

# Frequency Mixer (Upconverter)

# SIM-U432H+

## Typical Performance Data

IF INPUT (MHz)	LO INPUT (MHz)	RF OUTPUT (MHz)	CONVERSION LOSS (dB)			LO-IF ISOLATION (dB)			LO-RF ISOLATION (dB)			IP3 INPUT (dBm)		
			@LO (dBm)			@LO (dBm)			@LO (dBm)			@LO (dBm)		
			+14	+17	+20	+14	+17	+20	+14	+17	+20	+14	+17	+20
30.0	1100.0	1069.9	6.22	5.61	5.28	17.31	17.44	18.16	44.36	42.62	41.10	16.40	17.63	19.17
30.0	1175.0	1144.9	5.75	5.29	5.10	17.93	17.56	18.15	44.61	44.37	43.33	19.77	19.35	19.95
30.0	1250.0	1219.9	5.87	5.36	5.13	18.39	18.11	18.68	43.40	43.65	42.77	20.85	21.13	21.02
30.0	1325.0	1294.9	6.01	5.35	5.13	19.18	19.14	19.18	43.15	42.65	42.07	20.58	28.35	25.17
30.0	1400.0	1369.9	6.09	5.35	5.17	20.66	20.22	20.09	43.42	41.31	38.74	20.09	25.22	25.87
30.0	1475.0	1444.9	6.16	5.41	5.25	22.56	21.64	21.04	42.88	40.10	37.60	20.78	25.00	23.53
30.0	1550.0	1519.9	6.16	5.51	5.41	24.15	23.32	22.39	39.79	38.51	36.86	19.90	22.96	28.72
30.0	1625.0	1594.9	6.32	5.65	5.52	25.70	24.24	22.54	37.37	35.79	34.43	18.01	20.60	25.85
30.0	1700.0	1669.9	6.57	5.86	5.75	29.02	25.38	22.77	37.81	36.02	34.47	17.55	18.94	21.84
30.0	1775.0	1744.9	6.74	6.00	5.77	32.58	26.54	23.34	37.51	36.01	34.97	17.60	19.72	20.57
30.0	1850.0	1819.9	6.84	6.03	5.67	36.67	27.54	24.15	37.14	36.45	36.09	18.50	18.60	18.61
30.0	1925.0	1894.9	6.96	6.01	5.57	37.94	29.01	25.90	37.90	37.28	36.29	17.04	17.52	18.41
30.0	2000.0	1969.9	6.95	5.93	5.54	37.89	32.20	29.45	38.61	37.54	35.88	18.42	19.44	21.15
30.0	2075.0	2044.9	7.11	6.13	5.73	39.98	36.84	34.98	39.17	37.22	35.51	17.59	19.23	20.34
30.0	2150.0	2119.9	7.21	6.29	5.86	39.28	35.67	33.53	38.15	36.88	35.29	17.95	21.92	27.43
30.0	2225.0	2194.9	7.12	6.26	5.87	34.32	31.77	29.87	38.12	36.68	35.10	22.09	24.12	25.20
30.0	2300.0	2269.9	6.92	6.20	5.98	30.14	28.59	27.28	36.19	35.21	34.15	29.74	24.47	25.73
30.0	2375.0	2344.9	7.08	6.44	6.17	26.83	25.97	25.46	33.11	32.51	32.15	20.96	29.88	27.82
30.0	2450.0	2419.9	6.83	6.25	6.03	24.76	24.22	24.21	31.99	30.93	30.52	20.42	29.14	26.36
30.0	2525.0	2494.9	8.30	7.39	6.77	22.84	22.49	22.96	34.82	33.51	33.03	19.90	22.25	25.44
30.0	2600.0	2569.9	8.03	6.95	6.64	21.60	20.79	21.33	34.55	33.45	32.98	20.61	20.24	24.17
30.0	2680.0	2649.9	7.25	6.56	6.40	19.57	19.50	20.35	33.11	32.57	32.27	22.25	25.98	27.32
30.0	2760.0	2729.9	7.02	6.51	6.33	18.32	18.25	19.31	32.30	31.76	31.63	21.07	26.96	34.55
30.0	2840.0	2809.9	6.86	6.42	6.34	17.64	17.25	18.26	31.31	30.42	30.17	20.14	24.03	29.93
30.0	2920.0	2889.9	6.60	6.22	6.25	18.54	17.99	18.80	31.91	30.14	29.17	20.54	22.39	25.93
30.0	3000.0	2969.9	6.31	5.96	6.00	19.09	18.73	19.51	32.63	30.88	29.37	20.19	24.70	28.17
30.0	3080.0	3049.9	6.32	5.85	5.81	20.27	20.02	20.71	32.75	31.59	30.49	19.85	26.76	29.92
30.0	3160.0	3129.9	6.73	5.99	5.73	22.88	22.23	22.41	33.73	32.99	32.18	21.20	28.30	26.89
30.0	3240.0	3209.9	6.56	5.79	5.60	26.31	25.29	24.76	34.28	32.98	31.71	22.79	24.57	29.96
30.0	3320.0	3289.9	6.83	6.13	5.89	27.21	26.83	27.05	34.35	32.90	31.53	21.75	23.89	27.65
30.0	3400.0	3369.9	6.96	6.25	5.98	28.08	27.97	28.38	34.74	33.44	32.30	22.58	24.50	26.69
30.0	3480.0	3449.9	7.68	6.88	6.50	29.14	29.01	29.35	34.36	33.16	32.28	24.78	31.62	28.16
30.0	3560.0	3529.9	7.96	6.98	6.58	30.41	29.16	28.68	33.94	32.75	31.96	24.30	28.71	27.89
30.0	3640.0	3609.9	8.24	7.18	6.93	31.70	29.80	29.08	33.48	32.34	31.83	19.68	27.13	27.76
30.0	3720.0	3689.9	7.97	6.91	6.72	32.01	31.25	29.53	32.67	31.71	31.37	18.40	24.82	27.53
30.0	3800.0	3769.9	8.11	7.04	6.85	30.75	34.29	32.15	32.10	31.41	31.24	17.73	23.04	26.57
30.0	3880.0	3849.9	8.95	7.67	7.37	28.94	34.45	46.30	32.91	31.83	31.39	17.85	20.90	23.20
30.0	3960.0	3929.9	9.25	8.07	7.78	27.15	31.05	50.65	33.70	32.42	31.64	17.58	21.59	25.34
30.0	4040.0	4009.9	9.58	8.22	7.95	26.48	30.62	45.55	34.13	32.67	31.62	17.04	21.01	25.29
30.0	4120.0	4089.9	10.79	8.98	8.46	26.17	31.26	46.59	34.57	33.03	31.87	17.91	20.28	23.36
30.0	4200.0	4169.9	11.36	9.60	9.05	25.70	31.43	50.31	34.92	33.20	31.94	17.93	21.66	23.10
30.0	4250.0	4219.9	11.37	9.61	9.16	25.56	31.48	48.26	34.68	33.02	32.32	17.55	23.31	23.24



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IF/RF MICROWAVE COMPONENTS



REV. X2

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# Frequency Mixer (Upconverter)

# SIM-U432H+

## Typical Performance Data

IF INPUT (MHz)	IF VSWR (:1)			LO INPUT (MHz)	LO VSWR (:1)			RF OUTPUT (MHz)	LO INPUT (MHz)	RF VSWR (:1)		
	@LO (dBm)				@LO (dBm)					@LO (dBm)		
	+14	+17	+20		+14	+17	+20			+14	+17	+20
10.0	1.27	1.15	1.40	1100.0	2.24	1.84	2.24	1070.0	1100.0	2.18	2.01	1.90
20.0	1.28	1.16	1.41	1175.0	2.74	1.97	2.16	1145.0	1175.0	2.29	2.06	1.93
30.0	1.28	1.17	1.43	1250.0	3.04	2.00	1.96	1220.0	1250.0	2.58	2.31	2.16
40.0	1.29	1.18	1.43	1325.0	3.15	1.98	1.76	1295.0	1325.0	2.40	2.12	1.93
50.0	1.29	1.19	1.44	1400.0	3.30	2.04	1.73	1370.0	1400.0	2.92	2.33	2.08
60.0	1.31	1.19	1.43	1475.0	3.54	2.06	1.66	1445.0	1475.0	4.47	2.86	2.29
70.0	1.33	1.19	1.42	1550.0	3.85	2.09	1.57	1520.0	1550.0	3.16	2.22	1.80
80.0	1.35	1.21	1.42	1625.0	4.07	2.12	1.56	1595.0	1625.0	2.62	2.11	1.78
90.0	1.36	1.22	1.43	1700.0	3.97	2.02	1.44	1670.0	1700.0	2.43	2.03	1.83
100.0	1.38	1.25	1.44	1775.0	3.65	1.90	1.32	1745.0	1775.0	2.27	1.93	1.80
120.0	1.42	1.28	1.47	1850.0	3.36	1.81	1.21	1820.0	1850.0	2.13	1.84	1.70
140.0	1.45	1.29	1.47	1925.0	3.26	1.77	1.17	1895.0	1925.0	1.95	1.71	1.56
160.0	1.51	1.31	1.46	2000.0	3.05	1.70	1.12	1970.0	2000.0	1.75	1.52	1.39
180.0	1.57	1.36	1.48	2075.0	2.91	1.62	1.05	2045.0	2075.0	1.75	1.52	1.36
200.0	1.62	1.40	1.51	2150.0	2.78	1.56	1.03	2120.0	2150.0	1.86	1.61	1.42
220.0	1.66	1.41	1.52	2225.0	2.66	1.58	1.19	2195.0	2225.0	1.86	1.58	1.43
240.0	1.72	1.43	1.51	2300.0	2.71	1.50	1.10	2270.0	2300.0	2.02	1.77	1.65
260.0	1.81	1.48	1.52	2375.0	2.33	1.34	1.16	2345.0	2375.0	2.40	2.18	2.03
270.0	1.85	1.51	1.54	2450.0	1.98	1.19	1.26	2420.0	2450.0	2.46	2.19	2.04
280.0	1.88	1.53	1.56	2525.0	1.76	1.17	1.38	2495.0	2525.0	3.10	2.72	2.48
290.0	1.90	1.55	1.57	2600.0	1.71	1.15	1.37	2570.0	2600.0	3.86	3.29	3.08
300.0	1.92	1.56	1.57	2680.0	1.74	1.06	1.45	2650.0	2680.0	3.87	3.44	3.22
310.0	1.95	1.56	1.57	2760.0	1.73	1.18	1.55	2730.0	2760.0	3.77	3.37	3.17
320.0	1.99	1.57	1.57	2840.0	1.69	1.25	1.65	2810.0	2840.0	3.45	3.00	2.82
330.0	2.03	1.60	1.57	2920.0	1.76	1.32	1.73	2890.0	2920.0	2.88	2.43	2.27
340.0	2.07	1.62	1.58	3000.0	1.91	1.50	1.86	2970.0	3000.0	2.48	2.03	1.82
350.0	2.12	1.66	1.60	3080.0	2.02	1.58	1.87	3050.0	3080.0	2.32	1.90	1.66
360.0	2.15	1.69	1.62	3160.0	2.18	1.69	1.88	3130.0	3160.0	2.56	2.17	1.87
370.0	2.19	1.72	1.64	3240.0	2.21	1.73	1.87	3210.0	3240.0	2.79	2.34	1.95
380.0	2.21	1.73	1.65	3320.0	2.29	1.74	1.87	3290.0	3320.0	2.64	2.26	1.94
390.0	2.24	1.73	1.65	3400.0	2.29	1.75	1.85	3370.0	3400.0	2.54	2.20	1.93
400.0	2.27	1.75	1.65	3480.0	2.38	1.78	1.88	3450.0	3480.0	2.46	2.18	1.96
410.0	2.31	1.78	1.67	3560.0	2.47	1.77	1.86	3530.0	3560.0	2.37	2.08	1.89
420.0	2.36	1.81	1.68	3640.0	2.56	1.83	1.91	3610.0	3640.0	2.32	2.03	1.88
430.0	2.41	1.84	1.70	3720.0	2.74	2.00	2.02	3690.0	3720.0	2.29	2.01	1.89
440.0	2.47	1.87	1.72	3800.0	3.04	2.22	2.18	3770.0	3800.0	2.34	2.06	1.94
450.0	2.52	1.90	1.74	3880.0	3.51	2.50	2.36	3850.0	3880.0	2.64	2.31	2.15
460.0	2.55	1.92	1.75	3960.0	4.06	2.83	2.54	3930.0	3960.0	3.16	2.78	2.61
500.0	2.69	1.97	1.76	4040.0	4.76	3.16	2.70	4010.0	4040.0	3.76	3.24	3.01
600.0	3.07	2.11	1.76	4120.0	5.52	3.46	2.80	4090.0	4120.0	4.61	3.84	3.47
700.0	3.51	2.30	1.84	4200.0	5.82	3.56	2.82	4170.0	4200.0	5.53	4.60	4.14
800.0	3.94	2.57	2.05	4250.0	7.39	4.04	2.97	4220.0	4250.0	5.55	4.76	4.36



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