

High IP3

Frequency Mixer

Level 20 (LO Power +20 dBm) 1200 to 2000 MHz

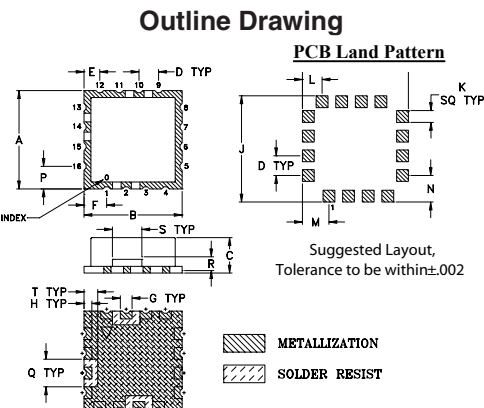
Maximum Ratings

Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
LO Power	+23 dBm
RF Power	+20 dBm

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

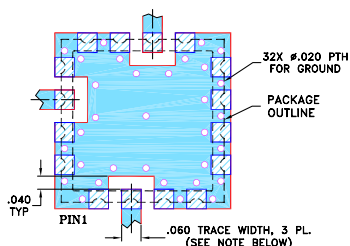
LO	10
RF	2
IF	14
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16



Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J	K
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060
12.7	12.7	4.572	2.54	2.032	2.921	1.524	1.016	13.72	1.524
L	M	N	P	Q	R	S	T	wt.	
.100	.135	.135	.115	.140	.070	.150	.070	grams	
2.54	3.429	3.429	2.921	3.556	1.778	3.81	1.778	1.0	

Demo Board MCL P/N: TB-433+ Suggested PCB Layout (PL-012)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- excellent IP2, 60 dBm typ.
- very high IP3, 30 dBm typ.
- excellent L-R isolation, 58 dB typ; and L-I isolation, 40 dB typ.
- high 1 dB compression, 20 dBm typ.
- shielded metal cover
- aqueous washable
- protected by US Patent 6,807,407

Applications

- cellular/PCS base stations
- ISM applications
- wideband communications
- defense communications



CASE STYLE: CK605

PRICE: \$22.95 ea. QTY. (1-9)
\$15.95 ea. QTY. (100)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

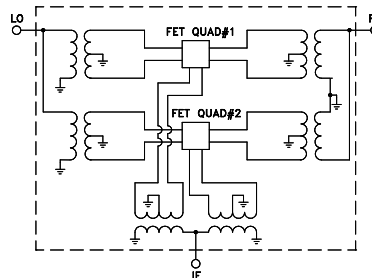
Electrical Specifications (T_{AMB} = 25°C)

FREQUENCY (MHz)			CONVERSION LOSS (dB)			RF in at 1dB Compr. (dBm)	IP3 (dBm)	IP2 (dBm)	LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)	
RF	LO	IF	Typ.	σ	Max.	Typ.	Typ.	Typ.	Typ.	Min.	Typ.	Min.
1200-2000	1270-2070	50-1000	8.4	0.25	9.8	+20	30	60	58	40	40	30

Typical Performance Data

Frequency (MHz)		Conv. Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)	IP3 (dBm)	IP2 (dBm)	IF Freq. (MHz)	VSWR IF (:1)
RF	LO	LO +20dBm	LO +20dBm	LO +20dBm	LO +20dBm	LO +20dBm	LO +20dBm	LO +20dBm		LO +20dBm
1130.10	1200.10	8.03	58.01	48.07	2.55	3.21	27.33	64.81	50.56	2.25
1210.10	1280.10	8.11	61.92	45.06	2.35	3.07	27.38	70.09	131.48	2.17
1290.10	1360.10	8.20	66.68	43.03	2.12	2.92	27.93	69.70	171.94	2.08
1370.10	1440.10	8.31	69.52	41.84	1.90	2.82	28.87	69.69	212.40	2.07
1450.10	1520.10	8.44	60.76	40.90	1.70	2.77	29.84	69.89	293.32	1.93
1510.10	1580.10	8.51	63.12	40.69	1.58	2.74	31.14	74.50	374.24	1.77
1590.10	1660.10	8.47	71.54	40.56	1.58	2.77	30.60	71.13	495.62	1.57
1650.10	1720.10	8.49	61.70	41.59	1.61	2.84	30.04	70.61	576.54	1.45
1730.10	1800.10	8.64	54.10	44.07	1.57	2.95	29.73	76.15	697.92	1.32
1790.10	1860.10	8.72	52.88	46.98	1.58	3.02	29.32	64.92	778.84	1.29
1870.10	1940.10	8.78	55.06	51.49	1.58	3.12	28.56	57.71	859.76	1.27
1930.10	2000.10	8.80	60.72	52.56	1.54	3.17	27.93	55.37	960.90	1.31
2010.10	2080.00	8.87	59.17	48.96	1.52	3.20	27.42	56.67	1001.36	1.35

Electrical Schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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IF/RF MICROWAVE COMPONENTS

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