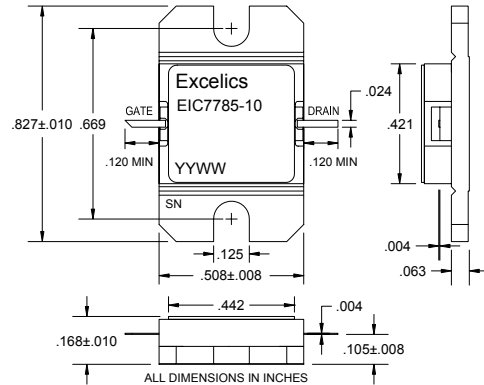


FEATURES

- 7.70– 8.50GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +40.5 dBm Output Power at 1dB Compression
- 8.5 dB Power Gain at 1dB Compression
- 28% Power Added Efficiency
- -46 dBc IM3 at PO = 29.5 dBm SCL
- 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 $f = 7.70\text{-}8.50\text{GHz}$ $V_{DS} = 10\text{ V}$, $I_{DSQ} \approx 3200\text{mA}$	39.5	40.5		dBm
G_{1dB}	Gain at 1dB Compression $f = 7.70\text{-}8.50\text{GHz}$ $V_{DS} = 10\text{ V}$, $I_{DSQ} \approx 3200\text{mA}$	7.5	8.5		dB
ΔG	Gain Flatness $f = 7.70\text{-}8.50\text{GHz}$ $V_{DS} = 10\text{ V}$, $I_{DSQ} \approx 3200\text{mA}$			± 0.6	dB
PAE	Power Added Efficiency at 1dB Compression $f = 7.70\text{-}8.50\text{GHz}$ $V_{DS} = 10\text{ V}$, $I_{DSQ} \approx 3200\text{mA}$		28		%
I_{d1dB}	Drain Current at 1dB Compression $f = 7.70\text{-}8.50\text{GHz}$		3300	3700	mA
IM3	Output 3rd Order Intermodulation Distortion $\Delta f = 10\text{ MHz}$ 2-Tone Test; $P_{out} = 29.5\text{ dBm S.C.L.}^2$ $V_{DS} = 10\text{ V}$, $I_{DSQ} \approx 65\% IDSS$ $f = 8.50\text{GHz}$	-43	-46		dBc
I_{DSS}	Saturated Drain Current $V_{DS} = 3\text{ V}$, $V_{GS} = 0\text{ V}$		5700	7100	mA
V_P	Pinch-off Voltage $V_{DS} = 3\text{ V}$, $I_{DS} = 57\text{ mA}$		-2.5	-4.0	V
R_{TH}	Thermal Resistance ³		2.5	3.0	$^\circ\text{C/W}$

Note: 1) Tested with 50 Ohm gate resistor.

2) S.C.L. = Single Carrier Level.

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

ABSOLUTE MAXIMUM RATING^{1,2}

SYMBOLS	PARAMETERS	ABSOLUTE ¹	CONTINUOUS ²
V_{ds}	Drain-Source Voltage	15	10V
V_{gs}	Gate-Source Voltage	-5	-4V
I_{gsf}	Forward Gate Current	104.4mA	34.8mA
I_{gsr}	Reverse Gate Current	-17.4mA	-5.8mA
P_{in}	Input Power	39.5dBm	@ 3dB Compression
T_{ch}	Channel Temperature	175 $^\circ\text{C}$	175 $^\circ\text{C}$
T_{stg}	Storage Temperature	-65 to +175 $^\circ\text{C}$	-65 to +175 $^\circ\text{C}$
P_t	Total Power Dissipation	50W	50W

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.

Specifications are subject to change without notice.

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