

Frequency Mixer (Upconverter)

SIM-U742MH+

Typical Performance Data

IF INPUT (MHz)	LO INPUT (MHz)	RF OUTPUT (MHz)	CONVERSION LOSS (dB)			IP3 Input (dBm)		
			@LO (dBm)			@LO (dBm)		
			+10	+13	+16	+10	+13	+16
21.1	4096.1	4075.00	5.94	6.03	6.05	18.00	24.58	24.43
31.1	4106.1	4075.00	6.03	6.05	6.08	17.65	23.61	24.87
41.1	4116.1	4075.00	6.06	6.03	6.05	17.27	22.41	24.98
194.9	4141.1	3946.25	6.07	5.99	6.02	16.69	19.92	23.91
338.6	4156.1	3817.50	6.03	5.95	6.01	16.79	19.31	23.19
482.4	4171.1	3688.75	6.01	5.94	6.01	17.12	18.84	22.27
769.9	4236.1	3466.25	6.13	5.95	6.00	19.15	19.55	18.97
1057.4	4617.4	3560.00	6.48	6.14	6.07	20.00	19.09	24.79
1201.1	4808.0	3606.88	6.96	6.52	6.41	18.91	19.39	22.38
1344.9	4998.6	3653.75	7.60	7.08	6.93	20.87	20.72	21.41
1632.4	5379.9	3747.50	9.94	8.67	8.08	14.65	19.43	20.98
1919.9	5761.1	3841.25	10.40	9.09	8.60	15.59	21.29	21.08
2207.4	6142.4	3935.00	9.58	8.72	8.44	18.93	22.07	22.64
2351.1	6333.0	3981.88	8.99	8.28	8.03	19.02	22.26	23.96
2494.9	6523.6	4028.75	8.54	7.97	7.88	16.50	21.91	25.55
2782.4	6904.9	4122.50	8.05	7.83	8.07	14.28	18.80	17.92
2926.1	7095.5	4169.38	8.24	7.66	7.96	12.26	15.57	16.30
3069.9	7286.1	4216.25	9.11	8.23	8.44	13.06	15.36	17.27
3213.6	7376.1	4162.50	9.65	8.62	8.97	14.99	14.77	17.47
3357.4	7476.1	4118.75	10.38	9.08	9.46	18.95	13.96	17.37

LO INPUT (MHz)	LO-IF ISOLATION (dB)			LO-RF ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)		
	+10	+13	+16	+10	+13	+16
2280.0	17.81	21.11	23.74	34.94	35.76	35.61
2500.0	21.15	25.02	27.71	41.92	42.09	40.79
2720.0	24.41	27.47	27.26	37.99	35.87	34.52
2950.0	27.67	28.05	25.84	33.41	31.81	30.26
3250.0	30.63	26.76	24.10	30.53	29.17	27.82
3370.0	28.47	25.09	22.75	30.45	28.95	27.62
3430.0	27.74	24.87	23.05	30.56	29.31	28.18
3650.0	25.29	23.46	22.12	30.35	29.32	28.52
4750.0	17.19	16.89	16.50	25.73	26.01	25.99
5630.0	15.79	16.30	16.27	22.87	22.90	22.48
5720.0	16.15	16.72	16.74	22.38	22.41	21.96
5900.0	17.08	17.80	17.91	21.38	21.43	20.82
6080.0	18.34	19.31	19.58	20.76	20.77	20.15
6260.0	19.95	21.40	22.02	21.04	21.15	20.41
6350.0	20.65	22.67	23.65	21.29	21.56	20.89
6440.0	21.40	24.00	25.64	21.46	22.02	21.53
6780.0	24.15	26.39	27.95	20.71	22.15	22.76
7030.0	20.89	21.16	21.38	18.46	19.85	20.78
7280.0	18.68	17.83	18.42	19.08	20.22	21.25
7530.0	16.86	15.28	15.36	21.39	21.99	23.10

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IF INPUT (MHz)	LO INPUT (MHz)	RF OUTPUT (MHz)	CONVERSION LOSS (dB)			IP3 Input (dBm)		
			@LO (dBm)			@LO (dBm)		
			+10	+13	+16	+10	+13	+16
21.1	4096.1	4075	5.94	6.03	6.05	18.00	24.58	24.43
31.1	4106.1	4075	6.03	6.05	6.08	17.65	23.61	24.87
41.1	4116.1	4075	6.06	6.03	6.05	17.27	22.41	24.98
194.9	4141.1	4075	6.07	5.99	6.02	16.69	19.92	23.91
338.6	4156.1	4075	6.03	5.95	6.01	16.79	19.31	23.19
482.4	4171.1	4075	6.01	5.94	6.01	17.12	18.84	22.27
769.9	4236.1	4075	6.13	5.95	6.00	19.15	19.55	18.97
1057.4	4617.4	4075	6.48	6.14	6.07	20.00	19.09	24.79
1201.1	4808.0	4075	6.96	6.52	6.41	18.91	19.39	22.38
1344.9	4998.6	4075	7.60	7.08	6.93	20.87	20.72	21.41
1632.4	5379.9	4075	9.94	8.67	8.08	14.65	19.43	20.98
1919.9	5761.1	4075	10.40	9.09	8.60	15.59	21.29	21.08
2207.4	6142.4	4075	9.58	8.72	8.44	18.93	22.07	22.64
2351.1	6333.0	4075	8.99	8.28	8.03	19.02	22.26	23.96
2494.9	6523.6	4075	8.54	7.97	7.88	16.50	21.91	25.55
2782.4	6904.9	4075	8.05	7.83	8.07	14.28	18.80	17.92
2926.1	7095.5	4075	8.24	7.66	7.96	12.26	15.57	16.30
3069.9	7286.1	4075	9.11	8.23	8.44	13.06	15.36	17.27
3213.6	7376.1	4075	9.65	8.62	8.97	14.99	14.77	17.47
3357.4	7476.1	4075	10.38	9.08	9.46	18.95	13.96	17.37

LO INPUT (MHz)	LO-IF ISOLATION (dB)			LO-RF ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)		
	+10	+13	+16	+10	+13	+16
2280.0	17.81	21.11	23.74	34.94	35.76	35.61
2500.0	21.15	25.02	27.71	41.92	42.09	40.79
2720.0	24.41	27.47	27.26	37.99	35.87	34.52
2950.0	27.67	28.05	25.84	33.41	31.81	30.26
3250.0	30.63	26.76	24.10	30.53	29.17	27.82
3370.0	28.47	25.09	22.75	30.45	28.95	27.62
3430.0	27.74	24.87	23.05	30.56	29.31	28.18
3650.0	25.29	23.46	22.12	30.35	29.32	28.52
4750.0	17.19	16.89	16.50	25.73	26.01	25.99
5630.0	15.79	16.30	16.27	22.87	22.90	22.48
5720.0	16.15	16.72	16.74	22.38	22.41	21.96
5900.0	17.08	17.80	17.91	21.38	21.43	20.82
6080.0	18.34	19.31	19.58	20.76	20.77	20.15
6260.0	19.95	21.40	22.02	21.04	21.15	20.41
6350.0	20.65	22.67	23.65	21.29	21.56	20.89
6440.0	21.40	24.00	25.64	21.46	22.02	21.53
6780.0	24.15	26.39	27.95	20.71	22.15	22.76
7030.0	20.89	21.16	21.38	18.46	19.85	20.78
7280.0	18.68	17.83	18.42	19.08	20.22	21.25
7530.0	16.86	15.28	15.36	21.39	21.99	23.10

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Typical Performance Data

IF INPUT (MHz)	LO INPUT (MHz)	IF VSWR (:1)			LO INPUT (MHz)	LO VSWR (:1)			RF OUTPUT (MHz)	RF VSWR (:1)		
		@LO (dBm)				@LO (dBm)				@LO (dBm)		
		+10	+13	+16		+10	+13	+16		+10	+13	+16
21.1	4096.1	2.16	1.06	1.24	2280.0	3.26	3.36	4.16	2250	2.52	2.32	2.23
31.1	4106.1	2.14	1.07	1.22	2500.0	2.13	2.74	3.71	2470	2.89	2.72	2.63
41.1	4116.1	2.16	1.07	1.22	2720.0	1.68	2.40	3.37	2690	3.11	2.91	2.80
194.9	4141.1	2.44	1.27	1.31	2950.0	1.54	2.29	3.44	2920	3.39	3.19	3.03
338.6	4156.1	2.52	1.48	1.45	3250.0	1.34	1.91	2.56	3220	3.09	2.90	2.76
482.4	4171.1	2.97	1.75	1.65	3370.0	1.38	2.13	3.27	3340	3.26	3.02	2.83
769.9	4236.1	4.02	2.30	2.03	3430.0	1.32	1.95	2.76	3400	3.15	2.90	2.75
1057.4	4617.4	4.83	2.72	2.30	3650.0	1.25	1.80	2.48	3620	2.97	2.78	2.67
1201.1	4808.0	5.60	3.03	2.48	4750.0	3.66	3.68	4.13	4720	3.97	3.43	3.09
1344.9	4998.6	6.55	3.28	2.60	5630.0	6.50	4.40	4.02	5600	3.63	3.03	2.63
1632.4	5379.9	6.82	3.42	2.58	5720.0	6.26	4.23	3.84	5690	3.42	2.88	2.54
1919.9	5761.1	5.70	3.01	2.26	5900.0	10.46	5.30	4.64	5870	2.90	2.54	2.30
2207.4	6142.4	6.09	2.81	2.09	6080.0	5.45	3.32	2.83	6050	2.57	2.28	2.12
2351.1	6333.0	4.62	2.38	1.90	6260.0	5.23	2.84	2.35	6230	2.62	2.41	2.32
2494.9	6523.6	3.79	2.10	1.81	6350.0	4.16	2.38	1.95	6320	2.51	2.34	2.25
2782.4	6904.9	2.76	1.99	2.16	6440.0	2.92	1.86	1.63	6410	2.47	2.30	2.23
2926.1	7095.5	1.96	1.88	2.21	6780.0	2.12	1.59	1.78	6750	2.99	2.79	2.71
3069.9	7286.1	1.54	2.04	2.54	7030.0	2.32	1.96	2.03	7000	3.43	3.11	2.93
3213.6	7376.1	1.27	2.30	3.03	7280.0	3.25	2.73	2.78	7250	4.48	3.84	3.64
3357.4	7476.1	1.48	2.54	3.22	7530.0	9.82	6.61	5.75	7500	7.27	5.23	4.61

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