

Ceramic

Frequency Mixer

WIDE BAND

New!

MCA-35H

Level 17 (LO Power +17 dBm) 500 to 3500 MHz



BLUE CELL™
CASE STYLE: DZ883
PRICE: \$ 8.95 ea. QTY.: (10-49)
(Patent pending)

Features

- wide bandwidth, 500 to 3500 MHz
- excellent isolation, 30 dB typ. (1800-2500 MHz)
- good matching 2:1 VSWR (over 1800-2800 MHz)
- small size 0.25"x0.3"x0.2"
- triple balanced mixer

Applications

- cellular
- PCN
- PDC
- DECT
- PHS

Electrical Specifications ($T_{AMB} = -55^{\circ}\text{C}$ to 100°C)

MODEL NO.	FREQUENCY (MHz)		CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3@ center band Typ. (dBm)	E FACTOR
	LO/RF $f_L - f_U$	IF	$\bar{x}$	σ	Max.	Typ.	Min.	Typ.	Min.		
MCA-35H	500-3500	10-1500	6.9	0.1	8.9						
	500-800	10-300	6.3	0.1	7.7	18	11	32	20	26	0.9
	800-1000	10-200	6.4	0.1	7.6	24	17	27	20	26	0.9
	1000-1800	10-800	6.6	0.1	8.6	29	20	26	20	24	0.7
	1800-2000	10-200	6.0	0.1	7.6	30	22	26	20	24	0.7
	1800-2500	10-700	5.8	0.1	7.6	30	22	27	19	22	0.5
	2000-3500	10-1500	6.5	0.1	8.6	29	17	22	14	23	0.6

1dB Compr.: +14 dBm typ.
E = $(IP3(\text{dBm}) - LO\ Power(\text{dBm}))/10$

• see individual band specs.

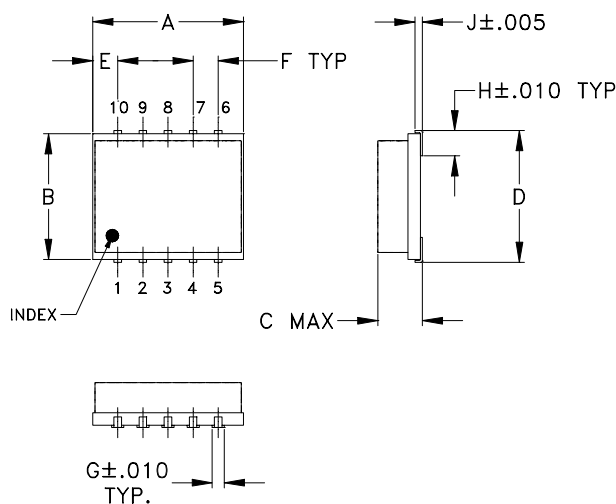
Pin Connections

LO	10
RF	5
IF	3
GROUND	1,2,4,6,7,8,9
DEMO BOARD	TB-144

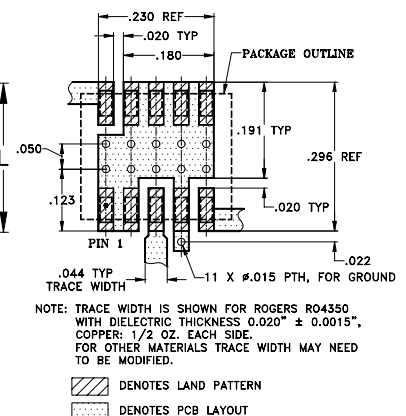
Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

Outline Drawing



Suggested PCB Layout (PL-045)



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	wt.
.30	.250	.180	.262	.050	.050	.024	.050	.015	.085	.296	.030	grams
7.62	6.35	4.57	6.65	1.27	1.27	0.61	1.27	0.38	2.16	7.52	0.76	0.5



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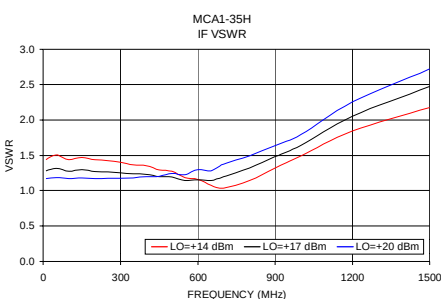
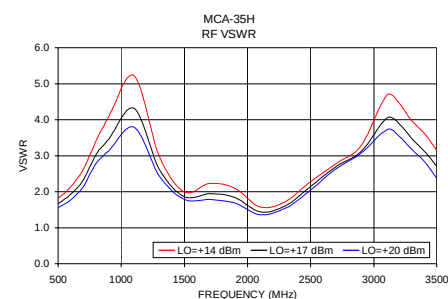
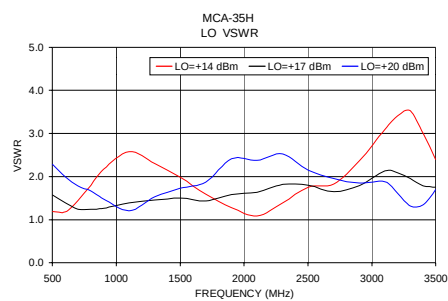
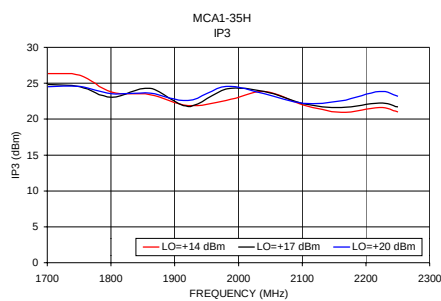
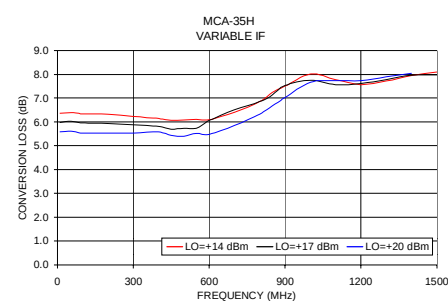
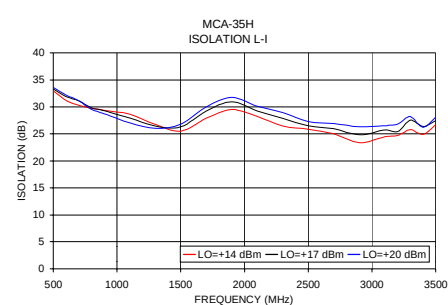
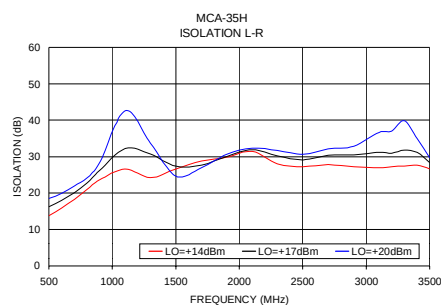
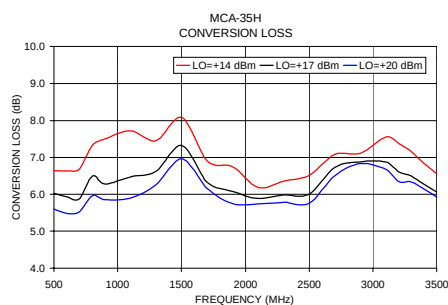
ISO 9001 CERTIFIED

REV. A
M81248
ED-9595C/1
MCA-35H
DJ/TD/CP
020515
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Typical Performance Data at 25°C

Frequency		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR LO port (:1)	VSWR RF port (:1)
RF MHz	LO MHz	LO +17 dBm	LO +17 dBm	LO +17 dBm	LO +17 dBm	LO +17 dBm
501.00	531.00	6.02	16.19	33.30	1.57	1.67
601.00	631.00	5.93	17.94	31.90	1.39	1.93
701.00	731.00	5.87	20.08	31.13	1.24	2.33
801.00	831.00	6.50	22.69	29.81	1.25	3.04
901.00	931.00	6.28	26.16	29.31	1.26	3.47
1101.00	1131.00	6.48	32.24	27.89	1.39	4.32
1301.00	1331.00	6.62	30.73	26.48	1.45	2.63
1501.00	1531.00	7.32	27.40	26.27	1.50	1.85
1701.00	1731.00	6.32	27.63	29.18	1.44	1.95
1901.00	1931.00	6.07	30.06	30.97	1.58	1.84
2101.00	2131.00	5.88	31.94	29.21	1.63	1.44
2301.00	2331.00	5.99	30.11	27.83	1.82	1.61
2501.00	2531.00	6.00	29.06	26.52	1.80	2.15
2701.00	2731.00	6.73	30.39	25.95	1.64	2.70
2901.00	2931.00	6.88	30.46	24.83	1.79	3.11
3100.00	3130.00	6.88	31.18	25.70	2.13	4.03
3200.00	3230.00	6.61	30.89	25.41	2.09	3.89
3300.00	3330.00	6.50	31.82	27.53	1.95	3.47
3400.00	3430.00	6.27	31.14	26.35	1.78	3.13
3500.00	3530.00	6.05	28.30	27.50	1.75	2.70

Performance Charts



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