

X5 Frequency Multiplier

50Ω Output 2250 to 2750 MHz

RMK-5-2751+

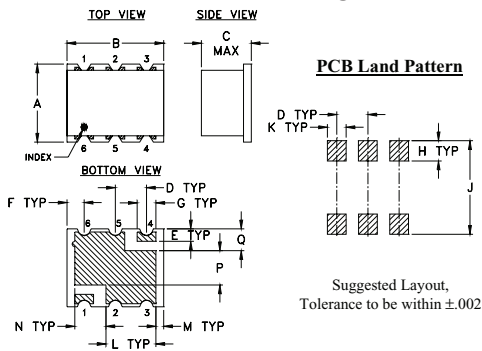
Maximum Ratings

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

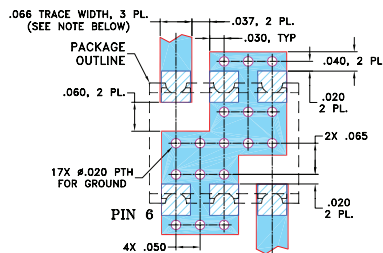
Outline Drawing



Outline Dimensions (inch)

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-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, 22 dB typ.
- high rejection of adjacent harmonics, 58 dBc typ.
- aqueous washable

Applications

- synthesizers
- local oscillators
- satellite up and down converters



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

Electrical Specifications at 25°C

Parameter	Min.	Typ.	Max.	Unit
Multiplier Factor		5		
Frequency Range, Input (F1)	450	—	550	MHz
Frequency Range, Output (F5)	2250	—	2750	MHz
Input Power	—	17	—	dBm
Conversion Loss	—	22	24.5	dB
Harmonic Output*				dB
F1	3.0	4.8	—	
F2	38	67.8	—	
F3	-7	-3.0	—	
F4	40	54	—	
F6	40	57	—	
F7	4	7	—	

* Harmonics of input frequency below the power level of F5

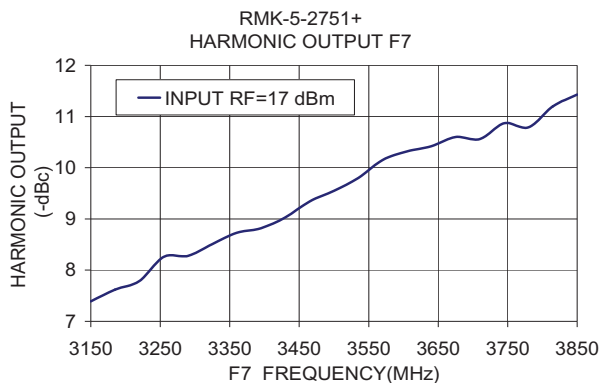
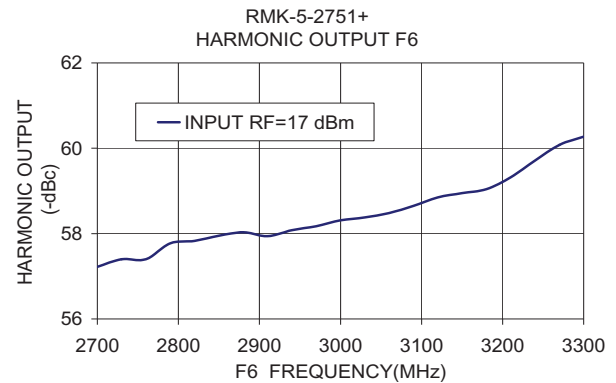
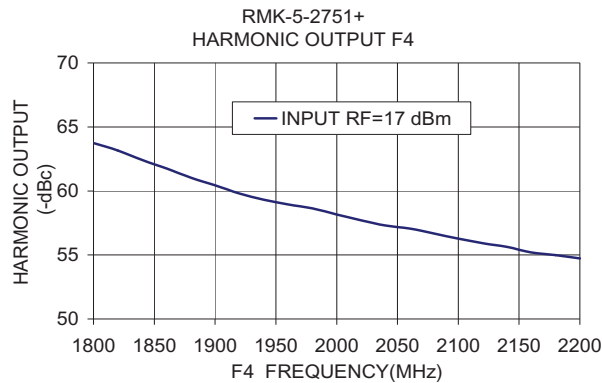
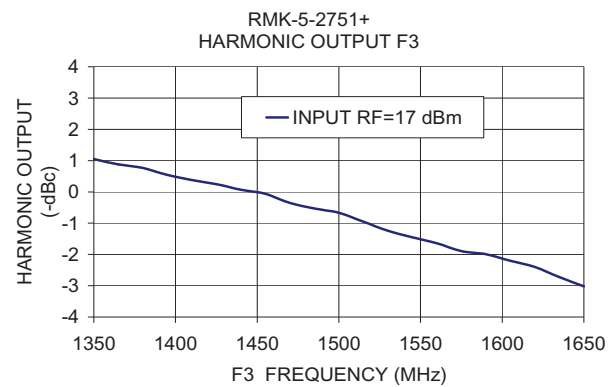
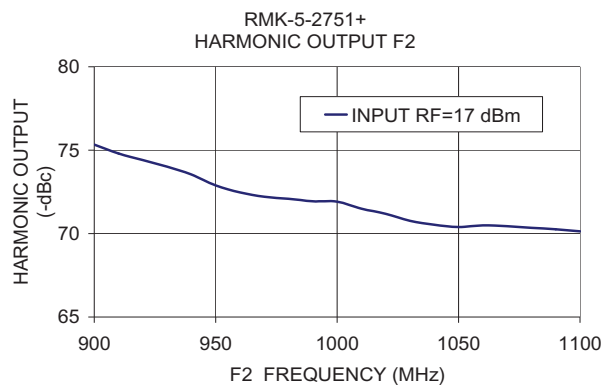
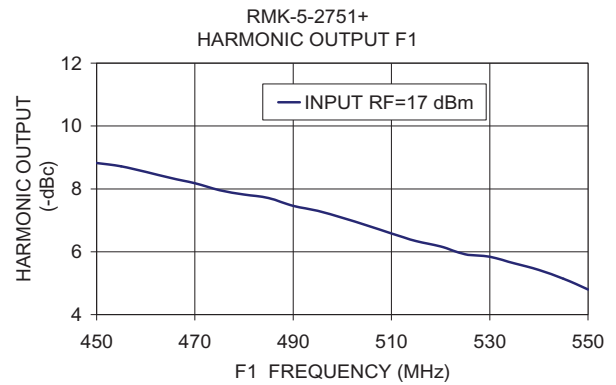
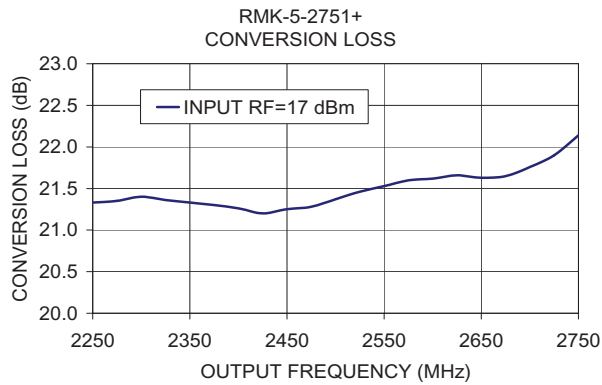
Typical Performance Data

Frequency		Conv. Loss (dB)	Harmonic Rejection Below F5, (dB) <i>at RF Input Power 17 dBm</i>					
Input (MHz)	Output (MHz)		F5	F1	F2	F3	F4	F6
450.00	2250.00	21.33	8.82	75.33	1.05	63.74	57.22	7.39
455.00	2275.00	21.35	8.72	74.80	0.88	63.16	57.40	7.62
460.00	2300.00	21.40	8.54	74.41	0.77	62.42	57.40	7.79
465.00	2325.00	21.36	8.35	74.01	0.54	61.76	57.77	8.26
470.00	2350.00	21.33	8.18	73.54	0.38	61.04	57.83	8.28
475.00	2375.00	21.30	7.96	72.89	0.25	60.45	57.95	8.51
480.00	2400.00	21.26	7.82	72.47	0.07	59.80	58.03	8.73
485.00	2425.00	21.20	7.71	72.21	-0.06	59.31	57.94	8.82
490.00	2450.00	21.25	7.46	72.09	-0.35	58.94	58.08	9.03
495.00	2475.00	21.28	7.30	71.94	-0.53	58.64	58.17	9.34
500.00	2500.00	21.37	7.08	71.91	-0.67	58.16	58.31	9.55
505.00	2525.00	21.46	6.84	71.50	-0.95	57.71	58.38	9.80
510.00	2550.00	21.53	6.58	71.19	-1.24	57.31	58.48	10.15
515.00	2575.00	21.60	6.34	70.76	-1.45	57.06	58.65	10.32
520.00	2600.00	21.62	6.17	70.53	-1.64	56.67	58.85	10.42
525.00	2625.00	21.66	5.92	70.40	-1.89	56.27	58.95	10.60
530.00	2650.00	21.63	5.84	70.50	-1.99	55.92	59.04	10.56
535.00	2675.00	21.65	5.63	70.45	-2.20	55.63	59.32	10.87
540.00	2700.00	21.76	5.42	70.35	-2.40	55.20	59.71	10.79
545.00	2725.00	21.90	5.14	70.26	-2.72	54.99	60.08	11.20
550.00	2750.00	22.14	4.80	70.14	-3.02	54.73	60.27	11.43



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