini-Circuits' RMK-3-33+ frequency multiplier provides a multiplication factor of 3 converting input frequencies from 700 to 1000 MHz into output frequencies from 2100 to 3000 MHz, supporting applications including synthesizers, local oscillators, transceiver chains, satellite up and down converters and more. It provides an input power range from +12 to +17 dBm, low conversion loss, and good harmonic suppression. The multiplier comes housed in a miniature surface mount package (0.25 x 0.31 x 0.16") ideal for dense circuit board layouts.

Feature	Advantages
Low conversion loss, 14.1 dB typ.	With a low conversion loss, RMK-3-33+ produces higher output power, reducing the need for amplification.
Very good harmonic suppression • F2, 47.5 dBc • F4, 43.5 dBc	Reduces spurious signals and the need for additional filtering.
Broadband	With an output frequency range spanning 2100 to 3000 MHz, this multiplier covers a wide range of applica- tions.
Wide input power range, +12 to +17 dBm	Wide input power signal range accommodates different input signal levels while still maintaining a low con- version loss.
Low cost	Provides an easy, cost-effective solution for generating high-frequency signals from a lower frequency signal source.
Small size	Measuring only 0.25 x 0.31 x 0.16", the RMK-3-33+ saves space in crowded PCB layouts.

CASE STYLE: TT1224

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 (collective), "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



RMK-3-33+

Frequency Multiplier

RMK-3-33+

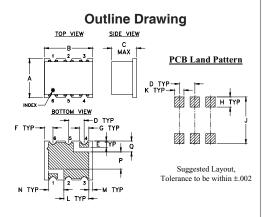
Output 2100 to 3000 MHz 50Ω

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 o	of these limits are exceeded.

Din Connections

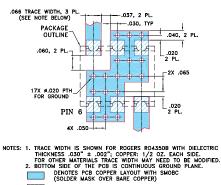
1
4
2,3,5,6



Outline Dimensions (inch)

Н	G	F	Е	D	С	В	А
.065	.060	.055	.040	.100	.16	.31	.25
1.65	1.52	1.40	1.02	2.54	4.06	7.87	6.35
	0	Р	N	М	1	к	
wt.	~				-		•
wt. grams							
	.070	.110	.100	.025	.160	.060	.300





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Notes

Features broadband

- · low conversion loss, 14.1 dB typ.
- high rejection F2, 47.5 dBc typ; F4, 43.5 dBc typ
- · low cost
- aqueous washable

Applications

- synthesizers local oscillators
- · satellite up and down converters



CASE STYLE: TT1224

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

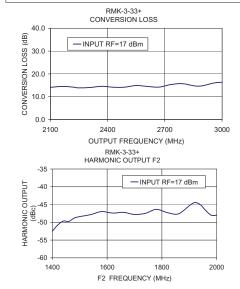


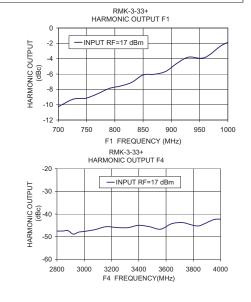
Electrical Specifications at 25°C Min. Тур. Unit Parameter Max. Multiplier Factor 3 Frequency Range, Input (F1) 700 1000 MHz 2100 3000 MHz Frequency Range, Output (F3) _ Input Power 12 17 dBm _ Conversion Loss 14.1 18.5 dB Harmonic Ouput* F1 -5 4.5 -dBc F2 32 47.5 30 43.5 F4

* Harmonics of input frequency below the power level of F3

Typical Performance Data

Frequency		Frequency Conv. Loss		Harmonic Rejection Below F3, (dBc) at RF Input Power 17 dBm		
Input (MHz)	Output (MHz)	(dB) F3	F1	F2	F4	
700.00	2100.00	14.08	-10.26	-52.50	-47.53	
750.00	2250.00	13.88	-9.14	-48.39	-47.66	
770.00	2310.00	14.05	-8.56	-47.83	-46.87	
810.00	2430.00	14.14	-7.57	-47.40	-45.98	
850.00	2550.00	14.91	-6.12	-47.79	-44.96	
910.00	2730.00	15.31	-4.60	-47.29	-44.31	
950.00	2850.00	14.81	-3.95	-45.32	-45.02	
960.00	2880.00	14.62	-3.82	-44.44	-45.22	
980.00	2940.00	15.69	-2.75	-46.68	-43.21	
1000.00	3000.00	16.31	-1.87	-48.02	-42.27	





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