

TECHNICAL DATA
DATA SHEET 693, REV. -

HERMETIC POWER MOSFET N-CHANNEL

(PRELIMINARY)

DESCRIPTION: 30 VOLT, 35 AMP, 0.012 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}	-	-	± 15	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	-	-	35 35	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	200	Amps(pk)
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	1.0	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	125	Watts

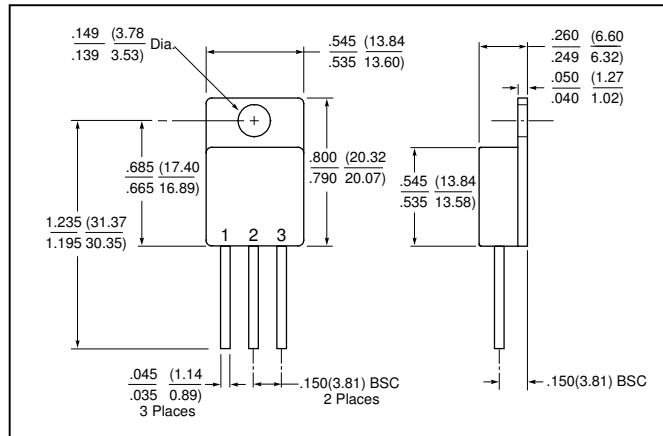
ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 250\mu\text{A}$	BV_{DSS}	30	-	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $I_D = 17.5\text{A}, V_{GS} = 5.0\text{V}@T_J = 25^\circ\text{C}$	$R_{DS(ON)}$	-	6.0	12	$\text{m}\Omega$
FORWARD TRANSCONDUCTANCE $V_{DS} = 3.0\text{Vdc}, I_{DS} = 17.5\text{A}$	g_{fs}	15	55	-	$\text{S}(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 30\text{Vdc}, V_{GS} = 0\text{Vdc}$ $V_{DS} = 30\text{Vdc}$ $V_{GS} = 0\text{Vdc}, T_J = 125^\circ\text{C}$	I_{DSS}	-	.05	10 100	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 $(V_{GS} = 5.0\text{Vdc},$ $V_{DS} = 24\text{Vdc},$ $I_D = 35\text{A})$	Q_g Q_{gs} Q_{gd}		61 14 33	122 28 66	nC
TURN ON DELAY TIME RISE TIME TURN OFF DELAY TIME FALL TIME $(V_{DS} = 15\text{V},$ $I_D = 35\text{A},$ $V_{GS} = 5.0\text{Vdc},$ $R_G = 4.7\Omega)$	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	24 493 60 149	48 986 120 300	nsec
FORWARD VOLTAGE, $(I_S = 4.7\text{A}, V_{GS} = 0\text{V})$ $(I_S = 35\text{A}, V_{GS} = 0\text{Vdc}, T_J = 125^\circ\text{C})$	V_{SD}	-	0.97 0.87	1.1	Volts
REVERSE RECOVERY TIME REVERSE RECOVERY CHARGE $(I_S = 35\text{A}, V_{GS} = 0\text{Vdc}$ $di/dt = 100\text{A}/\mu\text{sec})$	t_{rr} Q_{rr}	-	58 .088	-	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}	-	4025 1353 307	5635 1894 430	pF

*Note: Current limited by pin diameter.

SENSITRON
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REVISION -

MECHANICAL DIMENSIONS: in Inches / mm



TO-254

PINOUT TABLE

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

TECHNICAL DATA

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