

TECHNICAL DATA
DATA SHEET 5362, REV.-

HERMETIC POWER MOSFET N-CHANNEL

FEATURES:

- 800 Volt, 0.8 Ohm, 12A MOSFET in TO-254 package
- Low $R_{DS(on)}$ and Low Q_g
- High Avalanche Capability
- Add "C" to the part number after SHD for Ceramic Seals

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	V
ON-STATE DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_D	-	-	12	A
ON-STATE DRAIN CURRENT @ $T_C = 100^\circ\text{C}$	I_D	-	-	7	A
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	$^\circ\text{C}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	190	W
THERMAL RESISTANCE, JUNCTION TO CASE	R_{thJC}	-	-	0.66	$^\circ\text{C}/\text{W}$

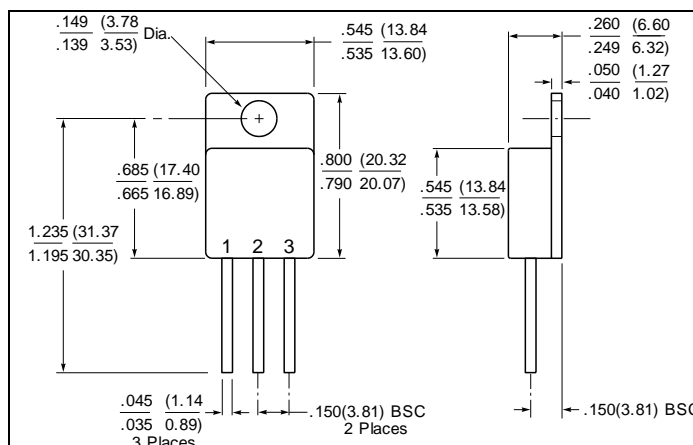
ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$, unless otherwise specified)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 0.25\text{mA}$	BV_{DSS}	800	-	-	V
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10\text{V}, I_D = 6\text{A}$	$R_{DS(ON)}$	-	0.62	0.80	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_{DS} = 0.25\text{mA}$	$V_{GS(th)}$	3.0	-	5.0	V
FORWARD TRANSCONDUCTANCE $V_{DS} = 50\text{V}, I_{DS} = 6\text{A}$	g_{fs}	-	13	-	$\text{S}(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 800\text{V}, V_{GS} = 0\text{V}$ $V_{DS} = 640\text{V}, V_{GS} = 0\text{V}, T_J = 125^\circ\text{C}$	I_{DSS}	-	-	25 250	μA
GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 20\text{V}$ GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20\text{V}$	I_{GSS}	-	-	100 -100	nA
TURN ON DELAY TIME RISE TIME TURN OFF DELAY TIME FALL TIME $V_{DD} = 400\text{V}, I_D = 12\text{A}, R_G = 22\Omega$	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	60 150 155 110	-	ns
TOTAL GATE CHARGE GATE TO SOURCE CHARGE GATE TO DRAIN CHARGE $I_D = 12\text{A}, V_{GS} = 10\text{V}, V_{DS} = 400\text{V}$	Q_g Q_{gs} Q_{gd}	-	68 15 32	90 - -	nC
DIODE FORWARD VOLTAGE $T_C = 25^\circ\text{C}, I_S = 12\text{A}, V_{GS} = 0\text{V}$	V_{SD}	-	-	1.5	V
REVERSE RECOVERY CHARGE $T_J = 25^\circ\text{C}, di/dt = 100\text{A}/\mu\text{s}, I_F = 12\text{A}$	Q_{RR}	-	12	-	μC
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C}, di/dt \leq 100\text{A}/\mu\text{s}, I_F = 12\text{A}$	t_{rr}	-	850	-	ns
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE $V_{GS} = 0\text{V}, V_{DS} = 25\text{V}, f = 1\text{MHz}$	C_{iss} C_{oss} C_{rss}	-	2700 275 30	-	pF

SENSITRON

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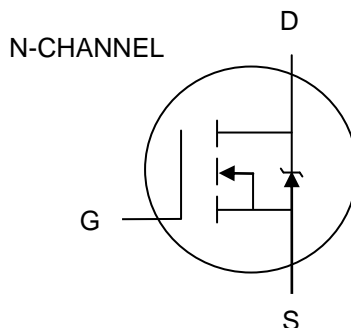
MECHANICAL DIMENSIONS: in Inches / mm



TO-254

PINOUT TABLE

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



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