Surface Mount

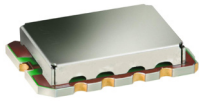
Low Noise Amplifier

TAMP-242LN+

50Ω 1710 to 2400 MHz

Features

- Ultra low noise figure, 0.65 dB typ.
- Output power, up to +17 dBm typ.
- Good output IP3, 33.5 dBm typ.
- Low current consumption
- Good return loss
- Unconditionally stable



CASE STYLE: JQ1382
PRICE: $9.95 ea. QTY (5-49)

+ 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.

Applications

- Base transceiver station, tower mounted amplifier, repeater
- WCDMA
- TD SCDMA
- PCS Rx / PCS Tx
- General purpose low noise amplifier

Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Units
Frequency Range		1710		2400	MHz
Noise Figure	1710 - 1880		0.60	0.85	dB
	1850 - 1990		0.60	0.85	
	1990 - 2200		0.65	0.85	
	2200 - 2400		0.65	0.90	
Gain	1710 - 1880	12.0	14.0		dB
	1850 - 1990	11.5	13.5		
	1990 - 2200	10.5	12.5		
	2200 - 2400	10.0	11.5		
Gain Flatness	1710 - 1880		± 0.5	± 1.0	dB
	1850 - 1990		± 0.3	± 0.7	
	1990 - 2200		± 0.5	± 1.0	
	2200 - 2400		± 0.4	± 0.8	
Output Power at 1dB compression	1710 - 1880	15.5	17.0		dBm
	1850 - 1990	15.5	17.0		
	1990 - 2200	15.5	17.0		
	2200 - 2400	15.5	17.0		
Output third order intercept point (OIP3)	1710 - 1880		32.5		dBm
	1850 - 1990		33.5		
	1990 - 2200		34.5		
	2200 - 2400		34.5		
Input VSWR	1710 - 1880		1.4		:1
	1850 - 1990		1.5		
	1990 - 2200		1.6		
	2200 - 2400		1.7		
Output VSWR	1710 - 1880		1.2		:1
	1850 - 1990		1.2		
	1990 - 2200		1.2		
	2200 - 2400		1.2		
DC Supply Voltage			5.0		V
Supply Current			40	46	mA

Pin Connections

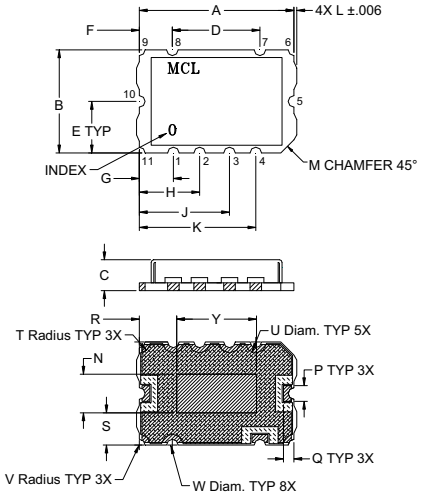
RF IN	10
RF OUT	5
V+	7
GROUND	1,2,3,4,6,8,9,11

Maximum Ratings

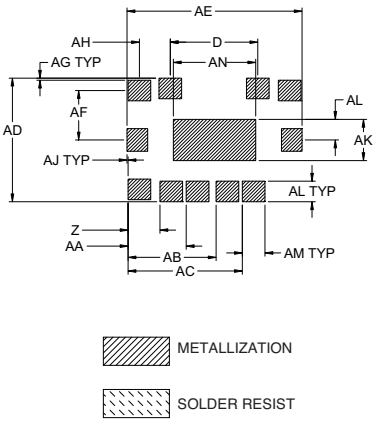
Parameter	Ratings
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Operating Voltage	5.5 V
Input RF Power (no damage)	+10 dBm
Power Consumption	250 mW

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

Outline Drawing



PCB Land Pattern

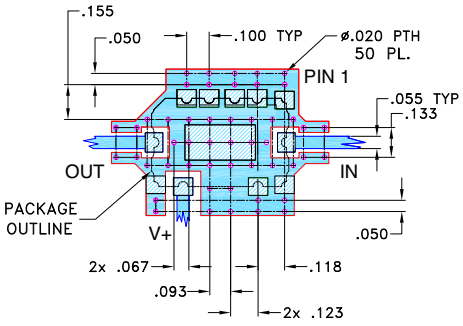


Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
.591	.394	.118	.335	.197	.126	.130	.230	.344	.445	.011	.050	.148	.060	.040	.143	.123	.042	.084
15.0	10.0	3.0	8.5	5.0	3.2	3.3	5.85	8.75	11.3	.28	1.27	3.75	1.52	1.02	3.63	3.13	1.07	2.13

V	W	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AJ	AK	AL	AM	AN	wt.
.022	.044	.305	.122	.222	.337	.437	.472	.669	.189	.008	.118	.004	.158	.079	.087	.315	grams
.56	1.12	7.75	3.1	5.65	8.55	11.1	12.0	17.0	4.8	.20	3.0	.10	4.0	2.0	2.2	8.0	0.8

Demo Board MCL P/N: TB-468+
Suggested PCB Layout (PL-293)



NOTES:
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B 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.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR IN (:1)	VSWR OUT (:1)	NOISE FIGURE (dB)	P. OUT @ 1dB COMPR. (dBm)	OUTPUT IP3 (dBm)
1710.00	14.54	7.41	1.41	1.19	0.59	17.10	31.29
1740.00	14.37	7.43	1.42	1.19	0.58	17.15	31.77
1760.00	14.27	7.44	1.42	1.20	0.59	17.18	31.59
1785.00	14.13	7.47	1.43	1.20	0.60	16.87	32.06
1800.00	14.05	7.47	1.43	1.20	0.61	17.01	32.29
1850.00	13.79	7.51	1.45	1.21	0.58	17.01	32.54
1880.00	13.63	7.53	1.46	1.21	0.58	17.04	32.81
1900.00	13.54	7.55	1.46	1.21	0.59	16.86	33.07
1940.00	13.34	7.59	1.48	1.22	0.58	17.09	33.32
1960.00	13.25	7.60	1.49	1.22	0.60	16.92	33.44
1990.00	13.11	7.62	1.50	1.22	0.60	16.95	33.75
2000.00	13.07	7.60	1.51	1.22	0.60	16.93	33.57
2050.00	12.86	7.60	1.53	1.22	0.59	17.12	34.05
2100.00	12.65	7.61	1.55	1.22	0.63	17.19	34.33
2150.00	12.46	7.62	1.56	1.22	0.64	16.92	34.80
2200.00	12.24	7.62	1.59	1.22	0.64	17.06	34.56
2250.00	12.05	7.62	1.61	1.21	0.63	17.34	34.83
2300.00	11.85	7.65	1.64	1.21	0.67	17.49	34.53
2350.00	11.68	7.66	1.66	1.21	0.67	17.37	33.62
2400.00	11.48	7.67	1.69	1.21	0.69	17.63	34.55