

TECHNICAL DATA  
DATASHEET 4193, REV. -

**HERMETIC POWER MOSFET - N-CHANNEL**

FEATURES:

- 200 Volt, 0.08 Ohm, 27A MOSFET
- Isolated Hermetic Metal Package
- 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	$I_{D25}$	-	-	27	Amps
PULSED DRAIN CURRENT	$I_{DM}$	-	-	60	Amps
OPERATING AND STORAGE TEMPERATURE	$T_J/T_{STG}$	-55	-	+175	$^\circ\text{C}$
TOTAL DEVICE DISSIPATION	$P_D$	-	-	150	Watts
THERMAL RESISTANCE, JUNCTION TO CASE	$R_{\theta JC}$	-	-	1	$^\circ\text{C/W}$

**ELECTRICAL CHARACTERISTICS**

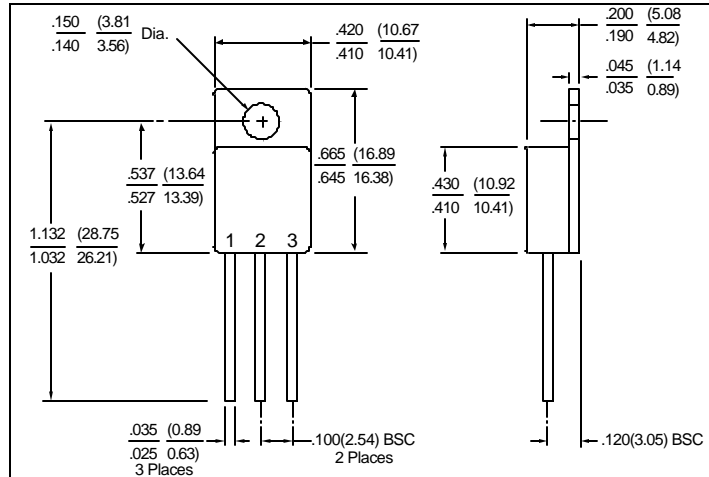
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = 250\mu A$	$BV_{DSS}$	200	-	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10V, I_D = 20A$	$R_{DS(ON)}$	-	0.07	0.08	$\Omega$
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu A$	$V_{GS(th)}$	2	-	4	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} = 15V, I_D = 30A$	$g_{fs}$	15	-	-	$S(1/\Omega)$
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	$\mu A$
GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 20V$ GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20V$	$I_{GSS}$	-	-	100 -100	nA
TURN ON DELAY TIME RISE TIME $V_{DD} = 100V$ $I_D = 20A$	$t_{d(ON)}$ $t_r$	-	15 35	25 55	nsec
TURN OFF DELAY TIME FALL TIME $V_{GS} = 10V$ $R_G = 2.5\Omega$	$t_{d(OFF)}$ $t_f$	-	40 30	60 45	nsec
DIODE FORWARD VOLTAGE $I_F = 20A, V_{GS} = 0V$ Pulse test, $t \leq 300 \mu s$ , duty cycle $d \leq 2\%$	$V_{SD}$	-	1.0	1.5	Volts
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C}$ , $I_F = 50A, V_R = 100V$ $di/dt = 100A/\mu\text{sec}$	$t_{rr}$	-	115	170	nsec
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE $V_{GS} = 0V$ , $V_{DS} = 25V$ , $f = 1.0\text{MHz}$	$C_{iss}$ $C_{oss}$ $C_{rss}$	-	2150 215 90	-	pF

SENSITRON

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MECHANICAL DIMENSIONS: in Inches / mm



**TO-257**

DEVICE TYPE	PIN-1	PIN-2	PIN-3
N-CHANNEL MOSFET TO-257 PACKAGE	DRAIN	SOURCE	GATE

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