

TECHNICAL DATA
DATA SHEET 229, REV. A

**HERMETIC POWER MOSFET
N-CHANNEL**

FEATURES:

- 1000 Volt, 2.0 Ohm, 6.0A MOSFET
- Isolated Hermetic Metal Package
- Fast Switching
- Low $R_{DS(on)}$

MAXIMUM RATINGS

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

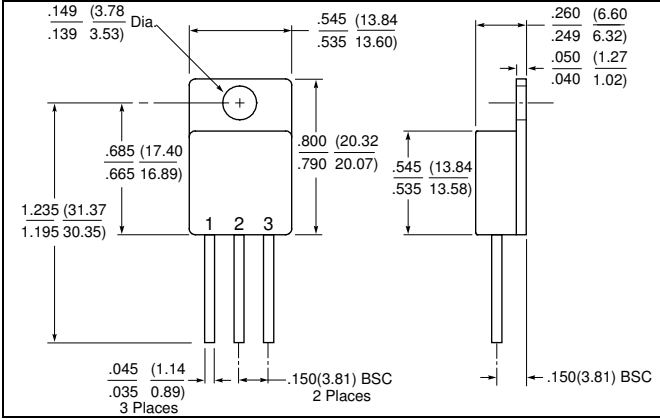
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
ON-STATE DRAIN CURRENT	I_D	-	-	6.0	Amps
PULSED DRAIN CURRENT	I_{DM}	-	-	24	Amps
OPERATING AND STORAGE TEMPERATURE	T_J/T_{STG}	-55	-	+150	$^\circ\text{C}$
TOTAL DEVICE DISSIPATION	P_D	-	-	150	Watts

ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = 3.0\text{ mA}$	BV_{DSS}	1000	-	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10V, I_D = 3.0A$	$R_{DS(ON)}$	-	-	2.0	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 2.5\text{mA}$	$V_{GS(th)}$	2.0	-	4.5	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} = 10V, I_D = 3.0A$	g_{fs}	4.0	6.0	-	$S(1/\Omega)$
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}	-	-	250 1000	μA
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 RISE TIME $V_{DD} = 500V,$ $I_D = 3.0A$	$t_{d(ON)}$ t_r	-	35 40		nsec
TURN OFF DELAY TIME FALL TIME $V_{GS} = 10V$ $R_G = 4.7\Omega$	$t_{d(OFF)}$ t_f		100 60		
DIODE FORWARD VOLTAGE $I_S = 6.0A, V_{GS} = 0V$ Pulse test, $t \leq 300\ \mu\text{s}$, duty cycle $d \leq 2\%$	V_{SD}	-	-	1.5	Volts
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C},$ $I_F = 6.0A, V_{DD} = 100V$ $di/dt = 100A/\mu\text{sec}$	t_{rr}	-	-	250	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}	-	2600 180 45	-	pF
THERMAL RESISTANCE, JUNCTION TO CASE	R_{thJC}	-	-	0.83	$^\circ\text{C/W}$

SENSITRON
DATA SHEET 229 REV. A

MECHANICAL DIMENSIONS: in Inches / mm



TO-254

DEVICE TYPE	PIN-1	PIN-2	PIN-3
N-CHANNEL MOSFET TO-254 PACKAGE	DRAIN	SOURCE	GATE

TECHNICAL DATA

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