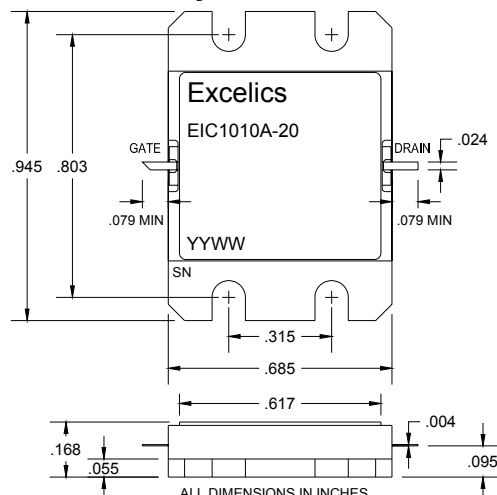


ISSUED 07/03/2007

10.00-10.25 GHz 20-Watt Internally Matched Power FET

FEATURES

- 10.00– 10.25GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +42.5 dBm Output Power at 1dB Compression
- 6.0 dB Power Gain at 1dB Compression
- 27% Power Added Efficiency
- Hermetic Metal Flange Package
- 100% Tested for DC, RF, and R_{TH}



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



Caution! ESD sensitive device.

SYMBOL	PARAMETERS/TEST CONDITIONS ¹	MIN	TYP	MAX	UNITS
P_{1dB}	Output Power at 1dB Compression $f = 10.00-10.25\text{GHz}$ $V_{DS} = 9\text{ V}, I_{DSQ} \approx 4000\text{mA}$	41.5	42.5		dBm
G_{1dB}	Gain at 1dB Compression $f = 10.00-10.25\text{GHz}$ $V_{DS} = 9\text{ V}, I_{DSQ} \approx 4000\text{mA}$	5.5	6.5		dB
ΔG	Gain Flatness $f = 10.00-10.25\text{GHz}$ $V_{DS} = 9\text{ V}, I_{DSQ} \approx 4000\text{mA}$			± 0.5	dB
PAE	Power Added Efficiency at 1dB Compression $f = 10.00-10.25\text{GHz}$ $V_{DS} = 9\text{ V}, I_{DSQ} \approx 4000\text{mA}$		27		%
I_{d1dB}	Drain Current at 1dB Compression $f = 10.00-10.25\text{GHz}$		5500	6500	mA
I_{DSS}	Saturated Drain Current $V_{DS} = 3\text{ V}, V_{GS} = 0\text{ V}$		14000	18000	mA
V_P	Pinch-off Voltage $V_{DS} = 3\text{ V}, I_{DS} = 140\text{ mA}$		-2.5	-4.0	V
R_{TH}	Thermal Resistance ²		1.4	1.6	$^\circ\text{C/W}$

Note: 1) Tested with 25 Ohm gate resistor.

2) Overall R_{th} depends on case mounting.

MAXIMUM RATING (Case Temperature 25°C)

SYMBOL	CHARACTERISTIC	ABSOLUTE ¹	CONTINUOUS ²
V_{DS}	Drain to Source Voltage	15V	10 V
V_{GS}	Gate to Source Voltage	-5V	-3.0 V
I_{DS}	Drain Current	I_{DSS}	9400mA
I_{GSF}	Forward Gate Current	3000mA	500 mA
P_{IN}	Input Power	42.5 dBm	@ 3dB compression
P_T	Total Power Dissipation	110W	94 W
T_{CH}	Channel Temperature	175 $^\circ\text{C}$	175 $^\circ\text{C}$
T_{STG}	Storage Temperature	-65 $^\circ\text{C} \sim 175^\circ\text{C}$	-65 $^\circ\text{C} \sim 175^\circ\text{C}$

Notes: 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.

Specifications are subject to change without notice.

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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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