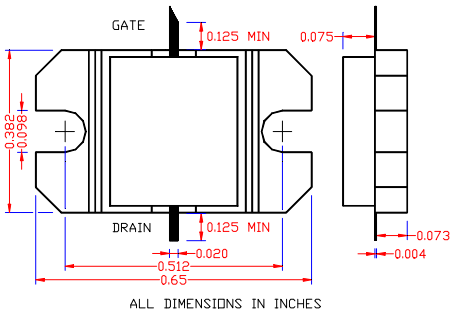
Excelics

EIA1314A-2P

Not recommended for new designs. Contact factory. Effective 03/2003

13.0-14.5GHz, 2W Internally Matched Power FET

- **13.0-14.5GHz BANDWIDTH AND INPUT/OUTPUT IMPEDANCE MATCHED TO 50 OHM**
- **FEATURES HIGH PAE(30% TYPICAL)**
- **33.0dBm TYPICAL P_{1dB} OUTPUT POWER**
- **9dB TYPICAL G_{1dB} POWER GAIN**
- **NON-HERMETIC METAL FLANGE PACKAGE**



ELECTRICAL CHARACTERISTICS (T_a = 25 ^{O}C)

SYMBOLS	PARAMETERS/TEST CONDITIONS	EIA1314A-2P						UNIT
		MIN	TYP	MAX				
P_{1dB}	Output Power at 1dB Compression f=13.0-14.5GHz Vds=8V, Idsq=0.5 Idss	32.5	33.0					dBm
G_{1dB}	Gain at 1dB Compression f=13.0-14.5GHz Vds=8V, Idsq=0.5 Idss	8	9					dB
PAE	Power Added Efficiency at 1dB compression f=13.0-14.5GHz Vds=8V, Idsq=0.5 Idss		30					%
Id_{1dB}	Drain Current at 1dB Compression		880					mA
IP3	Output 3rd Order Intercept Point f=13.0-14.5GHz Vds=8V, Idsq=0.5 Idss		40					dBm
Idss	Saturated Drain Current Vds=3V, Vgs=0V	1100	1440	1700				mA
Gm	Transconductance Vds=3V, Vgs=0V		1500					mS
Vp	Pinch-off Voltage Vds=3V, Ids=12mA		-1.0	-2.5				V
BVgd	Drain Breakdown Voltage Igd=4.8mA	-13	-15					V
Rth	Thermal Resistance (Au-Sn Eutectic Attach)		8					^{o}C/W

MAXIMUM RATINGS AT 25^{O}C

SYMBOLS	PARAMETERS	ABSOLUTE[1]	CONTINUOUS[2]
Vds	Drain-Source Voltage	12V	8V
Vgs	Gate-Source Voltage	-8V	-3V
Ids	Drain Current	Idss	Idss
Igsf	Forward Gate Current	180mA	30mA
Pin	Input Power	32dBm	@ 3dB Compression
Tch	Channel Temperature	175^{o}C	150^{o}C
Tstg	Storage Temperature	-65/175^{o}C	-65/150^{o}C
Pt	Total Power Dissipation	17W	14.2W

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.

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