



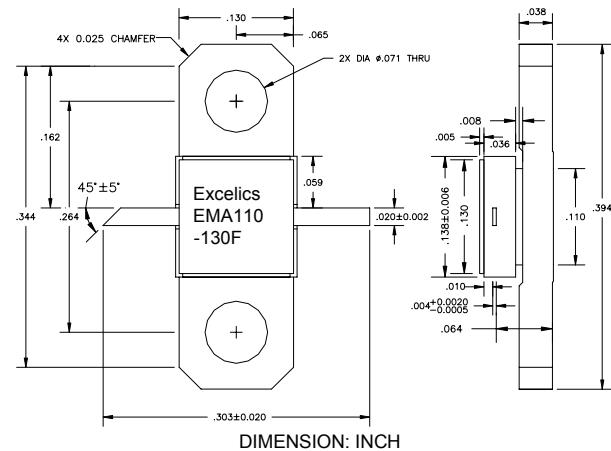
EMA110-130F

UPDATED 08/10/2005

0.5 – 3.0 GHz High Linearity Power MMIC

FEATURES

- 0.5 – 3.0 GHz BANDWIDTH
- 27.0dBm TYPICAL OUTPUT POWER
- -45dBc OIMD3 @ 17dBm EACH TONE Pout
- 11.0 dB TYPICAL POWER GAIN
- SINGLE BIAS SUPPLY
- 100% DC TESTED
- Hermetic 130 mil Ceramic Flange Package



ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)



Caution! ESD sensitive device.

SYMBOL	PARAMETER/TEST CONDITIONS ¹	MIN	TYP	MAX	UNITS
F	Operating Frequency Range	0.5		3.0	GHz
P _{1dB}	Power at 1dB Compression $V_{DD} = 8.0\text{V}$, F = 2.4G	25.5	27.0		dBm
G _{ss}	Small Signal Gain $V_{DD} = 8.0\text{V}$, F = 2.4G	9.5	11.0		dB
IMD3	Output 3 rd Order Intermodulation Distortion @ $\Delta f=10\text{MHz}$, Each Tone Pout 17dBm $V_{DD} = 8.0\text{V}$, F = 2.4G		-45	-42	dBc
RL _{IN}	Input Return Loss $V_{DD} = 8.0\text{V}$		-12	-6	dB
RL _{OUT}	Output Return Loss $V_{DD} = 8.0\text{V}$		-12	-6	dB
I _{DD}	Drain Current	190	240	290	mA
RTH	Thermal Resistance ¹		36		°C/W

Note: 1. Overall Rth depends on case mounting.

ABSOLUTE MAXIMUM RATINGS FOR CONTINUOUS OPERATION^{1,2}

SYMBOL	CHARACTERISTIC	VALUE
V _{DD}	Power Supply Voltage	8 V
V _{GG}	Gate Voltage	-3 V
I _{DD}	Drain Current	IDSS
I _{Gsf}	Forward Gate Current	10 mA
P _{IN}	Input Power	@ 3dB compression
P _T	Total Power Dissipation	2.8 W
T _{CH}	Channel Temperature	150°C
T _{STG}	Storage Temperature	-65/+150°C

Notes: 1. Operating the device beyond any of the above ratings may result in permanent damage or reduction of MTTF.

2. Bias conditions must also satisfy the following equation $P_T < (T_{CH} - T_{HS})/R_{TH}$, where T_{HS} = temperature of heatsink, and $P_T = (V_{DD} * I_{DD}) - (P_{OUT} - P_{IN})$.

Specifications are subject to change without notice.

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