TECHNICAL DATA
DATA SHEET 621, REV -

HERMETIC POWER MOSFET
P-CHANNEL

FEATURES:

- **-200 Volt, 0.5 Ohm, -7.7A MOSFET**
- **Isolated Hermetic Metal Package**
- **Fast Switching**
- **Low $R_{DS\ (on)}$**
- **Equivalent to IRFY9240 Series**

MAXIMUM RATINGS

ALL RATINGS ARE AT T_C = 25°C UNLESS OTHERWISE SPECIFIED.

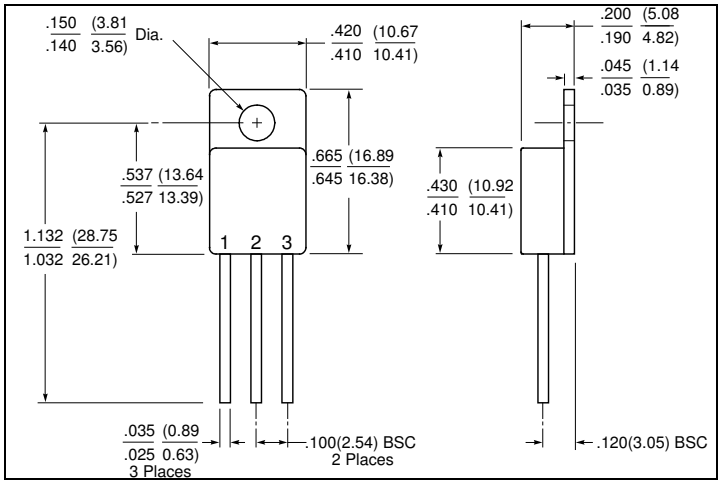
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	±20	Volts
ON-STATE DRAIN CURRENT @ T_C = 25°C	$I_{D\ (on)}$	-	-	-7.7	Amps
PULSED DRAIN CURRENT @ T_C = 25°C	I_{DM}	-	-	-30	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	°C
TOTAL DEVICE DISSIPATION @ T_C = 25°C	P_D	-	-	60	Watts

ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE V_{GS} = 0V, I_D = 1.0 mA	BV_{DSS}	-200	-	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE V_{GS} = -10V, I_D = -4.9A V_{GS} = -10V, I_D = -7.7A	$R_{DS(ON)}$	-	-	 0.50 0.58	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}$, I_D = -250µA	$V_{GS(th)}$	-2.0	-	-4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} \geq -15V_{DS(on)}$, I_D = -4.9A	g_{fs}	4.0	-	-	S(1/Ω)
ZERO GATE VOLTAGE DRAIN CURRENT V_{DS} = 0.8x Max. Rating, V_{GS} = 0V V_{DS} = 0.8x Max. Rating, V_{GS} = 0V, T_J = 125°C	I_{DSS}	-	-	 -25 -250	µA
GATE TO SOURCE LEAKAGE FORWARD V_{GS} = 20V GATE TO SOURCE LEAKAGE REVERSE V_{GS} = -20V	I_{GSS}	-	-	100 -100	nA
TURN ON DELAY TIME V_{DD} = -100V, RISE TIME I_D = -7.7A, TURN OFF DELAY TIME R_G = 9.1Ω, FALL TIME V_{GS} = -10V	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	-	35 85 85 65	nsec
TOTAL GATE CHARGE V_{GS} = -10V, I_D = -7.7A V_{DS} = 0.5 x V_{DS} Max	Q_g	28	-	60	nC
GATE TO SOURCE ON-STATE VOLTAGE V_{GS} = -10V, I_D = -7.7A, V_{DS} = 0.5 x V_{DS} Max	Q_{gs}	3.0	-	15	nC
GATE DRAIN CHARGE V_{GS} = -10V, I_D = -13A, V_{DS} = V_{DS} Max. x 0.8	Q_{gd}	4.5	-	38	nC
DIODE FORWARD VOLTAGE T_C = 25°C, I_S = -7.7A, V_{GS} = 0V	V_{SD}	-	-	-4.6	Volts
REVERSE RECOVERY TIME T_J = 25°C, I_S = -7.7 A, di/dt = -100A/µsec, $V_{DD} \leq$ -50 V	t_{rr}	-	-	440	nsec
INPUT CAPACITANCE V_{GS} = 0 V, OUTPUT CAPACITANCE V_{DS} = 25 V, REVERSE TRANSFER CAPACITANCE f = 1.0MHz	C_{iss} C_{oss} C_{rss}	-	1200 570 81	-	pF
THERMAL RESISTANCE, JUNCTION TO CASE	R_{thJC}	-	-	2.1	°C/W

SENSITRON
DATA SHEET 621
REVISION -

MECHANICAL DIMENSIONS: in Inches / mm



TO-257

PINOUT TABLE

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

TECHNICAL DATA

DISCLAIMER:

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).
2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.
6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.
7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.