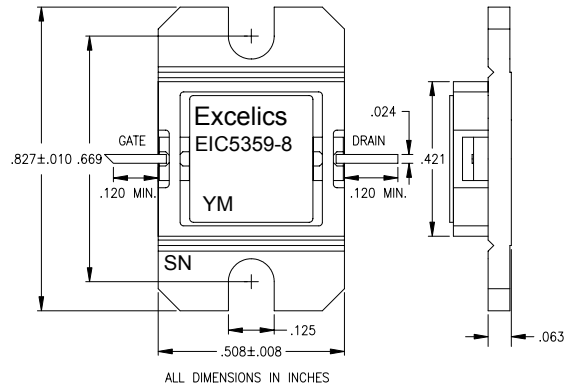




# EIC5359-8

## 5.30-5.90GHz, 8W Internally Matched Power FET

- 5.30-5.90 GHz BANDWIDTH
- Input/Output Impedance Matched to 50 Ohms
- +39.5 dBm Output Power at 1dB Compression
- 10 dB Power Gain at 1dB Compression
- 33% Power Added Efficiency
- -46 dBc IM3 at  $P_o = 28.5$  dBm
- Hermetic Metal Flange Package



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

SYMBOLS	PARAMETERS/TEST CONDITIONS	EIC5359-8			UNIT
		MIN	TYP	MAX	
$P_{1dB}$	Output Power at 1dB Compression $f=5.30\text{-}5.90\text{GHz}$ , $V_{ds}=10\text{V}$ , $I_{dsq}=2200\text{mA}$	38.5	39.5		dBm
$G_{1dB}$	Gain at 1dB Compression $f=5.30\text{-}5.90\text{GHz}$ , $V_{ds}=10\text{V}$ , $I_{dsq}=2200\text{mA}$	9	10		dB
PAE	Power Added Efficiency at 1dB compression $f=5.30\text{-}5.90\text{GHz}$ , $V_{ds}=10\text{V}$ , $I_{dsq}=2200\text{mA}$		33		%
$I_{d1dB}$	Drain Current at 1dB Compression		2200	2600	mA
IM3	Output 3 <sup>rd</sup> Order Intermodulation Distortion $f=5.90\text{GHz}$ , $\Delta f=10\text{MHz}$ 2-Tone Test. $P_{out}=28.5\text{dBm}$ S.C.L	-43	-46		dBc
$I_{dss}$	Saturated Drain Current $V_{ds}=3\text{V}$ , $V_{gs}=0\text{V}$		4000	4500	mA
$V_p$	Pinch-off Voltage $V_{ds}=3\text{V}$ , $I_{ds}=40\text{mA}$		-2.5	-4	V
$R_{th}$	Thermal Resistance (Au-Sn Eutectic Attach)		3.5	4	$^\circ\text{C/W}$

### ABSOLUTE MAXIMUM RATINGS FOR CONTINUOUS OPERATION AT $25^\circ\text{C}$

SYMBOLS	PARAMETERS	CONTINUOUS <sup>1,2</sup>
$V_{ds}$	Drain-Source Voltage	10V
$V_{gs}$	Gate-Source Voltage	-4.5V
$I_{ds}$	Drain Current	$I_{dss}$
$I_{gsf}$	Forward Gate Current	80mA
$P_{in}$	Input Power	@ 3dB Compression
$T_{ch}$	Channel Temperature	150 $^\circ\text{C}$
$T_{stg}$	Storage Temperature	-65 to +150 $^\circ\text{C}$
$P_t$	Total Power Dissipation	32W

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.