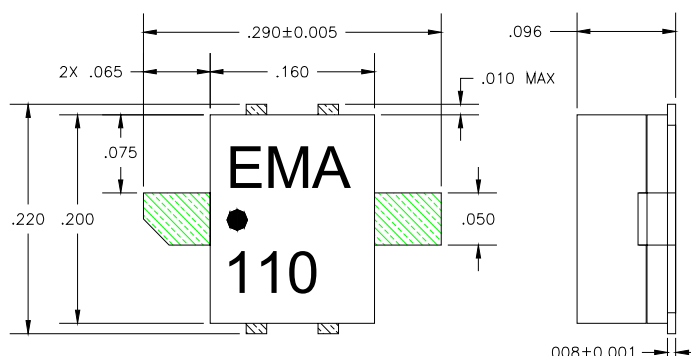


0.5 – 3.0 GHz High Linearity Power MMIC

Features

- 0.5 – 3.0 GHz Bandwidth
- 26.5dBm Typical Output Power at 1dB Compression
- 11.0 dB Typical Small Signal Gain
- Single Bias Supply



Caution! ESD sensitive device.

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

SYMBOL	PARAMETERS/TEST CONDITIONS ¹	MIN	TYP	MAX	UNITS
F	Operating Frequency Range	0.5		3	GHz
P_{1dB}	Power at 1dB Compression $V_{DD} = 8.0V, F=2.4G$	25.0	26.5		dBm
G_{SS}	Small Signal Gain $V_{DD} = 8.0V, F=2.4G$	9.5	11.0		dB
OIMD3	Output 3 rd Order Intermodulation Distortion @ $\Delta f=10\text{MHz}$, Each Tone Pout 17dBm $V_{DD} = 8.0V, F=2.4G$		-43	-40	dBc
RL_{IN}	Input Return Loss $V_{DD} = 8.0V$		-10	-6	dB
RL_{OUT}	Output Return Loss $V_{DD} = 8.0V$		-10	-6	dB
I_{DD}	Power Supply Current	190	240	290	mA
R_{TH}	Thermal Resistance ¹		36		$^\circ\text{C/W}$

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 $^\circ\text{C}$
T_{STG}	Storage Temperature	-65/+150 $^\circ\text{C}$

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 $V_{DS} * I_{DS} < (T_{CH} - T_b) / R_{TH}$; where T_b = base plate temperature

Specifications are subject to change without notice.

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EMA110-CP083

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0.5 – 3.0 GHz High Linearity Power MMIC

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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