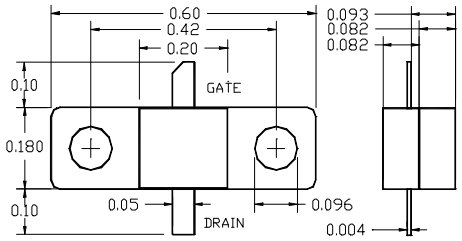
Excelics EIA5060-1S

TENTATIVE DATA SHEET
5.0-6.0GHz, 1W Internally Matched Power FET

- **5.0-6.0GHz BANDWIDTH AND INPUT/OUTPUT IMPEDANCE MATCHED TO 50 OHM**
- **FEATURES HIGH PAE(35% TYPICAL)**
- **31.0dBm TYPICAL P_{1dB} OUTPUT POWER**
- **13dB TYPICAL G_{1dB} POWER GAIN**
- **NON-HERMETIC 180 MIL METAL FLANGE PACKAGE**



ALL DIMENSIONS IN INCHES

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

SYMBOLS	PARAMETERS/TEST CONDITIONS	EIA0506-1P180F						UNIT
		MIN	TYP	MAX				
P_{1dB}	Output Power at 1dB Compression f=5.0-6.0GHz Vds=8V, Idsq=0.5 Idss	29.5	31.0					dBm
G_{1dB}	Gain at 1dB Compression f=5.0-6.0GHz Vds=8V, Idsq=0.5 Idss	11	13					dB
PAE	Power Added Efficiency at 1dB compression f=5.0-6.0GHz Vds=8V, Idsq=0.5 Idss		35					%
Id_{1dB}	Drain Current at 1dB Compression		440					mA
IP_3	Output 3rd Order Intercept Point f=5.0-6.0GHz Vds=8V, Idsq=0.5 Idss		37					dBm
Idss	Saturated Drain Current Vds=3V, Vgs=0V	550	720	850				mA
Gm	Transconductance Vds=3V, Vgs=0V		760					mS
Vp	Pinch-off Voltage Vds=3V, Ids=6mA		-1.0	-2.5				V
BVgd	Drain Breakdown Voltage Igd=4.8mA	-13	-15					V
Rth	Thermal Resistance (Au-Sn Eutectic Attach)		16					^{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	90mA	15mA
Pin	Input Power	29dBm	@ 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	8.5W	7.1W

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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