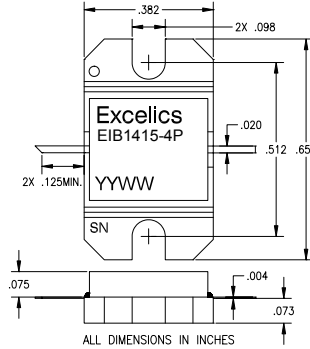


FEATURES

- 14.40-15.35 GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +36.0 dBm Output Power at 1dB Compression
- 7.0 dB Power Gain at 1dB Compression
- 23% Power Added Efficiency
- -46 dBc IM3 at PO = 25.0 dBm SCL
- Non-Hermetic Metal Flange Package



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 $f = 14.40\text{-}15.35\text{GHz}$ $V_{DS} = 8\text{ V}, I_{DSQ} \approx 1600\text{mA}$	35.0	36.0		dBm
G_{1dB}	Gain at 1dB Compression $f = 14.40\text{-}15.35\text{GHz}$ $V_{DS} = 8\text{ V}, I_{DSQ} \approx 1600\text{mA}$	6.0	7.0		dB
ΔG	Gain Flatness $f = 14.40\text{-}15.35\text{GHz}$ $V_{DS} = 8\text{ V}, I_{DSQ} \approx 1600\text{mA}$			± 0.6	dB
PAE	Power Added Efficiency at 1dB Compression $f = 14.40\text{-}15.35\text{GHz}$ $V_{DS} = 8\text{ V}, I_{DSQ} \approx 1600\text{mA}$		23		%
I_{d1dB}	Drain Current at 1dB Compression $f = 14.40\text{-}15.35\text{GHz}$		1700	1900	mA
IM3	Output 3rd Order Intermodulation Distortion $\Delta f = 10\text{ MHz}$ 2-Tone Test; $P_{out} = 25.0\text{ dBm S.C.L.}^2$ $V_{DS} = 8\text{ V}, I_{DSQ} \approx 65\% \text{ IDSS}$ $f = 15.35\text{GHz}$	-43	-46		dBc
I_{DSS}	Saturated Drain Current $V_{DS} = 3\text{ V}, V_{GS} = 0\text{ V}$		2720	3400	mA
V_P	Pinch-off Voltage $V_{DS} = 3\text{ V}, I_{DS} = 24\text{ mA}$		-2.0	-3.5	V
R_{TH}	Thermal Resistance ³		4.5	5.0	$^\circ\text{C/W}$

Note: 1) Tested with 100 Ohm gate resistor.

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

3) Overall Rth depends on case mounting.

MAXIMUM RATINGS AT 25^oC

SYMBOLS	PARAMETERS	ABSOLUTE ¹	CONTINUOUS ²
V_{ds}	Drain-Source Voltage	10V	8V
V_{gs}	Gate-Source Voltage	-5	-4V
I_{gsf}	Forward Gate Current	43.2mA	14.4mA
I_{gsr}	Reverse Gate Current	-7.2mA	-2.4mA
P_{in}	Input Power	35.0dBm	@ 3dB Compression
T_{ch}	Channel Temperature	175 ^o C	175 ^o C
T_{stg}	Storage Temperature	-65 to +175 ^o C	-65 to +175 ^o C
P_t	Total Power Dissipation	30W	30W

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.

Excelics Semiconductor, Inc. 310 De Guigne Drive, Sunnyvale, CA 94085

Phone: 408-737-1711 Fax: 408-737-1868 Web: www.excelics.com

page 1 of 1

Revised June 2006