

TECHNICAL DATA  
DATA SHEET 4197, REV. -

## HERMETIC POWER MOSFET N-CHANNEL

### FEATURES:

- 200 Volt, 80A, 36 milliohm
- Isolated Hermetic Metal Package
- Fast intrinsic Rectifier
- Low package inductance-easy to drive and protect
- Add suffix S for S-100 screening

### 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 @ $T_C = 25^\circ\text{C}$	$I_{D(on)}$	-	-	80	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	$I_{DM}$	-	-	300	Amps
OPERATING AND STORAGE TEMPERATURE	$T_{OP}/T_{STG}$	-55	-	+150	$^\circ\text{C}$
THERMAL RESISTANCE, JUNCTION TO CASE	$R_{thJC}$	-	-	0.25	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	$P_D$	-	-	500	Watts

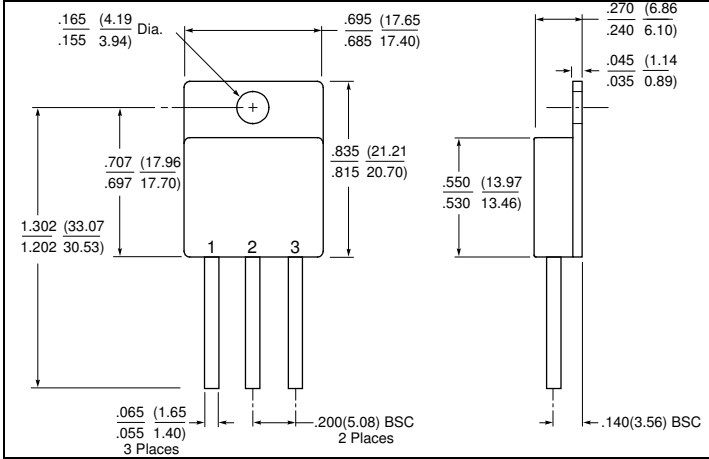
### ELECTRICAL CHARACTERISTICS

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 250\ \mu\text{A}$	$BV_{DSS}$	200	-	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10\text{V}, I_D = 40\text{A}$	$R_{DS(ON)}$	-	-	0.036	$\Omega$
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\ \mu\text{A}$	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} = 10\text{V}, I_D = 40\text{A}$	$g_{fs}$	35	45	-	$\text{S}(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0\text{V}$ $V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0\text{V}, T_J = 125^\circ\text{C}$	$I_{DSS}$	-	-	50 1.0	$\mu\text{A}$ mA
GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 20\text{V}$	$I_{GSS}$	-	-	100	nA
GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20\text{V}$				-100	
TURN ON DELAY TIME RISE TIME TURN OFF DELAY TIME FALL TIME $V_{DS} = 100\text{V}, I_D = 40\text{A}, R_G = 2.0\ \Omega, V_{GS} = 10\text{V}$	$t_{d(ON)}$ $t_r$ $t_{d(OFF)}$ $t_f$	-	26 50 75 20	-	nsec
DIODE FORWARD VOLTAGE $T_C = 25^\circ\text{C}, I_S = 80\text{A}, V_{GS} = 0\text{V}$	$V_{SD}$	-	-	1.5	Volts
REVERSE RECOVERY TIME $I_F = 80\text{A}, -di/dt = 100\text{A}/\mu\text{sec}, V_R = 100\text{V}$	$t_{rr}$	-	-	200	nsec
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE $V_{GS} = 0\text{V}$ $V_{DS} = 25\text{V}$ $f = 1.0\text{MHz}$	$C_{iss}$ $C_{oss}$ $C_{rss}$	-	4600 1100 500	-	pF

**SENSITRON**

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**MECHANICAL DIMENSIONS: in Inches / mm**



**TO-258**

**PINOUT TABLE**

DEVICE TYPE	PIN 1	PIN 2	PIN 3
MOSFET IN A TO-258 PACKAGE	DRAIN	SOURCE	GATE

**TECHNICAL DATA**

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