

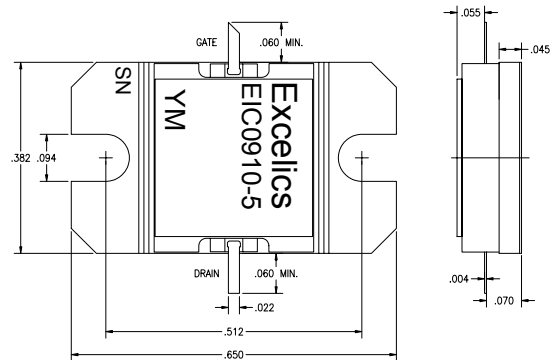


EIC0910-5

ISSUED DATE: 04-19-04

9.50-10.50GHz, 5W Internally Matched Power FET

- 9.50-10.50 GHz BANDWIDTH AND INPUT/OUTPUT IMPEDANCE MATCHED TO 50 OHM
- HIGH PAE: 30% TYPICAL
- +37.5 dBm TYPICAL P_{1dB} OUTPUT POWER
- 7dB TYPICAL G_{1dB} POWER GAIN
- HERMETIC METAL FLANGE PACKAGE



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

SYMBOLS	PARAMETERS/TEST CONDITIONS	EIC0910-5			UNIT
		MIN	TYP	MAX	
P_{1dB}	Output Power at 1dB Compression $f=9.5\text{-}10.5\text{GHz}$, $V_{ds}=10\text{V}$, $I_{dsq}=1600\text{mA}$	36.5	37.5		dBm
G_{1dB}	Gain at 1dB Compression $f=9.5\text{-}10.5\text{GHz}$, $V_{ds}=10\text{V}$, $I_{dsq}=1600\text{mA}$	6	7		dB
ΔG	Gain Flatness $f = 9.5\text{-}10.5\text{GHz}$, $V_{ds} = 10\text{V}$, $I_{dsq} = 1600\text{mA}$			± 0.6	dB
PAE	Power Added Efficiency at 1dB compression $f=9.5\text{-}10.5\text{GHz}$, $V_{ds}=10\text{V}$, $I_{dsq}=1600\text{mA}$		30		%
I_{d1dB}	Drain Current at 1dB Compression		1700	1900	mA
IM3	Output 3 rd Order Intermodulation Distortion $f=10.5\text{GHz}$ $\Delta f=10\text{MHz}$ 2-Tone Test. $P_{out}=26.5\text{ dBm S.C.L}$ I_{ds} @ 65% I_{dss}	-43	-46		dBc
I_{dss}	Saturated Drain Current $V_{ds}=3\text{V}$, $V_{gs}=0\text{V}$		2900	3500	mA
V_p	Pinch-off Voltage $V_{ds}=3\text{V}$, $I_{ds}=30\text{mA}$		-2.5	-4	V
R_{th}	Thermal Resistance (Au-Sn Eutectic Attach)		5.0	5.5	$^\circ\text{C/W}$

ABSOLUTE MAXIMUM RATINGS FOR CONTINUOUS OPERATION AT 25°C

SYMBOLS	PARAMETERS	CONTINUOUS ^{1,2}
V_{ds}	Drain-Source Voltage	10V
V_{gs}	Gate-Source Voltage	-4.5V
I_{ds}	Drain Current	I_{dss}
I_{gsf}	Forward Gate Current	60mA
P_{in}	Input Power	@ 3dB Compression
T_{ch}	Channel Temperature	150°C
T_{stg}	Storage Temperature	-65 to +150°C
P_t	Total Power Dissipation	23W

Note: 1. Exceeding any of the above ratings may result in permanent damage.
2. Exceeding any of the above ratings may reduce MTTF below design goals.