

# Frequency Multiplier (Tripler)

# RMK-3-722+

## Typical Performance Data

Test Conditions: RF Input Power = 7 dBm @ +25°C

FREQUENCY (MHz)				CONVERSION LOSS (dB)	HARMONIC OUTPUT* (-dBc)		
X1 OUTPUT	X2 OUTPUT	X3 OUTPUT	X4 OUTPUT	X3 OUTPUT	X1 OUTPUT	X2 OUTPUT	X4 OUTPUT
1525.0	3050.0	4575.0	6100.0	15.32	3.96	68.30	63.37
1560.0	3120.0	4680.0	6240.0	14.38	4.40	65.39	62.47
1595.0	3190.0	4785.0	6380.0	14.37	3.94	68.41	61.03
1630.0	3260.0	4890.0	6520.0	14.02	3.88	70.82	61.59
1665.0	3330.0	4995.0	6660.0	13.61	3.85	67.27	61.31
1700.0	3400.0	5100.0	6800.0	14.84	2.41	71.58	59.57
1735.0	3470.0	5205.0	6940.0	13.78	3.06	75.01	60.26
1770.0	3540.0	5310.0	7080.0	13.76	2.72	68.51	61.21
1805.0	3610.0	5415.0	7220.0	13.45	2.66	70.46	63.33
1840.0	3680.0	5520.0	7360.0	13.48	2.22	75.25	63.84
1875.0	3750.0	5625.0	7500.0	13.60	1.94	72.81	65.97
1910.0	3820.0	5730.0	7640.0	13.40	1.67	76.97	64.36
1945.0	3890.0	5835.0	7780.0	13.42	1.29	84.90	64.12
1980.0	3960.0	5940.0	7920.0	13.60	0.86	80.71	62.69
2015.0	4030.0	6045.0	8060.0	13.93	0.16	77.64	63.15
2050.0	4100.0	6150.0	8200.0	14.00	-0.09	78.76	62.71
2085.0	4170.0	6255.0	8340.0	14.16	-0.62	74.89	64.34
2120.0	4240.0	6360.0	8480.0	14.09	-0.82	70.94	65.68
2155.0	4310.0	6465.0	8620.0	14.04	-1.04	70.63	68.13
2190.0	4380.0	6570.0	8760.0	14.78	-1.96	69.56	65.72
2225.0	4450.0	6675.0	8900.0	14.80	-2.14	66.58	68.50
2260.0	4520.0	6780.0	9040.0	14.49	-2.16	65.44	64.24
2295.0	4590.0	6885.0	9180.0	14.92	-2.89	63.67	61.89
2330.0	4660.0	6990.0	9320.0	15.16	-3.28	64.28	67.91
2365.0	4730.0	7095.0	9460.0	16.00	-4.22	62.72	66.57
2400.0	4800.0	7200.0	9600.0	14.93	-3.64	63.07	62.34

\* Harmonic Output below power level of X3 Output.

# Frequency Multiplier (Tripler)

# RMK-3-722+

## Typical Performance Data

Test Conditions: RF Input Power = 7 dBm @ -40°C

FREQUENCY (MHz)				CONVERSION LOSS (dB)	HARMONIC OUTPUT* (-dBc)		
X1 OUTPUT	X2 OUTPUT	X3 OUTPUT	X4 OUTPUT	X3 OUTPUT	X1 OUTPUT	X2 OUTPUT	X4 OUTPUT
1525.0	3050.0	4575.0	6100.0	15.33	3.50	64.03	63.10
1560.0	3120.0	4680.0	6240.0	14.12	4.17	61.57	60.94
1595.0	3190.0	4785.0	6380.0	14.20	3.63	63.75	58.93
1630.0	3260.0	4890.0	6520.0	13.74	3.65	66.77	60.16
1665.0	3330.0	4995.0	6660.0	13.29	3.73	63.11	58.29
1700.0	3400.0	5100.0	6800.0	15.13	1.73	65.94	57.43
1735.0	3470.0	5205.0	6940.0	13.53	2.89	70.88	56.55
1770.0	3540.0	5310.0	7080.0	13.56	2.45	64.09	54.74
1805.0	3610.0	5415.0	7220.0	12.92	2.69	65.86	56.02
1840.0	3680.0	5520.0	7360.0	12.90	2.29	71.44	58.56
1875.0	3750.0	5625.0	7500.0	13.09	1.93	68.07	62.17
1910.0	3820.0	5730.0	7640.0	12.72	1.78	70.19	62.33
1945.0	3890.0	5835.0	7780.0	12.71	1.44	70.29	62.24
1980.0	3960.0	5940.0	7920.0	12.84	1.07	66.92	58.87
2015.0	4030.0	6045.0	8060.0	13.21	0.36	65.58	58.16
2050.0	4100.0	6150.0	8200.0	13.34	0.01	64.79	57.59
2085.0	4170.0	6255.0	8340.0	13.54	-0.58	65.18	57.73
2120.0	4240.0	6360.0	8480.0	13.46	-0.77	68.31	57.83
2155.0	4310.0	6465.0	8620.0	13.38	-0.95	77.24	61.57
2190.0	4380.0	6570.0	8760.0	14.15	-1.90	76.26	62.46
2225.0	4450.0	6675.0	8900.0	14.15	-2.07	66.44	70.75
2260.0	4520.0	6780.0	9040.0	13.76	-2.02	65.99	63.48
2295.0	4590.0	6885.0	9180.0	14.21	-2.79	63.40	61.10
2330.0	4660.0	6990.0	9320.0	14.53	-3.27	60.10	70.44
2365.0	4730.0	7095.0	9460.0	15.94	-4.74	55.29	61.19
2400.0	4800.0	7200.0	9600.0	14.52	-3.78	61.15	61.13

\* Harmonic Output below power level of X3 Output.

# Frequency Multiplier (Tripler)

# RMK-3-722+

## Typical Performance Data

Test Conditions: RF Input Power = 7 dBm @ +85°C

FREQUENCY (MHz)				CONVERSION LOSS (dB)	HARMONIC OUTPUT* (-dBc)		
X1 OUTPUT	X2 OUTPUT	X3 OUTPUT	X4 OUTPUT	X3 OUTPUT	X1 OUTPUT	X2 OUTPUT	X4 OUTPUT
1525.0	3050.0	4575.0	6100.0	15.31	4.36	73.85	63.35
1560.0	3120.0	4680.0	6240.0	14.65	4.51	72.35	63.58
1595.0	3190.0	4785.0	6380.0	14.59	4.13	75.21	62.93
1630.0	3260.0	4890.0	6520.0	14.32	4.02	75.95	63.26
1665.0	3330.0	4995.0	6660.0	14.00	3.90	73.76	63.74
1700.0	3400.0	5100.0	6800.0	14.83	2.83	78.77	62.60
1735.0	3470.0	5205.0	6940.0	14.15	3.16	77.13	63.79
1770.0	3540.0	5310.0	7080.0	14.15	2.77	72.97	64.80
1805.0	3610.0	5415.0	7220.0	14.00	2.58	75.73	66.04
1840.0	3680.0	5520.0	7360.0	14.00	2.18	78.46	65.61
1875.0	3750.0	5625.0	7500.0	14.14	1.91	76.98	66.47
1910.0	3820.0	5730.0	7640.0	14.03	1.50	82.26	66.01
1945.0	3890.0	5835.0	7780.0	14.06	1.17	81.47	66.50
1980.0	3960.0	5940.0	7920.0	14.26	0.75	82.79	65.78
2015.0	4030.0	6045.0	8060.0	14.51	0.11	75.91	66.47
2050.0	4100.0	6150.0	8200.0	14.59	-0.18	74.00	66.74
2085.0	4170.0	6255.0	8340.0	14.76	-0.73	74.10	68.08
2120.0	4240.0	6360.0	8480.0	14.73	-0.98	70.05	67.32
2155.0	4310.0	6465.0	8620.0	14.71	-1.19	69.60	68.22
2190.0	4380.0	6570.0	8760.0	15.41	-2.05	69.01	66.18
2225.0	4450.0	6675.0	8900.0	15.42	-2.21	66.55	67.19
2260.0	4520.0	6780.0	9040.0	15.08	-2.20	66.21	65.26
2295.0	4590.0	6885.0	9180.0	15.50	-2.91	64.93	63.29
2330.0	4660.0	6990.0	9320.0	15.61	-3.18	65.66	67.47
2365.0	4730.0	7095.0	9460.0	16.19	-3.93	63.64	68.35
2400.0	4800.0	7200.0	9600.0	15.39	-3.57	64.25	63.26

\* Harmonic Output below power level of X3 Output.



P.O. Box 350186, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4851 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MIN-CIRCUITS At: [www.minicircuits.com](http://www.minicircuits.com)

IF/RF MICROWAVE COMPONENTS



REV. X1  
RMK-3-722+  
9/15/2009  
Page 3 of 6

# Frequency Multiplier (Tripler)

# RMK-3-722+

## Typical Performance Data

Test Conditions: RF Input Power = 11 dBm @ +25°C

FREQUENCY (MHz)				CONVERSION LOSS (dB)	HARMONIC OUTPUT* (-dBc)		
X1 OUTPUT	X2 OUTPUT	X3 OUTPUT	X4 OUTPUT	X3 OUTPUT	X1 OUTPUT	X2 OUTPUT	X4 OUTPUT
1525.0	3050.0	4575.0	6100.0	14.25	7.77	67.72	63.94
1560.0	3120.0	4680.0	6240.0	14.17	7.52	64.47	67.80
1595.0	3190.0	4785.0	6380.0	14.02	7.23	65.56	65.51
1630.0	3260.0	4890.0	6520.0	13.92	6.89	68.27	64.35
1665.0	3330.0	4995.0	6660.0	13.97	6.56	65.24	67.64
1700.0	3400.0	5100.0	6800.0	14.02	6.03	65.47	66.83
1735.0	3470.0	5205.0	6940.0	13.88	5.83	68.46	65.85
1770.0	3540.0	5310.0	7080.0	13.83	5.54	65.12	68.98
1805.0	3610.0	5415.0	7220.0	14.14	4.96	65.14	70.77
1840.0	3680.0	5520.0	7360.0	14.10	4.53	66.52	69.08
1875.0	3750.0	5625.0	7500.0	14.18	4.30	65.72	69.53
1910.0	3820.0	5730.0	7640.0	14.51	3.54	66.23	66.78
1945.0	3890.0	5835.0	7780.0	14.60	3.08	67.45	66.06
1980.0	3960.0	5940.0	7920.0	15.05	2.44	68.34	64.63
2015.0	4030.0	6045.0	8060.0	15.38	1.69	66.83	64.79
2050.0	4100.0	6150.0	8200.0	15.33	1.52	65.01	62.15
2085.0	4170.0	6255.0	8340.0	15.73	0.79	66.38	60.47
2120.0	4240.0	6360.0	8480.0	15.57	0.69	63.13	57.30
2155.0	4310.0	6465.0	8620.0	15.63	0.42	64.47	56.92
2190.0	4380.0	6570.0	8760.0	16.37	-0.54	61.86	54.70
2225.0	4450.0	6675.0	8900.0	15.94	-0.42	63.10	55.46
2260.0	4520.0	6780.0	9040.0	16.12	-0.81	60.40	55.09
2295.0	4590.0	6885.0	9180.0	16.75	-1.59	60.52	55.57
2330.0	4660.0	6990.0	9320.0	16.27	-1.35	61.35	56.84
2365.0	4730.0	7095.0	9460.0	16.21	-1.73	58.10	56.26
2400.0	4800.0	7200.0	9600.0	15.49	-1.54	54.38	55.81

\* Harmonic Output below power level of X3 Output.



P.O. Box 350186, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4851 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MIN-CIRCUITS At: [www.minicircuits.com](http://www.minicircuits.com)

IF/RF MICROWAVE COMPONENTS



REV. X1  
RMK-3-722+  
9/15/2009  
Page 4 of 6

# Frequency Multiplier (Tripler)

# RMK-3-722+

## Typical Performance Data

Test Conditions: RF Input Power = 11 dBm @ -40°C

FREQUENCY (MHz)				CONVERSION LOSS (dB)	HARMONIC OUTPUT* (-dBc)		
X1 OUTPUT	X2 OUTPUT	X3 OUTPUT	X4 OUTPUT	X3 OUTPUT	X1 OUTPUT	X2 OUTPUT	X4 OUTPUT
1525.0	3050.0	4575.0	6100.0	13.42	8.24	65.31	63.55
1560.0	3120.0	4680.0	6240.0	13.36	7.92	62.26	65.29
1595.0	3190.0	4785.0	6380.0	13.21	7.64	63.84	62.63
1630.0	3260.0	4890.0	6520.0	13.09	7.28	66.56	62.71
1665.0	3330.0	4995.0	6660.0	13.13	7.07	62.70	66.02
1700.0	3400.0	5100.0	6800.0	13.23	6.51	63.92	64.56
1735.0	3470.0	5205.0	6940.0	13.08	6.31	68.62	63.19
1770.0	3540.0	5310.0	7080.0	13.08	5.91	64.03	66.34
1805.0	3610.0	5415.0	7220.0	13.35	5.37	63.55	70.65
1840.0	3680.0	5520.0	7360.0	13.31	4.95	64.88	71.95
1875.0	3750.0	5625.0	7500.0	13.35	4.72	64.82	71.42
1910.0	3820.0	5730.0	7640.0	13.67	3.93	66.44	66.72
1945.0	3890.0	5835.0	7780.0	13.72	3.54	68.87	64.31
1980.0	3960.0	5940.0	7920.0	14.18	2.90	71.38	63.39
2015.0	4030.0	6045.0	8060.0	14.59	2.10	67.37	65.40
2050.0	4100.0	6150.0	8200.0	14.62	1.82	65.03	62.64
2085.0	4170.0	6255.0	8340.0	15.04	1.05	67.82	62.17
2120.0	4240.0	6360.0	8480.0	14.82	1.00	63.61	60.17
2155.0	4310.0	6465.0	8620.0	14.84	0.75	63.58	57.92
2190.0	4380.0	6570.0	8760.0	15.56	-0.19	61.54	53.75
2225.0	4450.0	6675.0	8900.0	14.99	0.08	65.19	54.00
2260.0	4520.0	6780.0	9040.0	15.36	-0.50	59.69	52.54
2295.0	4590.0	6885.0	9180.0	16.11	-1.42	59.54	54.67
2330.0	4660.0	6990.0	9320.0	15.59	-1.14	59.74	56.72
2365.0	4730.0	7095.0	9460.0	15.77	-1.77	57.05	55.90
2400.0	4800.0	7200.0	9600.0	14.79	-1.22	54.00	53.77

\* Harmonic Output below power level of X3 Output.

# Frequency Multiplier (Tripler)

# RMK-3-722+

## Typical Performance Data

Test Conditions: RF Input Power = 11 dBm @ +85°C

FREQUENCY (MHz)				CONVERSION LOSS (dB)	HARMONIC OUTPUT* (-dBc)		
X1 OUTPUT	X2 OUTPUT	X3 OUTPUT	X4 OUTPUT	X3 OUTPUT	X1 OUTPUT	X2 OUTPUT	X4 OUTPUT
1525.0	3050.0	4575.0	6100.0	15.01	7.31	69.53	63.72
1560.0	3120.0	4680.0	6240.0	14.94	7.00	66.43	67.08
1595.0	3190.0	4785.0	6380.0	14.79	6.75	67.28	65.69
1630.0	3260.0	4890.0	6520.0	14.69	6.42	69.67	64.49
1665.0	3330.0	4995.0	6660.0	14.76	6.11	66.77	67.12
1700.0	3400.0	5100.0	6800.0	14.81	5.58	66.92	67.02
1735.0	3470.0	5205.0	6940.0	14.59	5.47	68.69	66.75
1770.0	3540.0	5310.0	7080.0	14.57	5.10	65.71	68.71
1805.0	3610.0	5415.0	7220.0	14.85	4.59	66.06	69.36
1840.0	3680.0	5520.0	7360.0	14.82	4.15	66.14	67.55
1875.0	3750.0	5625.0	7500.0	14.94	3.90	65.48	68.45
1910.0	3820.0	5730.0	7640.0	15.24	3.13	64.90	67.03
1945.0	3890.0	5835.0	7780.0	15.37	2.68	65.99	66.00
1980.0	3960.0	5940.0	7920.0	15.78	2.13	66.31	64.96
2015.0	4030.0	6045.0	8060.0	16.04	1.42	64.24	64.07
2050.0	4100.0	6150.0	8200.0	16.06	1.15	63.23	61.19
2085.0	4170.0	6255.0	8340.0	16.41	0.43	64.26	59.75
2120.0	4240.0	6360.0	8480.0	16.35	0.24	62.21	57.80
2155.0	4310.0	6465.0	8620.0	16.43	0.01	63.76	57.81
2190.0	4380.0	6570.0	8760.0	17.16	-0.93	61.82	56.61
2225.0	4450.0	6675.0	8900.0	16.80	-0.87	62.37	56.79
2260.0	4520.0	6780.0	9040.0	16.76	-1.07	59.93	56.49
2295.0	4590.0	6885.0	9180.0	17.38	-1.81	60.47	56.75
2330.0	4660.0	6990.0	9320.0	16.87	-1.51	61.50	57.69
2365.0	4730.0	7095.0	9460.0	16.68	-1.85	58.52	57.67
2400.0	4800.0	7200.0	9600.0	16.36	-2.03	55.32	57.89

\* Harmonic Output below power level of X3 Output.