

TECHNICAL DATA
DATA SHEET 835, REV. -

HERMETIC POWER MOSFET N-CHANNEL

DESCRIPTION: A 1000 VOLT, 1.4 AMP, 11 OHM MOSFET IN A HERMETIC TO-257 PACKAGE.

MAXIMUM RATINGS

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

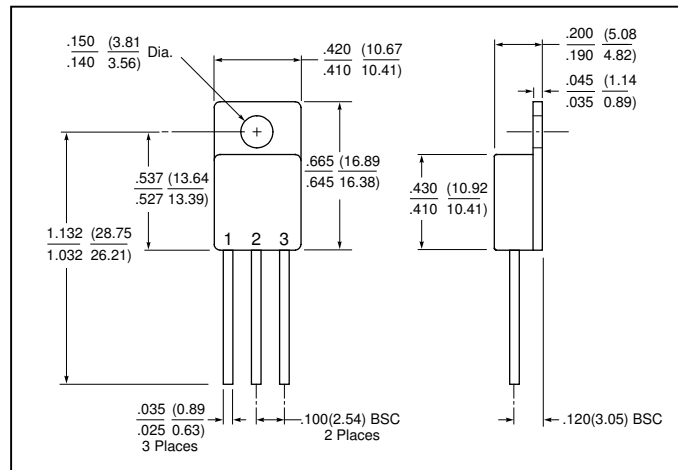
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
CONTINUOUS DRAIN CURRENT $V_{GS}=10\text{V}, T_C = 25^\circ\text{C}$ $V_{GS}=10\text{V}, T_C = 100^\circ\text{C}$	I_D	-	-	1.4 0.86	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	5.6	Amps(pk)
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	1.45	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	85	Watts

ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 250\mu\text{A}$	BV_{DSS}	1000	-	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $I_D = 0.84\text{A}, V_{GS} = 10\text{V}@T_J = 25^\circ\text{C}$	$R_{DS(ON)}$	-	-	11	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} = 50\text{Vdc}, I_{DS} = 0.84\text{A}$	g_{fs}	1.0	-	-	S(1/ Ω)
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 1000\text{Vdc}, V_{GS} = 0\text{Vdc}$ $V_{DS} = 800\text{Vdc}, V_{GS} = 0\text{Vdc}, T_J = 125^\circ\text{C}$	I_{DSS}	-	-	100 500	μA
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 ($V_{GS} = 10\text{Vdc}, V_{DS} = 400\text{Vdc}, I_D = 1.4\text{Adc}$)	Q_g Q_{gs} Q_{gd}	-	-	38 4.9 22	nC
TURN ON DELAY TIME RISE TIME TURN OFF DELAY TIME FALL TIME ($V_{DS} = 500\text{V}, I_D = 1.4\text{Adc}, V_{GS} = 10\text{Vdc}, R_G = 18\Omega$)	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	9.4 17 58 31	-	nsec
FORWARD VOLTAGE, ($I_S = 1.4\text{Adc}, V_{GS} = 0\text{V}$)	V_{SD}	-	-	1.5	Volts
REVERSE RECOVERY TIME REVERSE RECOVERY CHARGE ($I_F = 1.4\text{Adc}, V_{GS} = 0\text{Vdc}, di/dt = 100\text{A}/\mu\text{sec}$)	t_{rr} Q_{rr}	-	130 0.46	190 0.69	nsec μC
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE ($V_{DS} = 25\text{Vdc}, V_{GS} = 0\text{Vdc}, f = 1\text{MHz}$)	C_{iss} C_{oss} C_{rss}	-	500 52 17	-	pF

SENSITRON
DATA SHEET 835
REVISION -

MECHANICAL DIMENSIONS: in Inches / mm



TO-257

PINOUT TABLE

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

TECHNICAL DATA

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