WINSOURCE ELECTRONICS

THE DATASHEET OF

RMK-3-123+

X3 Frequency Multiplier

RMK-3-123+

50Ω Output 6600 to 12000 MHz



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	17 dBm

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

Pin Connections

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

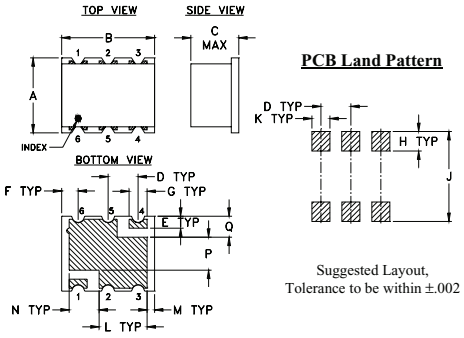
Features

- broadband
- high rejection F2, -33 dBc typ.; F4, -45 dBc typ.
- low cost
- aqueous washable

Applications

- synthesizers
- local oscillators
- satellite up and down converters

Outline Drawing

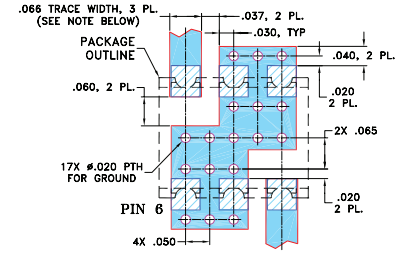


Outline Dimensions (inch / mm)

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.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Electrical Specifications

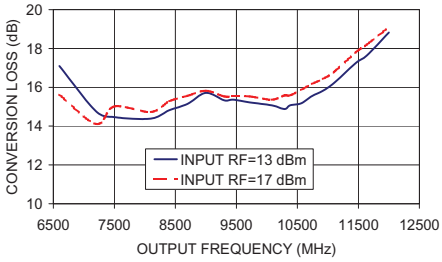
MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)					
	F1	F3					F1		F2		F4	
	Input	Output	Min.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.
3	2200-4000	6600-12000	13	17	15.5	21	5	-5	33	22	45	24

* Harmonics of input frequency below the power level of F3

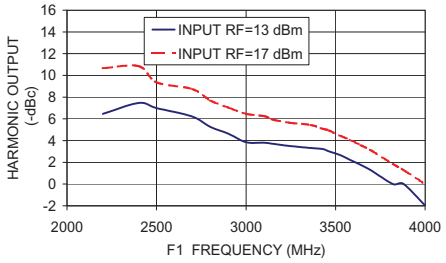
Typical Performance Data

	INPUT RF= 13 dBm				INPUT RF= 17 dBm			
Input Frequency (MHz)	Conversion Loss (dB)	Harmonic Output Below F3 (-dBc)			Conversion Loss (dB)	Harmonic Output Below F3 (-dBc)		
	F3	F1	F2	F4	F3	F1	F2	F4
2200.00	17.10	6.46	43.81	41.26	15.62	10.66	45.36	50.70
2400.00	14.76	7.47	42.53	40.96	14.11	10.86	44.54	52.89
2500.00	14.46	7.00	42.64	36.29	15.01	9.37	42.60	41.84
2700.00	14.39	6.21	41.67	46.46	14.73	8.74	43.18	50.24
2800.00	14.82	5.27	41.35	54.46	15.28	7.70	42.28	54.65
2900.00	15.15	4.65	41.77	62.55	15.56	7.05	40.84	53.91
3000.00	15.71	3.85	42.22	52.88	15.82	6.46	38.36	53.31
3100.00	15.33	3.81	40.33	45.93	15.53	6.25	35.03	51.83
3150.00	15.36	3.71	39.92	44.99	15.55	5.93	33.63	52.04
3240.00	15.22	3.51	37.49	43.68	15.53	5.65	31.88	51.49
3360.00	15.07	3.32	35.11	43.68	15.36	5.45	30.38	49.72
3430.00	14.88	3.22	33.83	43.88	15.58	5.07	30.14	47.92
3460.00	15.07	3.03	33.08	43.58	15.58	4.96	30.01	47.07
3520.00	15.17	2.71	31.33	43.53	15.86	4.48	28.99	45.90
3580.00	15.55	2.23	30.04	43.74	16.17	4.07	28.81	44.40
3640.00	15.82	1.77	29.35	44.29	16.43	3.58	29.12	43.44
3700.00	16.22	1.25	28.63	47.10	16.79	3.08	29.36	41.94
3820.00	17.26	-0.08	38.02	50.31	17.81	1.85	34.73	38.30
3880.00	17.64	-0.56	35.44	40.65	18.20	1.29	36.72	38.63
4000.00	18.82	-1.97	28.32	37.36	19.11	-.09	30.37	41.63

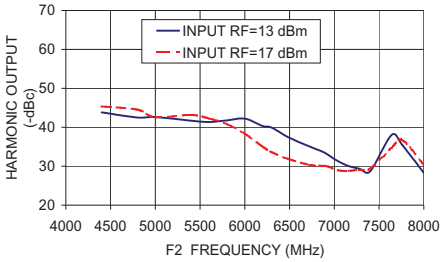
RMK-3-123+
CONVERSION LOSS



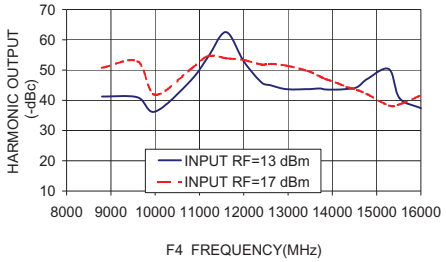
RMK-3-123+
HARMONIC OUTPUT F1



RMK-3-123+
HARMONIC OUTPUT F2



RMK-3-123+
HARMONIC OUTPUT F4



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

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- View RMK-3-123+ on WIN SOURCE
- Mini-Circuits Information

Optimize Your Supply Chain with WIN SOURCE Solutions

- Global Sourcing Solution
- Obsolete Management
- Cost Control Management
- Shortage Management
- Alternative Solution
- Excess Inventory Management