

Non-Catalog Model

Frequency Mixer

Level 7 (LO Power +7 dBm)

SRA-1TX

Important Note

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



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CASE STYLE : A01

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency	LO (fL to fU)	0.5		500	MHz
	RF (fL to fU)	0.5		500	MHz
	IF	0		500	MHz
Conversion Loss	mid band		5.7	7.0	dB
	Total Range			8.5	dB
LO-RF Isolation	Low Range	45	50		dB
	Mid Range	30	45		dB
	Upper Range	25	35		dB
LO-IF Isolation	Low Range	35	45		dB
	Mid Range	25	40		dB
	Upper Range	20	30		dB
1 dB Comp. Input Power			+1		dBm

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

Mid Range = [10fL to fU/2]

Upper Range = [fU/2 to fU]

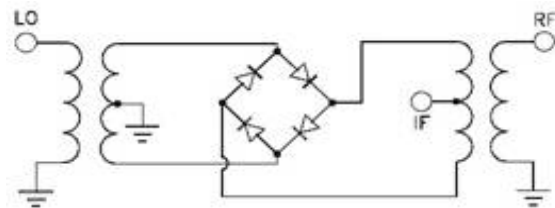
Hermetically sealed

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



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
0.5	30.5	7.78	7.29	7.01	0.5	64.0	67.0	64.9	64.0	67.0	56.9
1.0	31.0	7.34	6.89	6.61	1.0	64.0	67.0	63.2	64.0	62.7	56.3
2.0	32.0	6.97	6.49	6.20	2.0	64.0	67.0	61.1	64.0	61.3	55.7
5.0	35.0	6.39	6.01	5.80	5.0	64.0	67.0	60.3	64.0	60.6	55.5
10.0	40.0	6.40	5.99	5.75	10.0	64.0	67.0	59.6	64.0	59.4	55.3
20.0	50.0	6.46	6.02	5.75	20.0	64.0	67.0	58.9	64.0	59.1	55.1
32.7	62.7	6.37	5.96	5.74	32.7	64.0	59.3	56.9	64.0	57.9	54.2
50.0	80.0	6.28	5.91	5.71	50.0	58.1	56.0	54.5	64.0	56.1	53.1
65.0	95.0	6.22	5.87	5.64	65.0	54.5	53.8	52.9	57.3	54.1	51.7
100.0	70.0	6.13	5.81	5.66	100.0	50.4	49.9	48.9	51.3	49.5	48.0
161.6	131.6	6.13	5.84	5.70	161.6	45.3	44.6	44.0	44.2	43.6	43.3
200.0	170.0	6.27	5.99	5.82	200.0	42.2	41.5	41.3	41.3	40.8	40.9
226.1	196.1	6.26	5.95	5.75	226.1	41.0	40.6	40.7	40.0	40.0	40.2
258.3	228.3	6.19	5.89	5.72	258.3	39.9	39.4	39.6	38.3	37.8	38.7
306.7	276.7	6.26	5.99	5.84	306.7	36.8	37.3	37.7	35.8	36.4	36.9
355.0	325.0	6.57	6.23	6.05	355.0	34.2	34.9	35.7	33.8	34.3	35.1
403.3	373.3	6.74	6.32	6.07	403.3	33.6	33.7	34.3	33.7	33.8	34.2
451.7	421.7	7.29	6.68	6.25	451.7	33.9	33.7	34.1	34.4	33.2	33.2
483.9	453.9	7.77	7.17	6.69	483.9	34.0	34.2	34.7	35.0	34.5	34.4
500.0	470.0	7.86	7.25	6.77	500.0	34.2	34.5	35.1	34.6	34.4	34.4

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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	1.22	1.21	1.25	1.36	1.98	2.99	5.0	1.47	1.28	1.16	10.0	-270.8	-0.24
17.7	1.12	1.03	1.09	1.29	1.93	2.84	17.7	1.48	1.29	1.17	20.0	-267.8	-0.23
30.4	1.10	1.02	1.09	1.30	1.96	2.82	30.4	1.48	1.30	1.18	24.0	-265.0	-0.21
55.8	1.11	1.06	1.12	1.27	1.86	2.69	55.8	1.50	1.32	1.21	50.0	-261.2	-0.19
81.2	1.12	1.10	1.14	1.25	1.83	2.61	81.2	1.53	1.35	1.25	80.0	-263.8	-0.16
106.5	1.14	1.13	1.17	1.28	1.87	2.68	106.5	1.58	1.40	1.30	100.0	-264.4	-0.15
119.2	1.16	1.15	1.19	1.29	1.88	2.67	119.2	1.60	1.43	1.33	122.0	-267.7	-0.12
144.6	1.19	1.19	1.23	1.31	1.91	2.63	144.6	1.69	1.52	1.42	150.0	-263.5	-0.11
170.0	1.22	1.23	1.26	1.32	1.91	2.59	170.0	1.73	1.54	1.43	178.0	-262.1	-0.07
208.1	1.28	1.29	1.33	1.35	1.92	2.62	208.1	1.86	1.66	1.54	200.0	-261.2	-0.13
233.5	1.33	1.35	1.38	1.39	1.91	2.59	233.5	1.96	1.74	1.62	248.0	-265.8	-0.10
271.5	1.41	1.42	1.46	1.43	1.99	2.65	271.5	2.10	1.88	1.73	276.0	-270.4	-0.18
296.9	1.47	1.49	1.52	1.48	1.99	2.63	296.9	2.18	1.97	1.80	304.0	-266.9	-0.26
322.3	1.53	1.56	1.58	1.52	1.99	2.66	322.3	2.29	2.07	1.90	332.0	-250.0	-0.23
360.4	1.62	1.65	1.68	1.62	2.03	2.64	360.4	2.45	2.19	2.03	360.0	-231.2	-0.47
398.5	1.73	1.74	1.77	1.73	2.16	2.72	398.5	2.59	2.33	2.13	388.0	-211.9	-0.18
423.8	1.80	1.81	1.83	1.77	2.20	2.83	423.8	2.65	2.40	2.20	430.0	-189.5	-0.45
461.9	1.92	1.93	1.94	1.80	2.27	2.90	461.9	2.76	2.49	2.29	458.0	-184.4	-0.03
487.3	1.99	2.00	2.00	1.82	2.25	2.87	487.3	2.81	2.53	2.32	486.0	-184.5	-0.13
500.0	2.03	2.03	2.02	1.83	2.26	2.86	500.0	2.79	2.55	2.33	500.0	-181.3	-0.33

REV. X1
SRA-1TX
060615
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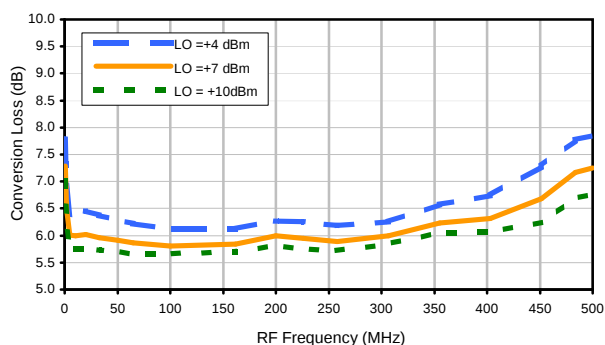


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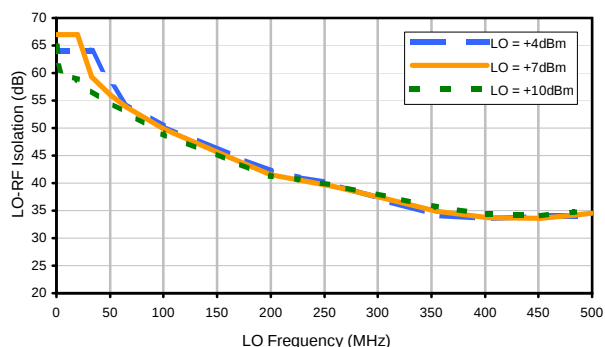


Typical Performance Curves

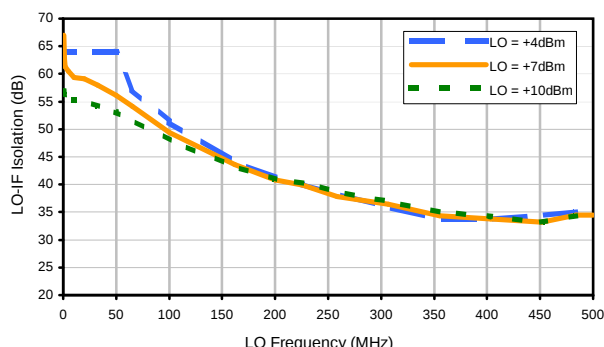
Conversion Loss



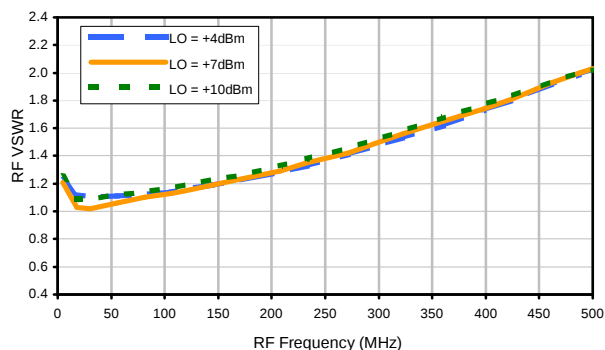
LO-RF Isolation



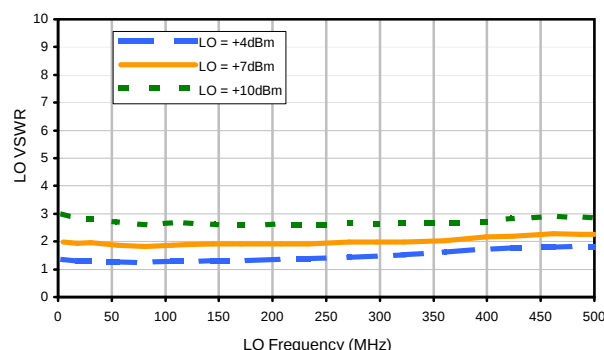
LO-IF Isolation



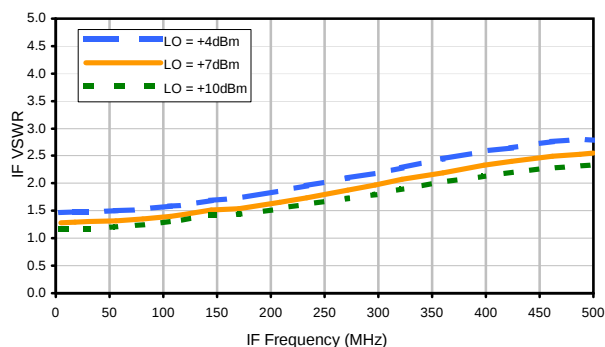
RF VSWR



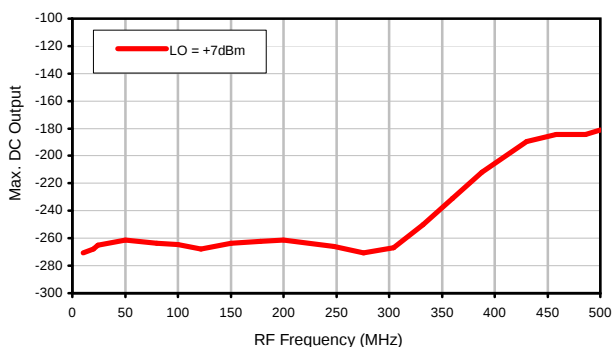
LO VSWR



IF VSWR



Max. DC Output



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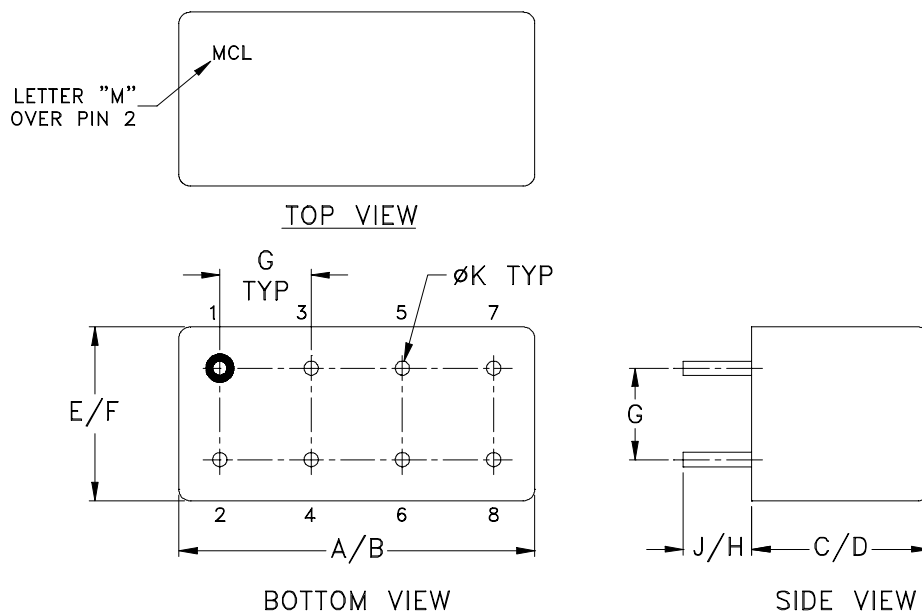


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A01
A04
A05
A06

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. $\pm .03$; 3 Pl. $\pm .015$

Notes:

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



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