

TECHNICAL DATA
DATA SHEET 896, REV. A

HERMETIC POWER MOSFET N-CHANNEL

DESCRIPTION: A 200 VOLT, .100 OHM MOSFET IN A HERMETIC CERAMIC SMD-1 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 @ $T_C = 25^\circ\text{C}$	I_D	-	-	27.4	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	120	Amps(pk)
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	0.36	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	345	Watts

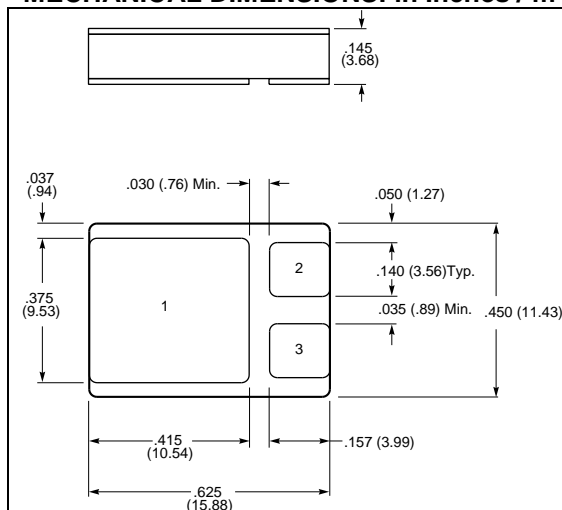
ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 1.0\text{mA}$	BV_{DSS}	200	-	-	Volts
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	$V_{GS(TH)}$	2.0	-	4.0	
DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10\text{Vdc}, I_D = 17\text{A}$ PULSE TEST, $t \leq 300 \mu\text{s}$, DUTY CYCLE $d \leq 2\%$	$R_{DS(ON)}$	-	-	0.10	Ω
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0\text{Vdc}$ $V_{DS} = 0.8 \times \text{Max. Rating}$ $V_{GS} = 0\text{Vdc}, T_J = 125^\circ\text{C}$	I_{DSS}	-	-	25 250	μA
GATE TO BODY LEAKAGE CURRENT $V_{GS} = \pm 20\text{Vdc}$	I_{GSS}	-	-	± 100	nA
TOTAL GATE CHARGE $V_{GS} = 10\text{Vdc}$	Q_g	55	-	115	nC
GATE TO SOURCE CHARGE $V_{DS} = 0.5\text{V Max. Rating},$	Q_{gs}	8	-	22	
GATE TO DRAIN CHARGE $I_D = 27.4\text{A}$	Q_{gd}	30	-	60	
TURN ON DELAY TIME $V_{DD} = 100\text{V},$	$t_{d(ON)}$	-	-	35	nsec
RISE TIME $I_D = 27.4\text{A},$	t_r	-	-	190	
TURN OFF DELAY TIME $R_G = 6.2\Omega$	$t_{d(OFF)}$	-	-	170	
FALL TIME	t_f	-	-	130	
FORWARD VOLTAGE $I_F = 27.5\text{A}, V_{GS} = 0\text{V}$ PULSE TEST, $t \leq 300 \mu\text{s}$, DUTY CYCLE $d \leq 2\%$	V_{SD}	-	-	1.9	Volts
REVERSE RECOVERY TIME $I_F = 25\text{A}$	t_{rr}	-	-	950	nsec
REVERSE RECOVERY CHARGE $di/dt = 100\text{A}/\mu\text{sec}$ $V_{DD} \leq 50\text{V}$	Q_{rr}	-	3.8	-	μC
INPUT CAPACITANCE $V_{DS} = 25\text{Vdc},$	C_{iss}	-	3500	-	pF
OUTPUT CAPACITANCE $V_{GS} = 0\text{Vdc},$	C_{oss}	-	700	-	
REVERSE TRANSFER CAPACITANCE $f = 1\text{MHz}$	C_{rss}	-	110	-	

SENSITRON

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MECHANICAL DIMENSIONS: in Inches / m



SMD-1

PINOUT TABLE

	PIN 1	PIN 2	PIN 3
N CHANNEL MOSFET IN AN SMD-1 PACKAGE	DRAIN	SOURCE	GATE

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