

TECHNICAL DATA  
DATA SHEET 622, REV. -

## HERMETIC POWER MOSFET N-CHANNEL

- 200 VOLT, 0.4 OHM, 9.0A MOSFET
- Fast Switching
- Low  $R_{DS(on)}$
- Equivalent to IRFY230M

### MAXIMUM RATINGS

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

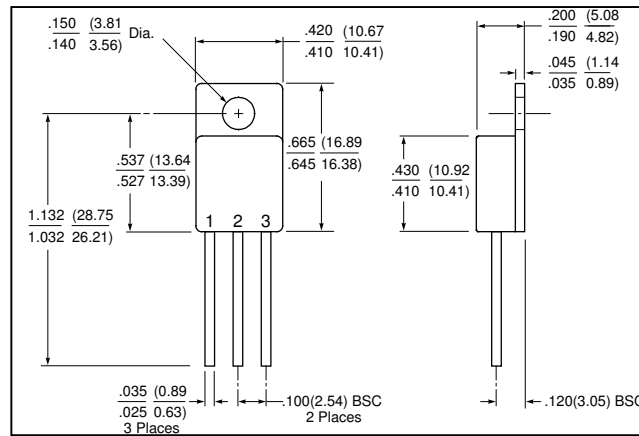
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	$V_{GS}$	-	-	$\pm 20$	Volts
CONTINUOUS DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	$I_D$	-	-	9.0	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	$I_{DM}$	-	-	36	Amps(pk)
OPERATING AND STORAGE TEMPERATURE	$T_{OP}/T_{STG}$	-55	-	+150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	1.4	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	$P_D$	-	-	89	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	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10\text{Vdc}, I_D = 6.0\text{A}$ $I_D = 9.0\text{A}$	$R_{DS(ON)}$	-	-	0.4 0.49	$\Omega$
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	$\mu\text{A}$
GATE TO BODY LEAKAGE CURRENT $V_{GS} = \pm 20\text{Vdc}$	$I_{GSS}$	-	-	$\pm 100$	nA
TOTAL GATE CHARGE GATE TO SOURCE CHARGE GATE TO DRAIN CHARGE $V_{GS} = 10\text{Vdc}$ $V_{DS} = 0.5\text{V Max. Rating},$ $I_D = 9.0\text{A}$	$Q_g$ $Q_{gs}$ $Q_{gd}$	16 3.0 5.5	-	39 5.7 20	nC
TURN ON DELAY TIME RISE TIME TURN OFF DELAY TIME FALL TIME $V_{DD} = 100\text{V},$ $I_D = 9.0\text{A},$ $R_G = 7.5\Omega$ $V_{GS} = 10\text{V}$	$t_{d(ON)}$ $t_r$ $t_{d(OFF)}$ $t_f$	-	-	35 80 60 40	nsec
FORWARD VOLTAGE $T_J = 125^\circ\text{C}, I_S = 9.0\text{A}, V_{GS} = 0\text{V}$	$V_{SD}$	-	-	1.4	Volts
REVERSE RECOVERY TIME REVERSE RECOVERY CHARGE $I_S = 9.0\text{A},$ $di/dt \leq 100\text{A}/\mu\text{sec},$ $V_{DD} \leq 50\text{V}$	$t_{rr}$	-	-	500	nsec
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE $V_{DS} = 25\text{Vdc},$ $V_{GS} = 0\text{Vdc},$ $f = 1\text{MHz}$	$C_{iss}$ $C_{oss}$ $C_{rss}$	-	600 250 80	-	pF

SENSITRON

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**MECHANICAL DIMENSIONS: in Inches / mm****TO-257****PINOUT TABLE**

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

**TECHNICAL DATA**

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