

# Frequency Mixer

# GRA-3H

## Typical Performance Data

RF (MHz)	LO (MHz)	CONVERSION LOSS (dB)			LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
		@LO (dBm)				@LO (dBm)			@LO (dBm)		
		+4	+7	+10		+4	+7	+10	+4	+7	+10
0.1	30.1	5.94	5.79	5.69	0.1	63.6	61.5	59.1	63.4	58.5	54.4
0.2	30.2	5.43	5.33	5.26	0.2	63.6	61.3	59.6	63.0	55.8	51.3
1.0	31.0	5.36	5.25	5.17	1.0	63.2	61.0	59.3	62.3	55.4	51.1
5.0	35.0	5.30	5.18	5.09	5.0	59.9	58.9	57.3	59.0	54.2	50.4
10.0	40.0	5.45	5.36	5.31	10.0	55.8	54.9	53.7	54.6	51.9	49.0
20.0	50.0	5.47	5.40	5.33	20.0	49.5	48.9	47.9	48.4	47.3	45.8
41.4	71.4	5.44	5.37	5.34	41.4	41.9	41.1	40.2	41.6	40.9	39.8
50.0	80.0	5.42	5.37	5.32	50.0	40.5	39.8	38.9	40.6	39.8	38.3
69.0	99.0	5.41	5.34	5.35	69.0	38.9	39.3	39.5	39.2	38.2	35.8
89.7	59.7	5.34	5.33	5.35	89.7	37.9	38.5	37.9	37.2	35.5	32.4
103.5	73.4	5.36	5.34	5.31	103.5	36.4	36.3	35.9	36.6	36.4	35.8
110.4	80.4	5.43	5.37	5.35	110.4	36.0	35.7	35.4	36.3	35.8	35.0
117.3	87.3	5.44	5.38	5.38	117.3	35.4	35.2	34.9	36.1	35.6	34.5
131.1	101.1	5.47	5.40	5.42	131.1	34.6	34.5	34.3	35.0	35.0	34.3
138.0	108.0	5.48	5.42	5.44	138.0	33.9	34.0	33.9	34.0	34.1	33.5
151.7	121.7	5.59	5.50	5.46	151.7	32.8	32.9	32.9	32.0	32.0	31.4
165.5	135.5	5.76	5.66	5.59	165.5	31.5	32.0	32.5	30.2	30.1	29.8
179.3	149.3	5.87	5.76	5.71	179.3	30.7	31.4	31.6	29.0	28.7	28.1
193.1	163.1	5.84	5.77	5.71	193.1	31.0	31.6	31.7	29.2	28.2	27.5
200.0	170.0	5.84	5.75	5.75	200.0	31.7	32.0	31.5	30.1	28.2	27.0

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P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



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## Typical Performance Data

RF/LO (MHz)	RF VSWR (:1)			LO VSWR (:1)			IF (MHz)	IF VSWR (:1)			LO/RF (MHz)	max. DC output (mV)	DC Offset (mV)
	@LO (dBm)			@LO (dBm)				@LO (dBm)			@LO (dBm)		
	+4	+7	+10	+4	+7	+10		+4	+7	+10	+7		
5.0	1.32	1.22	1.15	1.61	2.35	3.15	5.0	1.63	1.53	1.40	0.1	-715.8	-0.19
10.0	1.33	1.23	1.15	1.57	2.27	3.04	10.0	1.64	1.54	1.41	0.2	-730.2	-0.31
20.0	1.32	1.22	1.15	1.54	2.14	2.85	20.0	1.64	1.53	1.41	1.0	-777.5	-0.37
27.3	1.31	1.21	1.14	1.56	2.17	2.81	27.3	1.63	1.53	1.41	5.0	-776.9	-0.34
38.4	1.30	1.20	1.13	1.62	2.19	2.83	38.4	1.65	1.55	1.43	10.0	-780.1	-0.35
44.0	1.29	1.20	1.13	1.61	2.19	2.85	44.0	1.66	1.56	1.44	20.0	-779.7	-0.37
50.0	1.29	1.19	1.12	1.61	2.18	2.87	50.0	1.70	1.60	1.47	27.6	-781.7	-0.40
66.3	1.28	1.18	1.11	1.62	2.27	2.99	66.3	1.76	1.66	1.53	34.5	-777.0	-0.41
77.4	1.24	1.15	1.09	1.61	2.20	2.97	77.4	1.76	1.66	1.55	50.0	-773.4	-0.53
83.0	1.24	1.15	1.09	1.60	2.21	2.92	83.0	1.79	1.71	1.58	69.0	-778.3	-0.62
94.1	1.22	1.13	1.08	1.58	2.14	2.77	94.1	1.83	1.73	1.61	82.8	-781.9	-1.02
100.0	1.21	1.13	1.08	1.57	2.07	2.69	100.0	1.87	1.77	1.65	100.0	-785.1	-1.24
110.9	1.20	1.11	1.08	1.59	2.12	2.71	110.9	1.90	1.79	1.66	110.4	-754.5	-1.37
127.6	1.17	1.10	1.08	1.62	2.15	2.76	127.6	2.02	1.91	1.77	124.2	-746.4	-1.54
138.7	1.16	1.10	1.09	1.65	2.24	2.88	138.7	2.06	1.94	1.82	138.0	-741.4	-1.89
149.9	1.16	1.11	1.11	1.68	2.21	2.88	149.9	2.15	2.03	1.90	151.7	-751.9	-2.28
166.6	1.16	1.12	1.14	1.64	2.17	2.74	166.6	2.32	2.18	2.02	165.5	-768.4	-3.12
177.7	1.17	1.40	1.16	1.66	2.13	2.67	177.7	2.43	2.30	2.12	179.3	-750.2	-2.75
188.9	1.19	1.17	1.19	1.68	2.20	2.72	188.9	2.56	2.40	2.22	186.2	-739.6	-3.02
200.0	1.20	1.19	1.22	1.74	2.23	2.77	200.0	2.59	2.43	2.26	200.0	-715.4	-4.31

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