TECHNICAL DATA
DATASHEET 6018, REV. A

HERMETIC POWER MOSFET
N-CHANNEL

DESCRIPTION: A 1000 VOLT, 3.5 AMP, 5.4 OHM MOSFET IN A HERMETIC TO-257 PACKAGE.

Part ordering information:

- **For Ceramic Seals, use part number SHDC226308**
- **For lead bend, use part number SHD226308B**

MAXIMUM RATINGS

ALL RATINGS ARE AT T_A = 25°C UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	±20	Volts
CONTINUOUS DRAIN CURRENT V_{GS}=10V, T_C = 25°C V_{GS}=10V, T_C = 100°C	I_D	-	-	3.5 2.0	Amps
PULSED DRAIN CURRENT @ T_C = 25°C	I_{DM}	-	-	10	Amps(pk)
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	°C
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	1.9	°C/W
TOTAL DEVICE DISSIPATION @ T_C = 25°C	P_D	-	-	66	Watts

ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE V_{GS} = 0V, I_D = 250µA	BV_{DSS}	1000	-	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE I_D = 0.5A, V_{GS} = 10V@T_J = 25°C I_D = 0.5A, V_{GS} = 10V@T_J = 100°C	$R_{DS(ON)}$	-	-	5.4 10.4	Ω
GATE THRESHOLD VOLTAGE V_{DS} = V_{GS}, I_D = 250µA	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE V_{DS} = 10Vdc, I_{DS} = 1.5A	g_{fs}	1.0	-	-	S(1/Ω)
ZERO GATE VOLTAGE DRAIN CURRENT V_{DS} = 1000Vdc, V_{GS} = 0Vdc V_{DS} = 800Vdc, V_{GS} = 0Vdc, T_J = 125°C	I_{DSS}	-	-	 250 1000	µA
GATE TO BODY LEAKAGE CURRENT V_{GS} = ±20Vdc, V_{DS} = 0Vdc	I_{GSS}	-	-	+100 -100	nA
TOTAL GATE CHARGE (V_{GS} = 10 Vdc, GATE TO SOURCE CHARGE V_{DS} = 400Vdc, GATE TO DRAIN CHARGE I_D = 3.5Adc)	Q_g Q_{gs} Q_{gd}	-	80 10 42	-	nC
TURN ON DELAY TIME (V_{DS} = 600V, RISE TIME I_D = 3.5Adc, TURN OFF DELAY TIME V_{GS} = 10 Vdc, FALL TIME R_G = 50Ω)	$t_{d(ON)}$ t_r $t_{d(ON)}$ t_f	-	90 90 115 75	-	nsec
FORWARD VOLTAGE, (I_S = 3.5Adc, V_{GS} = 0V)	V_{SD}	-	-	2.5	Volts
REVERSE RECOVERY TIME (I_F = 3.5Adc, V_{GS} = 0Vdc REVERSE RECOVERY CHARGE di/dt = 100A/µsec)	t_{rr} Q_{rr}	-	410 1.3	-	nsec µC
INPUT CAPACITANCE (V_{DS} = 25 Vdc, OUTPUT CAPACITANCE V_{GS} = 0 Vdc, REVERSE TRANSFER CAPACITANCE f = 1 MHz)	C_{iss} C_{oss} C_{rss}	-	980 140 50	-	pF

SENSITRON

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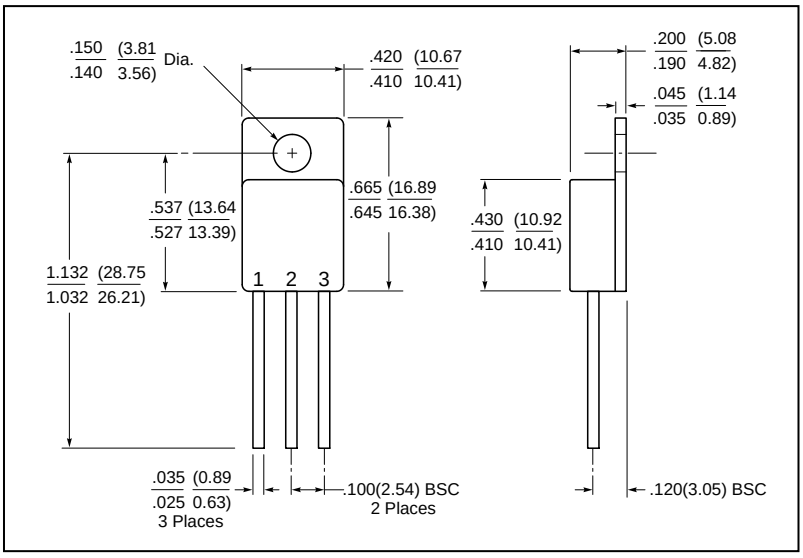
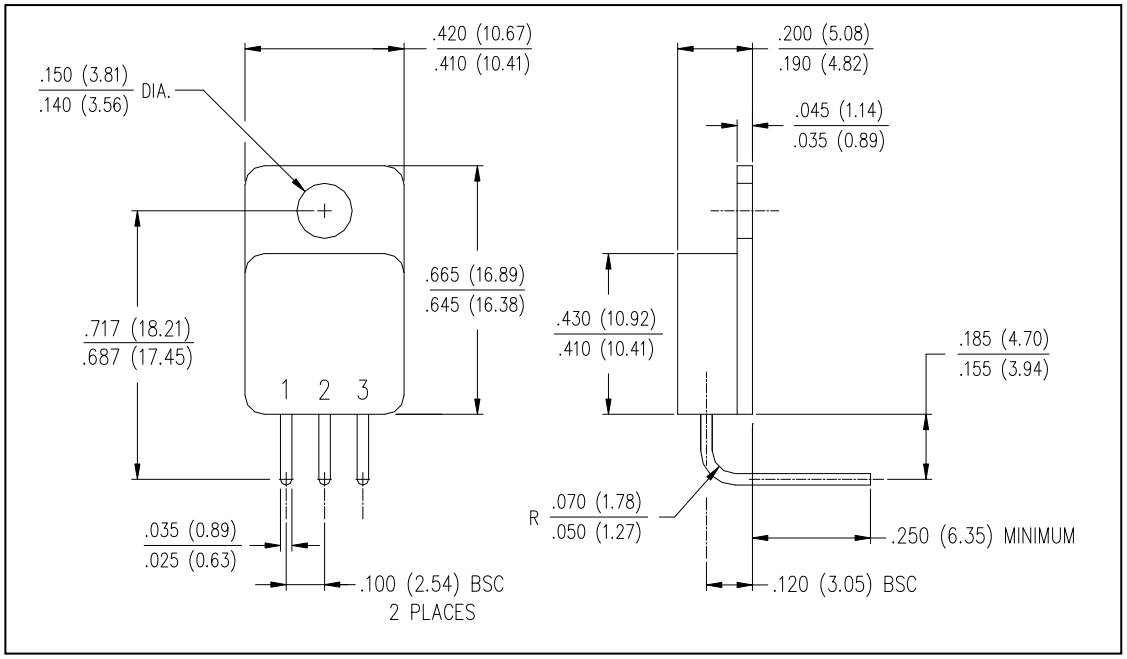
MECHANICAL DIMENSIONS: in Inches / mm



TO-257



TO-257 Lead Bend, Option "B"

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
MOSFET IN A TO-257 PACKAGE	DRAIN	SOURCE	GATE

SENSITRON

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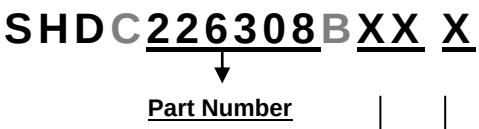
PART ORDERING INFORMATION:



Screening Level (blank is no screening):

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

QCI (blank is no QCI):

Suffix	Inspection in Accordance with:
blank	No QCI
Q*	MIL-PRF-19500 QCI