

Surface Mount Active Mixer

Level -0 (LO Power -0 dBm) 850 to 1200 MHz

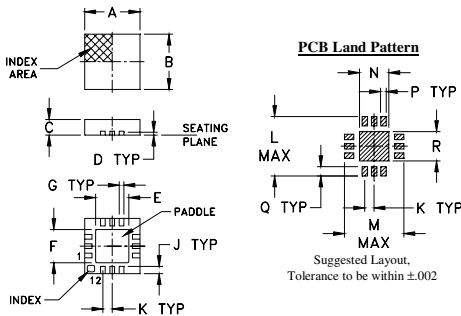
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	+13dBm
DC Current	40mA
LO Power	10dBm

Pin Connections

LO	11
RF	5
IF	5
DC	1
GROUND	4,6,7,8,9,10,12

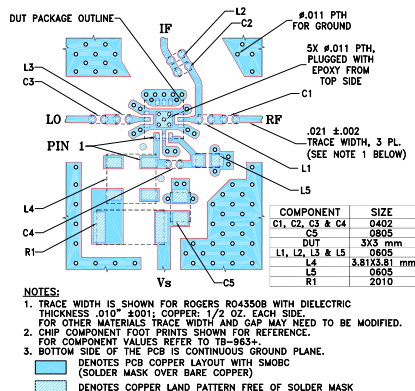
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J
.118	.118	.035	.008	.057	.057	.009	---	.016
3.00	3.00	0.89	0.20	1.45	1.45	0.23	---	0.41
K	L	M	N	P	Q	R	wt	
.020	.127	.127	.049	.010	.020	.049	grams	
0.51	3.23	3.23	1.24	0.25	0.51	1.24	0.02	

Demo Board MCL P/N: TB-963+ Suggested PCB Layout (PL-531)



Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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MA3-242LH+



Generic photo used for illustration purposes only

CASE STYLE: DQ1225

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



Available Tape and Reel
at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500, 1000, 2000

Features

- low conversion loss, 5.5 dB typ.
- wide bandwidth, 850 to 1200 MHz
- single ended mixer with LO amplifier
- aqueous washable
- low profile
- low cost
- E-PHEMT

Applications

- PCN
- defense & weather radar
- cellular
- UHF TV

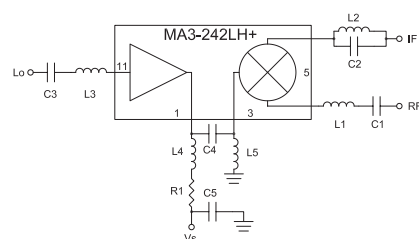
Electrical Specifications at 25°C

Parameter	Min.	Typ.	Max.	Unit
Frequency Range, RF	850	985	1120	MHz
Frequency Range, LO	900	1050	1200	MHz
Frequency Range, IF	50	—	80	MHz
Conversion Loss	—	5.5	—	dB
RF to IF Isolation	—	20	—	dB
LO to IF Isolation	—	25	—	dB
IP3	—	18	—	dBm
RF Input at 1 dB Compression	—	14	—	dBm
Recommended Device Operation Current	—	22	—	mA
DC Voltage (Vs)	—	5.0	—	V
Device Voltage Variation vs. Temperature at 22 mA	—	-2.3	—	mV/°C
Device Voltage Variation vs. Current at 25°C	—	15.1	—	mV/mA

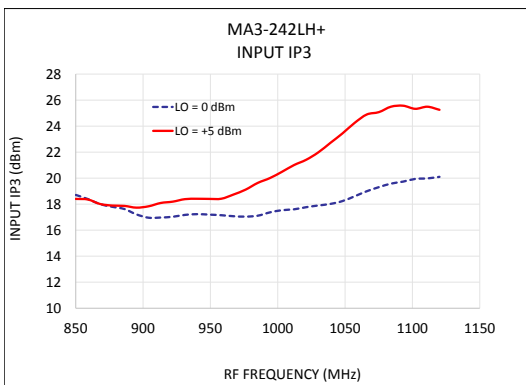
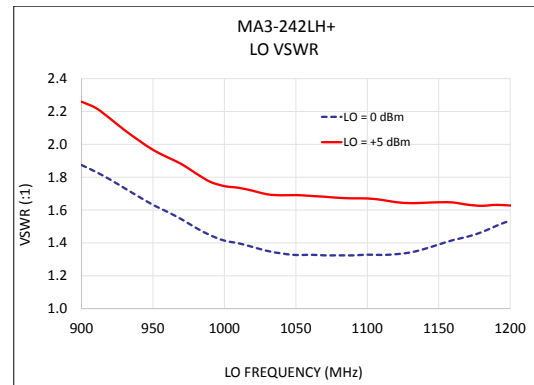
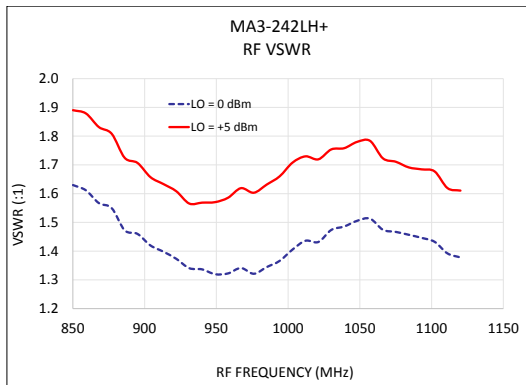
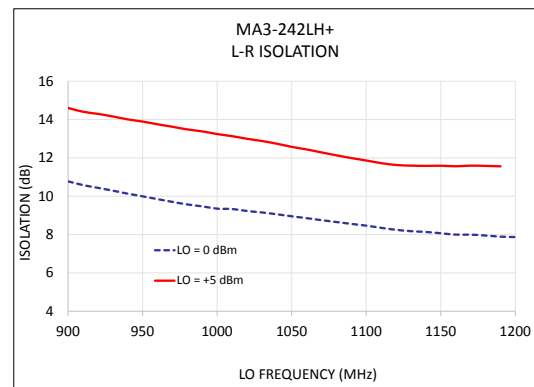
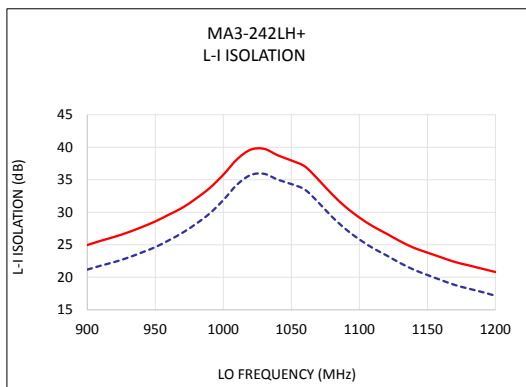
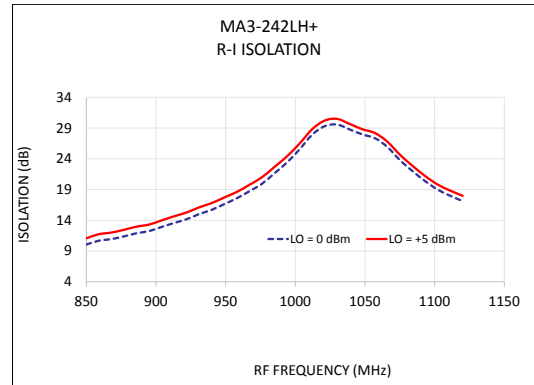
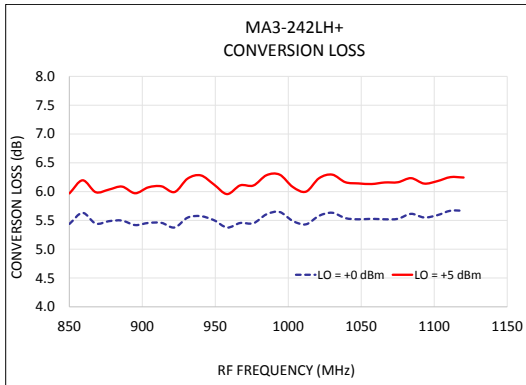
Typical Performance Data

Frequency		Conversion Loss (dB)	Isolation R-I (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)	IP3 (dBm)
RF MHz	LO MHz	LO 0dBm	LO 0dBm	LO 0dBm	LO 0dBm	LO 0dBm	LO 0dBm
850.10	900.10	5.44	10.06	21.19	1.63	1.87	18.71
859.10	910.10	5.63	10.68	21.80	1.61	1.83	18.39
868.10	920.10	5.44	10.94	22.36	1.57	1.79	18.00
877.10	930.10	5.49	11.39	23.03	1.55	1.73	17.80
886.10	940.10	5.50	11.89	23.81	1.47	1.68	17.63
904.10	960.10	5.46	12.92	25.71	1.42	1.59	16.96
913.10	970.10	5.46	13.57	26.86	1.40	1.54	16.97
922.10	980.10	5.38	14.18	28.24	1.37	1.49	17.03
931.10	990.10	5.55	15.02	29.84	1.34	1.45	17.18
940.10	1000.10	5.57	15.71	31.89	1.34	1.41	17.23
1030.10	1100.10	5.63	29.56	25.81	1.47	1.33	17.90
1039.10	1110.10	5.54	28.76	24.47	1.49	1.33	18.02
1048.10	1120.10	5.52	27.96	23.35	1.51	1.33	18.24
1057.10	1130.10	5.53	27.35	22.18	1.51	1.34	18.60
1120.10	1200.10	5.67	17.11	17.15	1.38	1.54	20.10

Electrical Schematic



REV. OR
M162008
MA3-242LH+
JM/CP/AM
200922



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