

TECHNICAL DATA
DATA SHEET 2027, REV. B**HERMETIC POWER MOSFET**
N-CHANNEL**DESCRIPTION:** A 600 VOLT, 16 AMP, 0.40 OHM MOSFET IN A HERMETIC TO-254 PACKAGE.**MAXIMUM RATINGS**ALL RATINGS ARE AT $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE SPECIFIED.

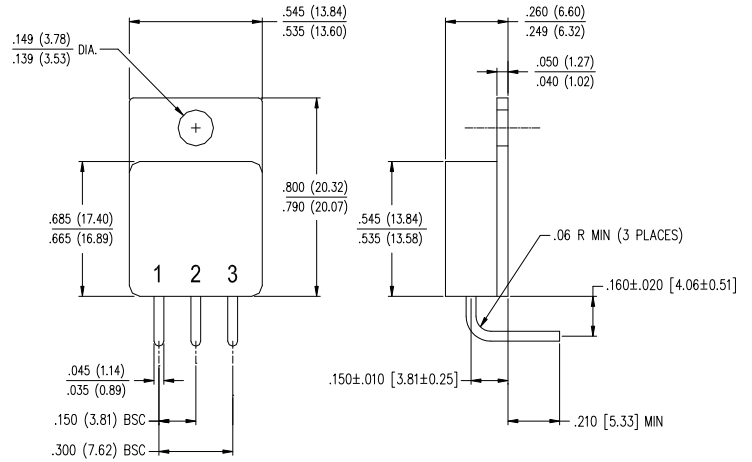
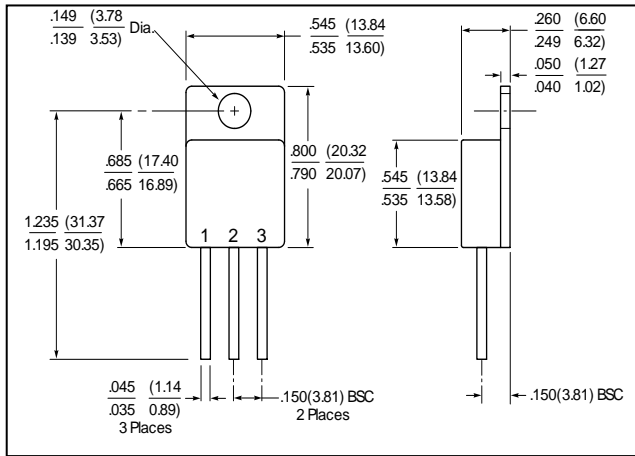
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
CONTINUOUS DRAIN CURRENT $V_{GS}=10\text{V}, T_C=25^\circ\text{C}$ $V_{GS}=10\text{V}, T_C=100^\circ\text{C}$	I_D	-	-	16 10	Amps
PULSED DRAIN CURRENT @ $T_C=25^\circ\text{C}$	I_{DM}	-	-	52	Amps(pk)
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	$^\circ\text{C}$
THERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	1.0	$^\circ\text{C/W}$
TOTAL DEVICE DISSIPATION @ $T_C=25^\circ\text{C}$	P_D	-	-	125	Watts

ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS}=0\text{V}, I_D=250\mu\text{A}$	BV_{DSS}	600	-	-	Volts
GATE THRESHOLD VOLTAGE $V_{DS}=V_{GS}, I_D=250\mu\text{A}$	$V_{GS(th)}$	2.0	-	4.0	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $I_D=5.5\text{A}, V_{GS}=10\text{V}@T_J=25^\circ\text{C}$	$R_{DS(ON)}$	-	-	0.40	Ω
FORWARD TRANSCONDUCTANCE $V_{DS}=2\text{Vdc}, I_D=5.5\text{A}$	g_{fs}	5.0	-	-	$\text{S}(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS}=600\text{Vdc}, V_{GS}=0\text{Vdc}$ $V_{DS}=480\text{V}, V_{GS}=0\text{Vdc}, T_J=125^\circ\text{C}$	I_{DSS}	-	0.1 0.2	0.25 1.0	mA
GATE TO BODY LEAKAGE CURRENT $V_{GS}=\pm 20\text{Vdc}, V_{DS}=0\text{Vdc}$	I_{GSS}	-	-	+100 -100	nA
TOTAL GATE CHARGE GATE TO SOURCE CHARGE GATE TO DRAIN CHARGE $V_{GS}=10\text{Vdc}, V_{DS}=360\text{Vdc}, I_D=16\text{Adc}$	Q_g Q_{gs} Q_{gd}	-	-	210 26 110	nC
TURN ON DELAY TIME RISE TIME TURN OFF DELAY TIME FALL TIME $V_{DD}=210\text{V}, I_D=7.0\text{Adc}, V_{GS}=10\text{Vdc}, R_G=5.0\Omega, R_D=30\Omega$	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	19 54 110 56	-	nsec
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE $T_J=150^\circ\text{C}, V_{DS}=25\text{Vdc}, V_{GS}=0\text{Vdc}, f=1\text{MHz}$	C_{iss} C_{oss} C_{rss}	-	3900 440 98	-	pF
FORWARD VOLTAGE $I_S=16\text{Adc}, V_{GS}=0\text{V}$	V_{SD}	-	-	1.4	Volts
REVERSE RECOVERY TIME REVERSE RECOVERY CHARGE $I_F=16\text{Adc}, di/dt=100\text{A}/\mu\text{sec}$	t_{rr} Q_{rr}	-	700 6.6	-	nsec μC

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MECHANICAL DIMENSIONS: in Inches / mm



AVAILABLE OPTION "B" LEAD BEND
PART NUMBER SHD225515B

TO-254

PINOUT TABLE

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

