Non-Catalog Model

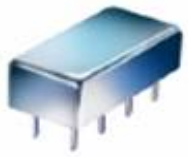
Frequency Mixer TAK-5R

Level 7 (LO Power +7 dBm)

Important Note

This is a non-catalog model and can be manufactured on specific request.
Pricing and delivery information can be supplied upon request.

Please click "Back", and then click "Contact Us" for Applications support.



CASE STYLE : A04

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		**Min.**	**Typ.**	**Max.**	**Units**
Frequency	**LO** (fL to fU)	0.05		200	MHz
	RF (fL to fU)	0.05		200	MHz
	IF	0		200	MHz
Conversion Loss	**mid band**		4.7	6.5	dB
	Total Range			8.0	dB
LO-RF Isolation	**Low Range**	50	55		dB
	Mid Range	35	45		dB
	Upper Range	35	45		dB
LO-IF Isolation	**Low Range**	45	50		dB
	Mid Range	30	40		dB
	Upper Range	30	40		dB
1 dB Comp. Input Power			+1		dBm

Notes: Low Range = [fL to 10fL] Mid Range = [10fL to fU/2] Upper Range = [fU/2 to fU]
mid band = [2fL to fU/2]

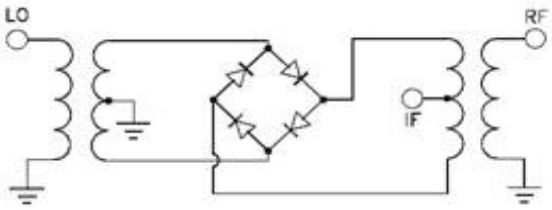
Hermatically sealed

MAXIMUM RATINGS	
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

PIN CONNECTIONS	
LO	8
RF	1
IF	3, 4 ^
GROUND	2, 5, 6, 7

^ - pins must be connected together externally

Electrical Schematics



Frequency Mixer TAK-5R

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=30MHz (dB) @LO (dBm)		
		+4	+7	+10
0.05	30.1	5.36	5.17	5.02
0.2	30.2	5.02	4.82	4.70
1.0	31.0	4.79	4.62	4.50
5.0	35.0	4.80	4.59	4.52
10.0	40.0	4.95	4.76	4.66
20.9	50.9	5.31	4.83	4.69
42.4	72.4	5.28	4.96	4.80
53.2	83.2	5.29	4.94	4.78
63.9	93.9	5.19	4.94	4.79
74.7	104.7	5.22	4.96	4.85
85.5	115.5	5.23	4.94	4.80
96.3	126.3	5.25	4.97	4.78
107.0	137.0	5.43	5.01	4.82
128.6	158.6	5.43	5.23	5.09
139.3	169.3	5.48	5.18	5.08
150.1	180.1	5.47	5.22	5.10
160.9	190.9	5.60	5.29	5.15
171.6	201.6	5.75	5.31	5.26
182.4	212.4	6.08	5.52	5.31
193.2	223.2	6.17	5.74	5.42
203.9	233.9	6.41	6.07	5.71
225.5	255.5	6.77	6.51	6.23
236.3	266.3	6.71	6.42	6.16
247.0	277.0	6.92	6.64	6.35
257.8	287.8	6.94	6.63	6.27
268.6	298.6	7.19	6.80	6.42
279.3	309.3	7.14	6.61	6.34
290.1	320.1	7.47	6.80	6.57
300.9	330.9	7.26	6.65	6.46
311.6	341.6	7.44	6.78	6.68
322.4	352.4	7.19	6.69	6.61
333.2	363.2	7.45	6.99	7.00
343.9	373.9	7.36	7.07	7.15
354.7	384.7	7.75	7.43	7.51
365.5	395.5	7.89	7.79	7.93
376.3	406.3	8.36	8.22	8.39
397.8	427.8	9.22	9.01	9.12
408.6	438.6	9.59	9.44	9.57
419.3	449.3	10.07	9.65	9.71
430.1	460.1	10.88	10.18	10.20

RF (IN) (MHz)	LO (MHz)	IP3 INPUT (dBm) @LO (dBm)		
		+4	+7	+10
10.1	40.1	22.23	26.73	19.06
20.9	50.9	24.44	23.49	21.08
31.6	61.6	22.63	26.53	20.84
42.4	72.4	16.75	26.12	21.10
53.2	83.2	18.25	22.93	26.05
63.9	93.9	16.48	21.44	24.56
74.7	104.7	17.16	26.52	21.50
85.5	115.5	17.20	23.95	20.03
96.3	126.3	17.95	25.11	21.15
107.0	137.0	18.57	24.12	20.57
117.8	147.8	20.16	21.15	21.19
128.6	158.6	18.77	26.38	19.55
139.3	169.3	17.99	26.41	22.19
150.1	180.1	20.32	26.39	18.91
160.9	190.9	23.41	23.62	17.85
171.6	201.6	20.73	20.94	19.20
182.4	212.4	13.86	25.59	18.24
193.2	223.2	11.87	25.56	19.21
203.9	233.9	10.71	21.61	15.52
214.7	244.7	10.45	24.82	10.20
225.5	255.5	10.45	24.23	10.40
236.3	266.3	10.64	20.90	10.53
247.0	277.0	10.99	17.73	10.82
257.8	287.8	11.44	23.51	11.58
268.6	298.6	12.84	17.78	13.48
279.3	309.3	12.99	22.66	13.71
290.1	320.1	14.05	24.29	16.44
300.9	330.9	14.15	22.87	19.16
311.6	341.6	15.42	23.52	20.86
322.4	352.4	13.97	21.83	21.41
333.2	363.2	15.47	22.25	18.90
343.9	373.9	17.97	25.46	20.00
354.7	384.7	14.69	20.10	22.84
365.5	395.5	16.26	21.41	17.51
376.3	406.3	15.40	21.02	15.65
387.0	417.0	14.41	20.37	16.91
397.8	427.8	14.16	21.78	15.96
408.6	438.6	14.64	17.43	17.34
419.3	449.3	15.16	19.74	18.41
430.1	460.1	15.32	21.64	19.00

RF (IN) (MHz)	LO (MHz)	COMPRESSION @RF IN=+1dBm (dB) @LO (dBm)		
		+4	+7	+10
10.1	40.1	0.42	0.18	0.08
20.9	50.9	0.20	0.14	0.02
31.6	61.6	0.23	0.14	0.04
42.4	72.4	0.27	0.12	0.04
53.2	83.2	0.25	0.12	0.06
63.9	93.9	0.35	0.15	0.07
74.7	104.7	0.39	0.13	0.07
85.5	115.5	0.26	0.15	0.10
96.3	126.3	0.29	0.15	0.10
107.0	137.0	0.24	0.18	0.10
117.8	147.8	0.34	0.12	0.10
128.6	158.6	0.34	0.16	0.11
139.3	169.3	0.52	0.20	0.15
150.1	180.1	0.65	0.26	0.18
160.9	190.9	0.62	0.32	0.16
171.6	201.6	0.67	0.37	0.12
182.4	212.4	0.68	0.46	0.16
193.2	223.2	0.72	0.58	0.29
203.9	233.9	0.76	0.51	0.33
214.7	244.7	0.83	0.59	0.34
225.5	255.5	0.75	0.48	0.31
236.3	266.3	0.86	0.63	0.49
247.0	277.0	0.68	0.46	0.35
257.8	287.8	0.71	0.50	0.44
268.6	298.6	0.43	0.33	0.31
279.3	309.3	0.62	0.49	0.42
290.1	320.1	0.46	0.44	0.35
300.9	330.9	0.66	0.64	0.46
311.6	341.6	0.76	0.64	0.41
322.4	352.4	0.99	0.70	0.44
333.2	363.2	0.97	0.65	0.39
343.9	373.9	1.10	0.69	0.39
354.7	384.7	1.13	0.61	0.34
365.5	395.5	1.18	0.50	0.25
376.3	406.3	1.15	0.46	0.26
387.0	417.0	1.29	0.46	0.26
397.8	427.8	1.59	0.55	0.36
408.6	438.6	1.64	0.55	0.42
419.3	449.3	1.84	0.78	0.58
430.1	460.1	2.12	0.81	0.62

Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=100.1MHz (dB) @LO (dBm) +7
90.0	10.1	5.25
87.9	12.2	5.20
85.9	14.2	5.17
83.8	16.3	5.18
81.8	18.3	5.14
79.7	20.4	5.09
77.7	22.4	5.05
75.6	24.5	5.04
73.6	26.5	5.05
71.5	28.6	5.03
69.5	30.6	5.01
67.4	32.7	5.00
65.4	34.7	4.96
63.3	36.8	4.95
61.3	38.8	4.94
59.2	40.9	4.93
57.2	42.9	4.95
55.1	45.0	4.94
53.1	47.0	4.90
51.0	49.1	4.82
49.0	51.1	4.85
46.9	53.2	4.86
44.9	55.2	4.89
42.8	57.3	4.89
40.8	59.3	4.94
38.7	61.4	4.91
36.7	63.4	4.93
34.6	65.5	4.91
32.6	67.5	4.91
30.5	69.6	4.92
28.5	71.6	4.92
26.4	73.7	4.93
24.4	75.7	4.93
22.3	77.8	4.91
20.3	79.8	4.94
18.2	81.9	4.95
16.2	83.9	4.96
14.1	86.0	4.96
12.1	88.0	5.01
10.0	90.1	5.04

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=10.1MHz (dB) @LO (dBm) +7
10.0	20.1	4.73
14.6	24.7	4.66
19.2	29.3	4.57
23.8	33.9	4.56
28.5	38.6	4.55
33.1	43.2	4.64
37.7	47.8	4.63
42.3	52.4	4.65
46.9	57.0	4.71
51.5	61.6	4.74
56.2	66.3	4.68
60.8	70.9	4.72
65.4	75.5	4.77
70.0	80.1	4.77
74.6	84.7	4.84
79.2	89.3	4.88
83.8	93.9	4.87
88.5	98.6	4.85
93.1	103.2	4.93
97.7	107.8	4.91
102.3	112.4	4.90
106.9	117.0	4.92
111.5	121.6	4.87
116.2	126.3	4.92
120.8	130.9	4.94
125.4	135.5	4.97
130.0	140.1	5.09
134.6	144.7	5.26
139.2	149.3	5.42
143.8	153.9	5.54
148.5	158.6	5.52
153.1	163.2	5.51
157.7	167.8	5.58
162.3	172.4	5.58
166.9	177.0	5.60
171.5	181.6	5.67
176.2	186.3	5.61
180.8	190.9	5.50
185.4	195.5	5.56
190.0	200.1	5.51

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=200.1MHz (dB) @LO (dBm) +7
190.0	10.1	6.31
185.4	14.7	6.27
180.8	19.3	6.12
176.2	23.9	6.04
171.5	28.6	5.96
166.9	33.2	5.85
162.3	37.8	5.79
157.7	42.4	5.79
153.1	47.0	5.77
148.5	51.6	5.72
143.8	56.3	5.74
139.2	60.9	5.69
134.6	65.5	5.66
130.0	70.1	5.63
125.4	74.7	5.63
120.8	79.3	5.62
116.2	83.9	5.61
111.5	88.6	5.59
106.9	93.2	5.57
102.3	97.8	5.50
97.7	102.4	5.56
93.1	107.0	5.59
88.5	111.6	5.61
83.8	116.3	5.65
79.2	120.9	5.65
74.6	125.5	5.61
70.0	130.1	5.63
65.4	134.7	5.64
60.8	139.3	5.65
56.2	143.9	5.63
51.5	148.6	5.60
46.9	153.2	5.56
42.3	157.8	5.54
37.7	162.4	5.54
33.1	167.0	5.56
28.5	171.6	5.58
23.8	176.3	5.60
19.2	180.9	5.58
14.6	185.5	5.64
10.0	190.1	5.71

Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB) @LO (dBm)			LO-IF ISOLATION (dB) @LO (dBm)		
	+4	+7	+10	+4	+7	+10
0.05	58.70	61.25	63.38	59.68	62.86	65.04
0.2	58.78	61.25	63.53	60.25	63.20	65.17
1.0	58.78	60.99	63.56	60.35	63.40	65.24
5.0	58.77	61.03	63.40	60.14	63.18	65.16
10.0	58.84	61.08	63.32	60.27	63.47	65.68
20.9	64.72	64.62	63.75	65.94	66.50	64.15
42.4	61.89	63.09	63.07	57.52	57.20	57.25
53.2	60.32	62.33	62.85	52.92	53.32	54.73
63.9	58.63	60.62	62.02	49.28	51.00	53.36
74.7	58.14	61.52	62.89	47.45	48.54	50.36
85.5	55.68	58.39	61.79	45.64	47.51	49.62
96.3	54.48	55.91	58.18	43.60	45.61	48.16
107.0	58.68	62.64	63.26	41.99	43.89	46.11
128.6	55.75	66.88	61.59	41.68	42.69	43.97
139.3	49.07	54.11	61.24	42.38	45.78	47.93
150.1	46.35	49.17	53.20	41.15	44.55	46.85
160.9	45.37	48.35	52.21	39.19	41.54	43.19
171.6	44.39	47.35	51.73	38.27	40.82	42.05
182.4	43.80	46.68	51.10	36.99	39.95	40.27
193.2	43.88	46.90	51.74	36.45	39.06	37.13
203.9	46.81	53.00	53.44	36.67	37.78	35.02
225.5	48.14	53.03	49.86	38.41	38.40	34.66
236.3	47.11	50.20	51.18	37.87	37.75	35.46
247.0	47.32	50.63	52.93	37.22	36.99	35.26
257.8	47.65	50.60	51.27	36.37	35.58	34.23
268.6	48.81	50.46	49.06	36.42	34.73	32.90
279.3	51.80	53.26	48.98	36.88	34.25	31.88
290.1	56.12	50.25	43.01	37.82	34.26	29.73
300.9	62.57	48.31	39.63	37.11	32.66	26.92
311.6	59.31	45.54	36.68	35.04	30.84	24.25
322.4	48.26	43.00	34.58	32.43	29.07	22.49
333.2	42.54	38.24	31.69	29.69	26.99	20.93
343.9	38.79	35.26	29.74	26.83	24.54	19.70
354.7	35.21	32.98	28.26	24.43	22.96	18.76
365.5	32.11	31.66	27.39	22.43	21.80	18.21
376.3	29.17	28.93	25.69	20.73	20.94	17.53
397.8	24.49	24.53	22.85	17.83	17.78	15.80
408.6	23.22	23.24	22.14	17.14	17.01	15.44
419.3	22.38	22.21	21.27	16.80	16.54	15.08
430.1	22.15	21.77	20.71	17.02	16.41	14.89

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB) @LO (dBm)		
		+4	+7	+10
10.1	40.1	34.15	34.78	33.95
20.9	50.9	29.45	30.25	30.66
31.6	61.6	26.99	27.28	27.69
42.4	72.4	25.13	25.75	25.96
53.2	83.2	24.27	24.79	24.96
63.9	93.9	23.62	24.14	24.57
74.7	104.7	22.99	23.79	24.46
85.5	115.5	22.62	23.39	23.98
96.3	126.3	22.20	22.88	23.50
107.0	137.0	22.42	23.15	23.74
117.8	147.8	22.88	23.68	24.14
128.6	158.6	23.14	23.90	24.30
139.3	169.3	23.15	23.94	24.46
150.1	180.1	21.75	22.49	23.04
160.9	190.9	19.67	20.25	20.70
171.6	201.6	18.25	18.71	18.95
182.4	212.4	16.85	17.19	17.38
193.2	223.2	15.74	15.95	16.09
203.9	233.9	15.36	15.46	15.70
214.7	244.7	14.86	14.88	15.04
225.5	255.5	14.65	14.64	14.88
236.3	266.3	14.31	14.23	14.50
247.0	277.0	14.40	14.37	14.55
257.8	287.8	14.38	14.30	14.61
268.6	298.6	14.67	14.65	14.88
279.3	309.3	14.39	14.34	14.43
290.1	320.1	14.57	14.37	14.16
300.9	330.9	14.22	13.85	13.42
311.6	341.6	13.71	13.01	12.53
322.4	352.4	12.88	12.10	11.56
333.2	363.2	12.09	11.33	10.72
343.9	373.9	11.20	10.51	9.84
354.7	384.7	10.39	9.63	9.08
365.5	395.5	9.55	8.73	8.28
376.3	406.3	8.74	7.96	7.64
387.0	417.0	8.12	7.43	7.14
397.8	427.8	7.61	7.10	6.83
408.6	438.6	7.23	6.82	6.51
419.3	449.3	6.93	6.55	6.29
430.1	460.1	6.65	6.24	6.01

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1) @LO (dBm)		
		+4	+7	+10
5.0	35.0	1.32	1.21	1.15
10.0	40.0	1.33	1.22	1.15
20.9	50.9	1.58	1.34	1.23
31.6	61.6	1.58	1.34	1.23
42.4	72.4	1.54	1.35	1.22
53.2	83.2	1.45	1.29	1.17
63.9	93.9	1.44	1.24	1.14
74.7	104.7	1.41	1.24	1.11
85.5	115.5	1.39	1.21	1.12
96.3	126.3	1.32	1.17	1.10
107.0	137.0	1.29	1.15	1.08
117.8	147.8	1.29	1.17	1.08
128.6	158.6	1.23	1.12	1.07
139.3	169.3	1.18	1.08	1.08
150.1	180.1	1.16	1.11	1.15
160.9	190.9	1.16	1.17	1.24
171.6	201.6	1.24	1.24	1.32
182.4	212.4	1.32	1.25	1.30
193.2	223.2	1.38	1.28	1.31
203.9	233.9	1.45	1.34	1.30
214.7	244.7	1.49	1.40	1.34
225.5	255.5	1.53	1.43	1.35
236.3	266.3	1.51	1.42	1.35
247.0	277.0	1.54	1.44	1.35
257.8	287.8	1.53	1.43	1.32
268.6	298.6	1.56	1.41	1.29
279.3	309.3	1.50	1.35	1.26
290.1	320.1	1.57	1.41	1.34
300.9	330.9	1.53	1.40	1.35
311.6	341.6	1.61	1.50	1.48
322.4	352.4	1.56	1.50	1.49
333.2	363.2	1.68	1.63	1.63
343.9	373.9	1.67	1.65	1.67
354.7	384.7	1.79	1.77	1.79
365.5	395.5	1.79	1.79	1.82
376.3	406.3	1.87	1.84	1.86
387.0	417.0	1.91	1.86	1.86
397.8	427.8	2.00	1.88	1.85
408.6	438.6	2.03	1.87	1.83
419.3	449.3	2.10	1.89	1.83
430.1	460.1	2.13	1.93	1.87

LO (MHz)	LO VSWR (:1) @LO (dBm)		
	+4	+7	+10
5.0	1.73	2.61	3.67
10.0	1.69	2.49	3.52
20.9	1.08	1.52	2.28
31.6	1.08	1.56	2.33
42.4	1.05	1.56	2.33
53.2	1.05	1.51	2.24
63.9	1.04	1.48	2.16
74.7	1.04	1.47	2.12
85.5	1.05	1.49	2.17
96.3	1.07	1.50	2.15
107.0	1.05	1.54	2.22
117.8	1.07	1.58	2.29
128.6	1.11	1.62	2.31
139.3	1.13	1.63	2.30
150.1	1.13	1.64	2.30
160.9	1.15	1.64	2.28
171.6	1.18	1.66	2.33
182.4	1.22	1.68	2.33
193.2	1.27	1.73	2.37
203.9	1.32	1.79	2.44
214.7	1.37	1.88	2.52
225.5	1.39	1.96	2.59
236.3	1.41	1.96	2.63
247.0	1.42	1.99	2.65
257.8	1.44	2.03	2.70
268.6	1.47	2.10	2.79
279.3	1.51	2.10	2.81
290.1	1.56	2.17	2.88
300.9	1.61	2.22	2.91
311.6	1.64	2.24	2.92
322.4	1.67	2.22	2.87
333.2	1.70	2.23	2.84
343.9	1.73	2.27	2.86
354.7	1.78	2.32	2.88
365.5	1.85	2.32	2.89
376.3	1.92	2.38	2.91
387.0	2.00	2.43	2.92
397.8	2.09	2.51	2.97
408.6	2.16	2.52	2.93
419.3	2.23	2.54	2.95
430.1	2.32	2.59	2.97

IF (OUT) (MHz)	IF VSWR @LO=200.1MHz (:1) @LO (dBm)		
	+4	+7	+10
5.0	1.66	1.53	1.43
10.6	1.67	1.54	1.44
14.9	2.32	1.86	1.57
19.7	2.30	1.92	1.61
24.6	2.33	1.92	1.61
29.5	2.32	1.92	1.61
34.4	2.34	1.93	1.62
39.2	2.28	1.88	1.60
44.1	2.29	1.91	1.60
49.0	2.27	1.92	1.63
53.8	2.27	1.89	1.61
58.7	2.25	1.94	1.63
63.6	2.28	1.94	1.66
68.5	2.33	1.97	1.67
73.3	2.36	2.01	1.69
78.2	2.45	2.05	1.76
83.1	2.41	2.07	1.80
87.9	2.56	2.13	1.85
92.8	2.59	2.19	1.91
97.7	2.60	2.22	1.96
102.6	2.68	2.26	2.01
107.4	2.68	2.30	2.04
112.3	2.67	2.33	2.04
117.2	2.68	2.34	2.07
122.1	2.72	2.34	2.07
126.9	2.67	2.35	2.08
131.8	2.69	2.35	2.09
136.7	2.73	2.35	2.09
141.5	2.69	2.37	2.13
146.4	2.72	2.42	2.17
151.3	2.75	2.44	2.20
156.2	2.82	2.47	2.25
161.0	2.86	2.52	2.30
165.9	2.85	2.54	2.32
170.8	2.89	2.56	2.35
175.6	2.92	2.60	2.40
180.5	2.91	2.59	2.42
185.4	2.89	2.57	2.41
190.3	2.88	2.60	2.43
195.1	2.93	2.59	2.42
200.0	2.87	2.52	2.33

Harmonics Tables

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	16	30	14	30	19	40	30	49	48	53
1	-	17	+0	25	12	29	26	38	36	47	34	57
2	>100	59	55	59	54	57	59	76	57	64	70	70
3	>100	60	59	61	61	66	60	64	61	75	60	>81
4	>100	>81	77	>81	74	>81	79	78	>81	>81	>81	>81
5	>100	>81	>81	>81	>81	>81	>81	>81	79	>81	>81	>81
6	>100	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81
7	>100	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81
8	>100	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81
9	>100	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81
10	>100	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81
RF CAL		0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 100.1 MHz; -14.00 dBm.
LO IN: 130.01 MHz; +7.00 dBm
IF OUT: 29.91 MHz; -18.96 dBm

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	26	40	23	39	31	53	43	71	66	75
1	-	18	+0	27	13	32	25	40	39	49	43	61
2	92	52	48	54	49	52	58	62	51	65	59	70
3	>100	45	41	48	47	49	48	49	54	57	53	66
4	>100	73	63	68	65	67	64	66	68	82	69	77
5	>100	70	68	64	66	65	58	64	59	66	63	76
6	>100	>91	84	84	74	81	74	75	75	77	79	83
7	>100	90	78	78	75	73	71	78	68	72	69	84
8	>100	>91	91	>91	85	84	84	84	81	83	89	87
9	>100	>91	88	>91	84	88	81	84	73	90	76	86
10	>100	>91	>91	>91	>91	>91	>91	>91	81	74	>91	89
RF CAL		0	1	2	3	4	5	6	7	8	9	10

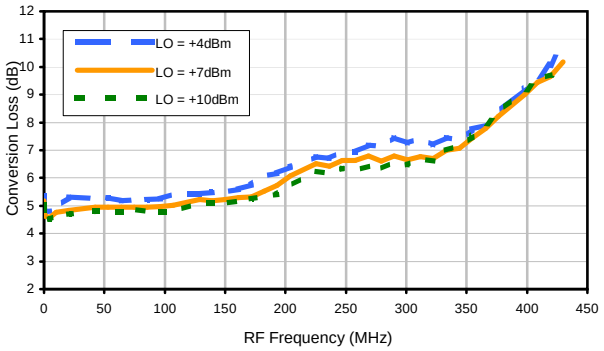
LO HARMONICS ORDER

Test conditions: RF IN: 100.1 MHz; -4.00 dBm.
LO IN: 130.01 MHz; +7.00 dBm
IF OUT: 29.91 MHz; -9.03 dBm

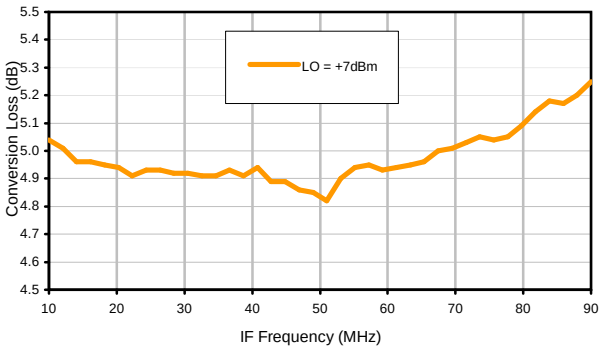
Notes: 1. All Harmonics are in (dBc) relative to IF OUTPUT.
2. + entry denotes harmonics are in (dBc) above IF OUTPUT.
3. RF Cal represent the Harmonics level of the RF input signal to the mixer.

Typical Performance Curves

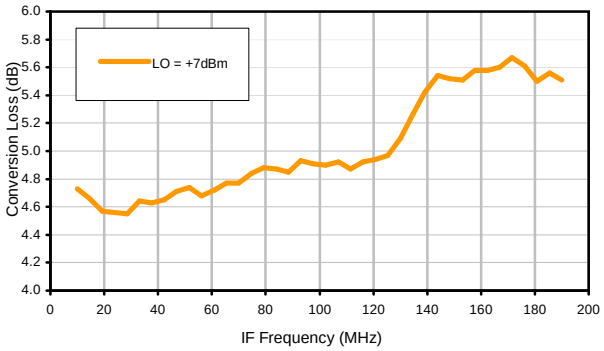
Conversion Loss @ IF=30MHz



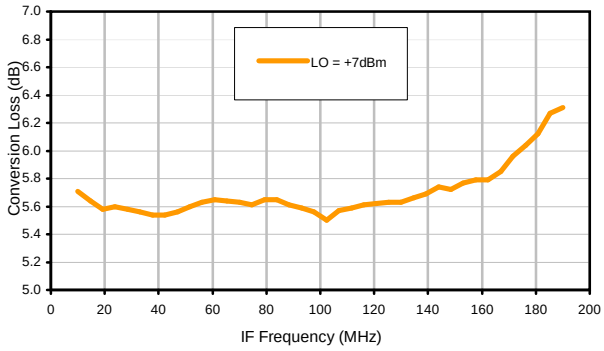
Conversion Loss vs. IF @ RF=100.1MHz



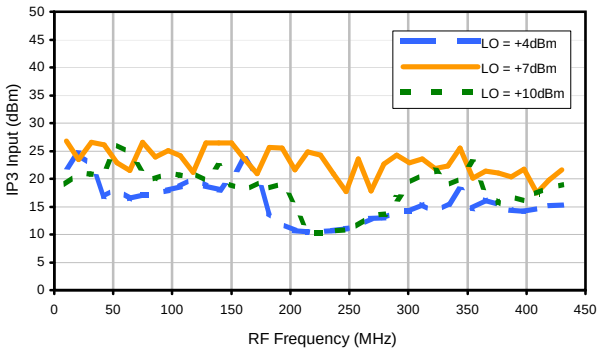
Conversion Loss vs. IF @ RF=10.1MHz



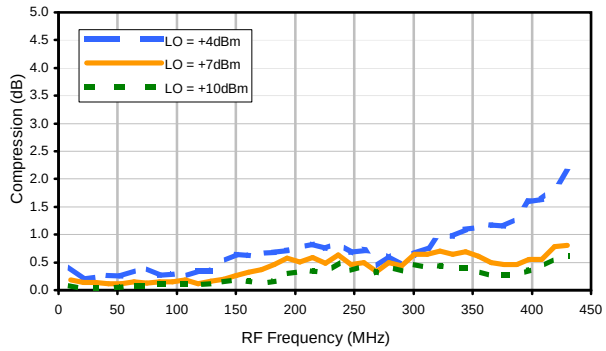
Conversion Loss vs. IF @ RF=200.1MHz



IP3 Input

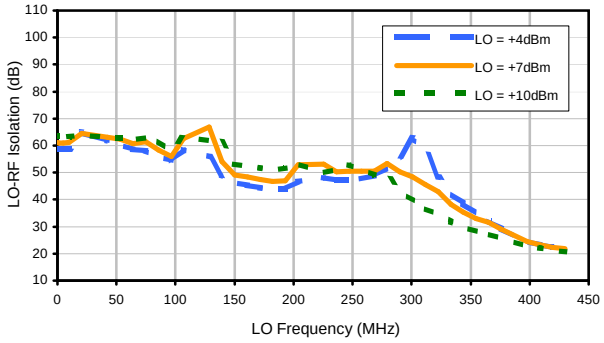


Compression @ RF IN=+1dBm

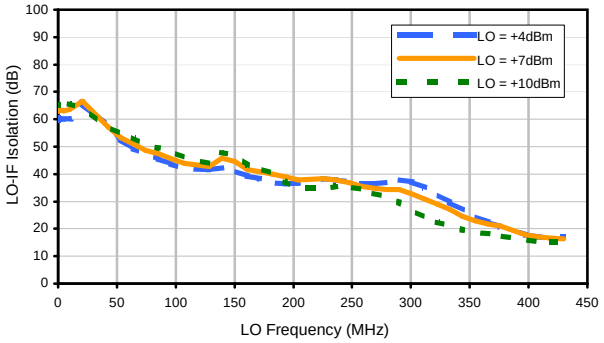


Typical Performance Curves

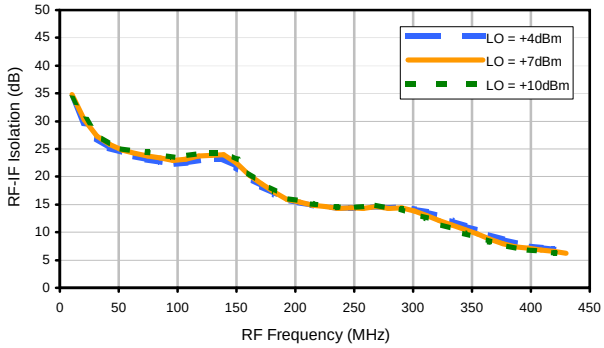
LO-RF Isolation



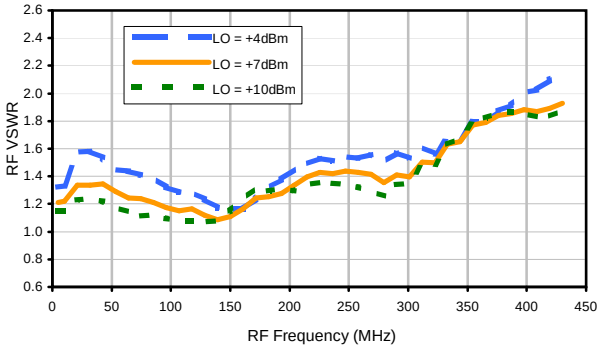
LO-IF Isolation



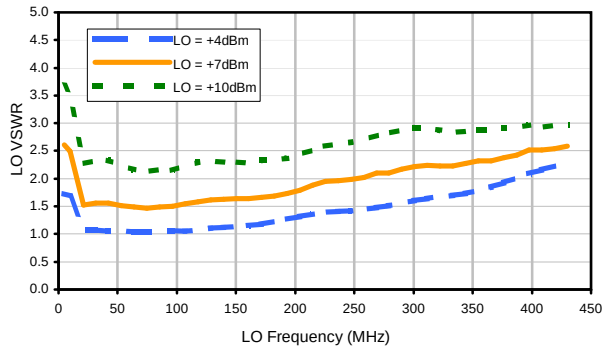
RF-IF Isolation



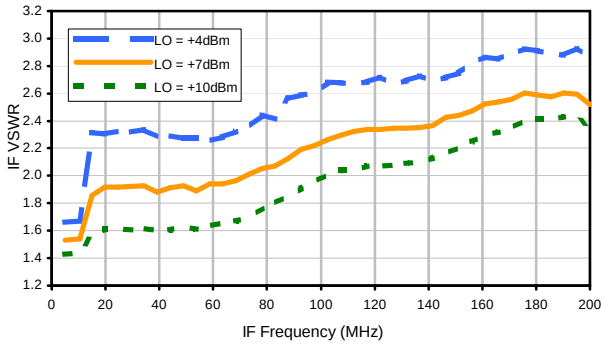
RF VSWR



LO VSWR



IF VSWR



Frequency Mixer TAK-5R

Harmonics Tables

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	16	30	14	30	19	40	30	49	48	53
1	-	17	+0	25	12	29	26	38	36	47	34	57
2	>100	59	55	59	54	57	59	76	57	64	70	70
3	>100	60	59	61	61	66	60	64	61	75	60	>81
4	>100	>81	77	>81	74	>81	79	78	>81	>81	>81	>81
5	>100	>81	>81	>81	>81	>81	>81	>81	79	>81	>81	>81
6	>100	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81
7	>100	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81
8	>100	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81
9	>100	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81
10	>100	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81	>81
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 100.1 MHz; -14.00 dBm.
LO IN: 130.01 MHz; +7.00 dBm
IF OUT: 29.91 MHz; -18.96 dBm

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	26	40	23	39	31	53	43	71	66	75
1	-	18	+0	27	13	32	25	40	39	49	43	61
2	92	52	48	54	49	52	58	62	51	65	59	70
3	>100	45	41	48	47	49	48	49	54	57	53	66
4	>100	73	63	68	65	67	64	66	68	82	69	77
5	>100	70	68	64	66	65	58	64	59	66	63	76
6	>100	>91	84	84	74	81	74	75	75	77	79	83
7	>100	90	78	78	75	73	71	78	68	72	69	84
8	>100	>91	91	>91	85	84	84	84	81	83	89	87
9	>100	>91	88	>91	84	88	81	84	73	90	76	86
10	>100	>91	>91	>91	>91	>91	>91	>91	81	74	>91	89
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

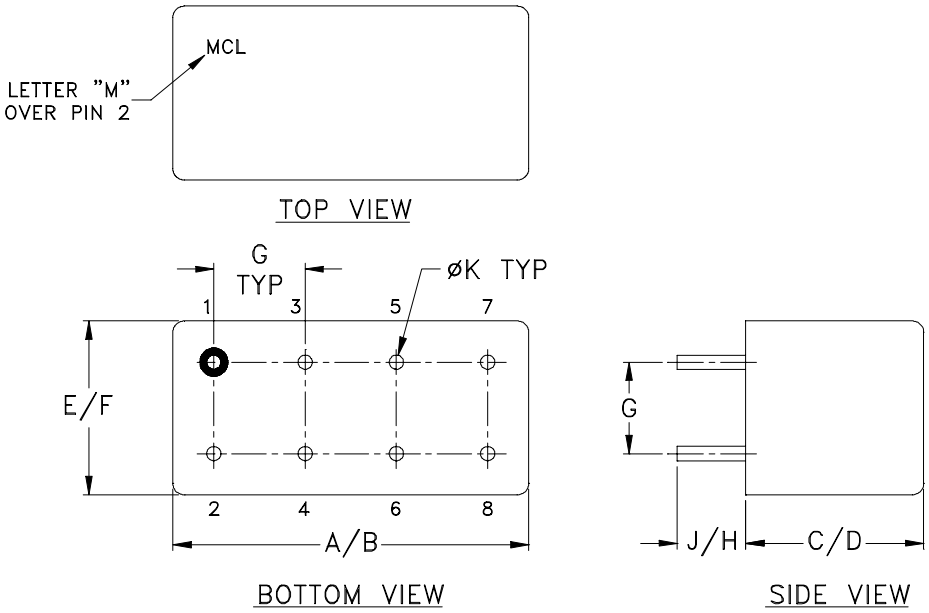
Test conditions: RF IN: 100.1 MHz; -4.00 dBm.
LO IN: 130.01 MHz; +7.00 dBm
IF OUT: 29.91 MHz; -9.03 dBm

Notes: 1. All Harmonics are in (dBc) relative to IF OUTPUT.
2. + entry denotes harmonics are in (dBc) above IF OUTPUT.
3. RF Cal represent the Harmonics level of the RF input signal to the mixer.

Case Style A

A01
A04
A05
A06

Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	WT, GRAM
A01	.770 (19.56)	.800 (20.32)	.385 (9.78)	.400 (10.16)	.370 (9.40)	.400 (10.16)	.200 (5.08)	.20 (5.08)	.14 (3.56)	.031 (.79)	5.2
A04			.200 (5.08)	.210 (5.33)							3.7
A05			.240 (6.10)	.250 (6.35)							3.7
A06			.285 (7.24)	.310 (7.87)							5.2

Dimensions are in inches (mm). Tolerances: 2 Pl. ± .03; 3 Pl. ± .015

Notes:

1. Header material: C.R.S.
   Pin material: #52 alloy.
   Cover material: Cupro-Nickel.
2. Pin finish: Electro Tin-Silver.
3. Insulated spacer available. Request P/N B14-045-01.
4. Tolerance on pin diameter +/-.005 inch.
5. Glass meniscus 0.015 inch max.
6. Blue bead indicates Pin 1. Pin numbers do not appear on unit, for reference only.

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