

**TECHNICAL DATA**  
**DATA SHEET 5034, REV. A**

**LOW  $R_{DS}$  HERMETIC POWER MOSFET - N-CHANNEL**

**FEATURES:**

- 100 Volt, 0.013 Ohm, 90A MOSFET
- Isolated Hermetic Metal Package
- Ultra Low  $R_{DS(on)}$

**MAXIMUM RATINGS**

ALL RATINGS ARE AT  $T_C = 25^\circ\text{C}$  UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	$V_{GS}$	-	-	$\pm 20$	Volts
ON-STATE DRAIN CURRENT	$I_{D25}$	-	-	55*	Amps
PULSED DRAIN CURRENT	$I_{DM}$	-	-	240	Amps
OPERATING AND STORAGE TEMPERATURE	$T_J/T_{STG}$	-55	-	+150	$^\circ\text{C}$
TOTAL DEVICE DISSIPATION	$P_D$	-	-	210	Watts
THERMAL RESISTANCE, JUNCTION TO CASE	$R_{\theta JC}$	-	-	0.6	$^\circ\text{C/W}$

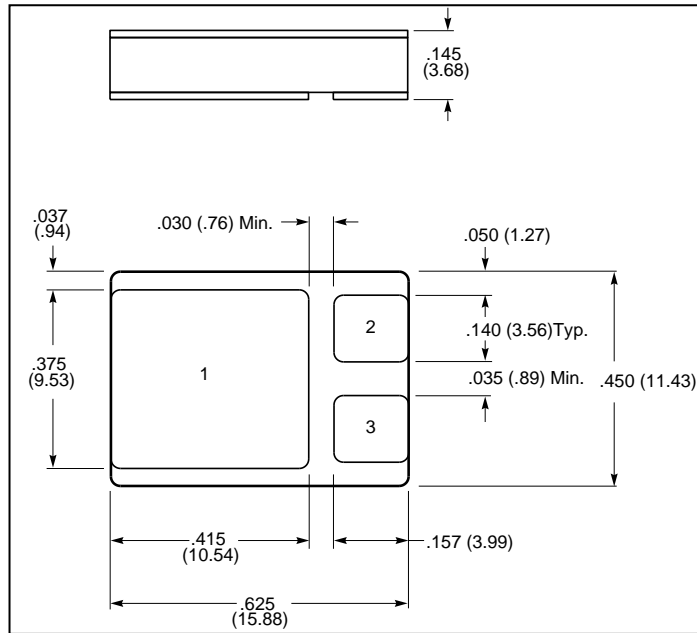
Note: \* current limited by package; die rating is 90A

**ELECTRICAL CHARACTERISTICS**

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = 250\mu\text{A}$	$BV_{DSS}$	100	-	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10V, I_D = 30A$	$R_{DS(ON)}$	-	0.013	0.015	$\Omega$
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	$V_{GS(th)}$	2	-	4	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} = 15V, I_D = 30A$	$g_{fs}$	25	-	-	$S(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 0.8 \times \text{Max. rating}, V_{GS} = 0V, T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	$I_{DSS}$	-	-	1 50	$\mu\text{A}$
GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 20V$	$I_{GSS}$	-	-	100	nA
GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20V$				-100	
TURN ON DELAY TIME $V_{DD} = 50V$	$t_{d(ON)}$	-	20	-	nsec
RISE TIME $I_D = 55A$	$t_r$		110		
TURN OFF DELAY TIME $V_{GS} = 10V$	$t_{d(OFF)}$		65		nsec
FALL TIME $R_G = 2.5\Omega$	$t_f$		100		
DIODE FORWARD VOLTAGE $I_F = 30A, V_{GS} = 0V$ Pulse test, $t \leq 300 \mu\text{s}$ , duty cycle $d \leq 2\%$	$V_{SD}$	-	1.0	1.2	Volts
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C},$ $I_F = 30A, V_R = 100V$ $di/dt = 100A/\mu\text{sec}$	$t_{rr}$	-	70	140	nsec
INPUT CAPACITANCE $V_{GS} = 0V,$	$C_{iss}$	-	8700	-	pF
OUTPUT CAPACITANCE $V_{DS} = 25V,$	$C_{oss}$		740		
REVERSE TRANSFER CAPACITANCE $f = 1.0\text{MHz}$	$C_{rss}$		450		

**SENSITRON**  
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**MECHANICAL DIMENSIONS: in Inches / mm**



**SMD-1**

**PINOUT TABLE**

DEVICE TYPE	PIN 1	PIN 2	PIN 3
N CHANNEL MOSFET IN A LCC-3P PACKAGE	DRAIN	SOURCE	GATE

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