

TECHNICAL DATA  
DATA SHEET 5550, Rev -

## HERMETIC POWER MOSFET P-CHANNEL

**FEATURES:**

- 200 Volt, 0.1 Ohm, 40A P Channel MOSFET
- SMD-2 Hermetic Metal Package
- Fast Switching
- Low  $R_{DS(on)}$
- Rohs Compliant Option – For Rohs compliance, use suffix -G

**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	$I_{D(25)}$	-	-	- 40	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	$I_{DM}$	-	-	- 120	Amps
OPERATING AND STORAGE TEMPERATURE	$T_J/T_{STG}$	-55	-	+150	$^\circ\text{C}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	$P_D$	-	-	300	Watts

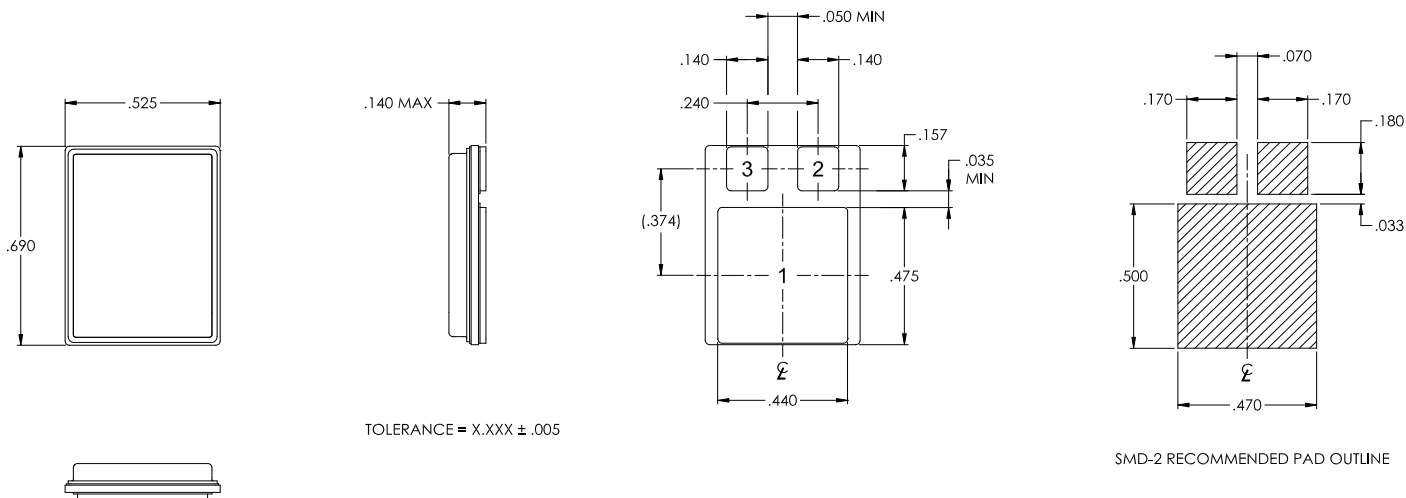
**ELECTRICAL CHARACTERISTICS**

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = -0.25mA$	$BV_{DSS}$	- 200	-	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = -10V, I_D = 0.5 \cdot I_{D25}$	$R_{DS(ON)}$	-	0.09	0.105	$\Omega$
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = -250\mu A$	$V_{GS(th)}$	- 2.0	-	- 4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} = -10V; I_D = 0.5 \cdot I_{D25}$	$g_{fs}$	-	22	-	S(1/ $\Omega$ )
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = V_{DSS}, V_{GS} = 0V, T_J = 125^\circ\text{C}$	$I_{DSS}$	-	-	- 25 - 200	$\mu A$
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 TURN OFF DELAY TIME FALL TIME $V_{DS} = 0.5 \cdot V_{DSS}, I_D = 0.5 \cdot I_{D25}, R_G = 2\Omega, V_{GS} = -10V$	$t_{d(ON)}$ $t_r$ $t_{d(OFF)}$ $t_f$	-	30 46 67 27	50 75 110 50	nsec
DIODE FORWARD VOLTAGE $I_F = -24A, V_{GS} = 0V$ Pulse test, $t \leq 300 \mu s, \text{duty cycle } d \leq 2\%$	$V_{SD}$	-	-	- 3.3	Volts
REVERSE RECOVERY TIME REVERSE RECOVERY CHARGE $I_F = -24A, V_{GS} = 0V, di/dt = 100A/\mu sec, V_R = 100V$	$t_{rr}$ $Q_{rr}$	-	260 4.2	400	nsec $\mu C$
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE $V_{GS} = 0V, V_{DS} = -25V, f = 1MHz$	$C_{iss}$ $C_{oss}$ $C_{rss}$	-	5400 1540 170	-	pF
THERMAL RESISTANCE, JUNCTION TO CASE	$R_{thJC}$	-	-	0.42	$^\circ\text{C/W}$

**SENSITRON**

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SENSITRON SEMICONDUCTOR SMD-2 CASE OUTLINE AND DIMENSIONS



**PINOUT TABLE**

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

**PART ORDERING INFORMATION**

**SHD285808 XX X**

**Screening Level (blank is no screening):**

Suffix	Screened in Accordance with:
blank	No screening level
S	MIL-PRF-19500, TX Level
SV	MIL-PRF-19500, TXV Level
SS	MIL-PRF-19500, S Level

**QCI (blank is no QCI):**

Suffix	Inspection
blank	No QCI
Q	MIL-PRF-19500 QCI

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