

Frequency Mixers

UNCL-R1H (+17 dBm LO, up to +1 dBm RF)

Model
UNCL-R1H

T-74-09-01



computer-automated performance data

typical production unit / for data of other models consult factory

mixer conversion gain and isolation

RF MHz	LO MHz	Conversion Gain (dB)			Isolation L-R (dB)			Isolation L-I (dB)		
		LO +14 dBm	LO +17 dBm	LO +20 dBm	LO +14 dBm	LO +17 dBm	LO +20 dBm	LO +14 dBm	LO +17 dBm	LO +20 dBm
10.000	40.000	5.58	6.33	6.58	72.44	71.50	70.35	57.77	57.52	56.95
20.000	50.000	5.54	6.22	6.50	70.03	69.22	68.35	56.30	54.07	52.18
50.000	80.000	5.52	6.18	6.48	65.16	64.69	64.55	51.96	48.29	46.04
53.240	83.235	5.49	6.17	6.47	64.56	64.24	64.15	51.60	47.86	45.57
96.470	66.471	5.48	6.12	6.41	59.34	59.19	58.65	47.75	43.67	40.75
100.000	70.000	5.49	6.13	6.41	58.96	58.66	58.27	47.58	43.42	40.47
139.710	109.706	5.39	6.09	6.41	56.06	55.56	55.47	45.86	41.18	38.85
182.940	152.941	5.28	6.06	6.39	53.36	53.10	53.16	44.31	40.77	38.10
200.000	170.000	5.43	6.16	6.40	52.62	52.49	52.67	42.61	39.69	36.99
226.180	196.177	5.35	6.09	6.37	51.44	51.44	51.70	41.51	39.10	36.45
240.590	210.588	5.35	6.11	6.34	50.98	51.08	51.41	39.98	38.11	35.78
250.000	220.000	5.16	6.01	6.32	50.74	50.87	51.23	39.23	37.62	35.50
269.410	239.412	5.50	6.11	6.32	50.15	50.21	50.37	37.59	36.75	35.25
312.650	282.647	5.43	5.99	6.17	49.19	49.32	49.26	33.47	34.04	33.41
355.880	325.882	5.24	5.83	5.97	48.40	48.66	48.59	30.83	31.86	32.37
399.120	369.118	5.10	5.73	5.91	47.64	47.79	47.69	28.85	30.03	30.87
442.350	412.353	5.08	5.49	5.77	47.09	46.94	46.68	26.91	28.23	29.32
471.180	441.177	5.08	5.46	5.62	46.92	46.83	46.62	25.67	27.18	28.25
485.590	455.588	4.83	5.33	5.53	46.87	46.88	46.72	25.46	27.21	28.61
500.000	470.000	4.86	5.31	5.54	46.79	46.71	46.34	25.23	27.14	28.44

mixer VSWR

FREQ. (MHz)	VSWR RF port			VSWR LO port			VSWR IF port		
	LO +14 dBm	LO +17 dBm	LO +20 dBm	LO +14 dBm	LO +17 dBm	LO +20 dBm	LO +14 dBm	LO +17 dBm	LO +20 dBm
10.000	1.57	1.49	1.45	1.15	1.80	2.68	1.47	1.19	1.04
20.000	1.39	1.30	1.25	1.22	1.87	2.78	1.47	1.19	1.04
50.000	1.35	1.24	1.18	1.17	1.81	2.73	1.46	1.19	1.06
53.240	1.35	1.24	1.17	1.16	1.80	2.72	1.46	1.19	1.06
96.470	1.34	1.24	1.18	1.14	1.75	2.61	1.48	1.20	1.08
100.000	1.34	1.24	1.18	1.16	1.74	2.63	1.48	1.21	1.08
139.710	1.33	1.24	1.20	1.16	1.73	2.57	1.49	1.23	1.11
182.940	1.31	1.25	1.22	1.19	1.65	2.42	1.53	1.27	1.14
200.000	1.31	1.25	1.23	1.21	1.63	2.39	1.55	1.28	1.15
226.180	1.30	1.25	1.25	1.21	1.60	2.34	1.57	1.31	1.17
240.590	1.29	1.26	1.27	1.20	1.57	2.34	1.59	1.32	1.19
250.000	1.29	1.26	1.28	1.21	1.56	2.34	1.62	1.35	1.21
269.410	1.28	1.27	1.29	1.21	1.50	2.25	1.61	1.33	1.16
312.650	1.27	1.29	1.33	1.24	1.42	2.08	1.67	1.39	1.21
355.880	1.26	1.31	1.37	1.29	1.39	1.93	1.73	1.43	1.23
399.120	1.26	1.34	1.42	1.30	1.31	1.85	1.79	1.47	1.26
442.350	1.28	1.38	1.48	1.31	1.27	1.78	1.84	1.51	1.26
471.180	1.29	1.40	1.51	1.30	1.22	1.73	1.88	1.54	1.27
485.590	1.30	1.42	1.53	1.32	1.22	1.69	1.89	1.54	1.27
500.000	1.31	1.43	1.55	1.31	1.22	1.68	1.87	1.53	1.26



Distribution Centers/NORTH AMERICA

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
800-654-7949 417-335-5935 Fax 417-335-5945 EUROPE 44-252-835094 Fax 44-252-837010

10 - 500 MHz

Mini-Circuits

ULTRA-REL™ MIXERS

5-YR. GUARANTEE*

mixer harmonic intermodulation

(relative to desired IF output)

T-74-09-01

RF CAL													
RF ORDER HARMONIC	0	-	-	14	17	14	36	16	36	20	41	27	58
	1	-	30	0	40	13	46	31	36	24	38	26	39
	2	96	61	47	61	50	56	52	54	51	58	50	56
	3	94	63	62	68	56	71	51	68	50	67	50	69
	4	> 97	83	79	79	78	75	71	76	69	79	68	79
	5	> 97	84	82	85	78	85	76	84	76	> 87	82	86
	6	> 97	> 88	86	> 87	> 88	86	> 87	87	> 86	86	86	87
	7	> 96	> 87	> 87	> 87	> 88	> 87	> 88	> 87	> 88	87	87	> 87
	8	95	86	87	86	> 87	86	> 87	> 86	> 88	> 88	> 87	86
	9	> 96	> 87	> 87	> 87	> 88	> 87	> 88	> 88	87	> 88	> 87	> 87
	10	> 96	> 86	> 87	> 86	> 87	> 87	> 87	87	> 87	> 88	> 88	> 87
	0	1	2	3	4	5	6	7	8	9	10		
LO HARMONICS ORDER													

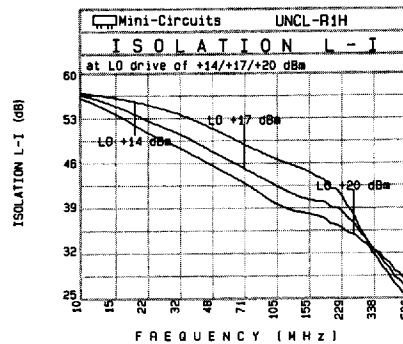
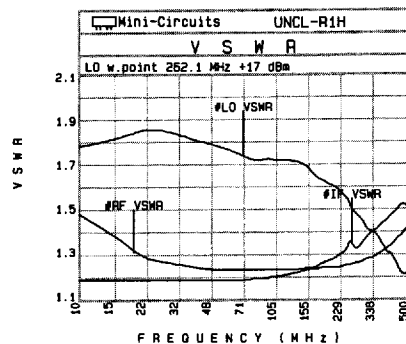
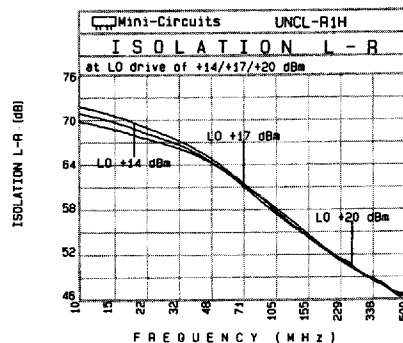
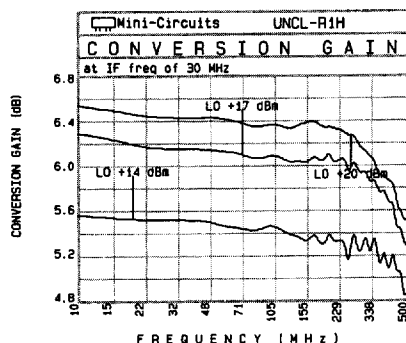
test condition RF IN: 185.10 MHz; -15.00 DBM
LO IN: 155.01 MHz; +17.02 DBM
IF OUT: 30.09 MHz; -9.01 DBM

		RF CAL											
RF ORDER HARMONIC	0	-	-	24	28	27	54	30	46	38	53	53	50
	1	-	30	0	40	13	49	30	40	32	44	41	46
	2	83	53	42	63	44	58	43	56	43	60	46	60
	3	95	53	51	56	49	58	43	66	38	61	38	59
	4	96	81	59	77	65	71	70	68	67	70	60	70
	5	96	67	67	68	60	73	54	74	53	69	55	67
	6	96	79	69	82	72	78	78	73	67	73	64	74
	7	> 96	74	71	76	71	79	68	83	66	77	69	75
	8	94	85	88	80	82	78	81	78	73	81	71	85
	9	> 96	89	84	92	78	93	76	85	75	82	83	82
	10	> 96	92	95	87	89	86	84	87	82	92	79	93
		0	1	2	3	4	5	6	7	8	9	10	
LO HARMONICS ORDER													

test condition RF IN: 185.10 MHz; -5.08 DBM
LO IN: 155.01 MHz; +16.93 DBM
IF OUT: 30.09 MHz; +1.16 DBM

typical performance curves

(production unit)



In Stock...Immediate Delivery