TECHNICAL DATA
DATA SHEET 871, REV. -

HERMETIC POWER MOSFET
P-CHANNEL

FEATURES:

- **-100 Volt, 0.21 Ohm, -13A MOSFET**
- **Hermetic Metal Package**
- **Fast Switching**
- **Electrically Equivalent to IRFY9140 Series**

MAXIMUM RATINGS

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

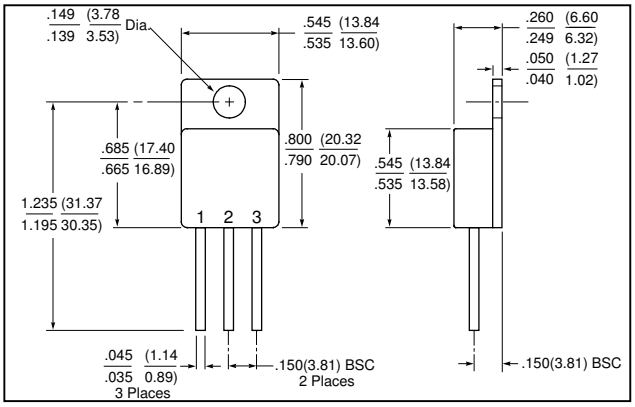
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	±20	Volts
ON-STATE DRAIN CURRENT @ T_C = 25°C	$I_{D\ (on)}$	-	-	-13	Amps
PULSED DRAIN CURRENT @ T_C = 25°C	I_{DM}	-	-	-52	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	°C
THERMAL RESISTANCE, JUNCTION TO CASE	R_{thJC}	-	-	0.88	°C/W
TOTAL DEVICE DISSIPATION @ T_C = 25°C	P_D	-	-	140	Watts

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE V_{GS} = 0V, I_D = 1.0 mA	BV_{DSS}	-100	-	-	Volts
TOTAL GATE CHARGE V_{GS} = -10V, I_D = -13A, V_{DS} = 0.5 x V_{DS} Max.	Q_g	31	-	60	nC
GATE TO SOURCE ON-STATE VOLTAGE V_{GS} = -10V, I_D = -13A, V_{DS} = 0.5 x V_{DS} Max.	Q_{gs}	3.7	-	13	nC
GATE DRAIN CHARGE V_{GS} = -10V, I_D = -13A, V_{DS} = 0.5 x V_{DS} Max.	Q_{gd}	7.0	-	35.2	nC
STATIC DRAIN TO SOURCE ON STATE RESISTANCE V_{GS} = 10V, I_D = -8.4A V_{GS} = 10V, I_D = -13A	$R_{DS(ON)}$	-	-	 0.21 0.24	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 = -8.2A	g_{fs}	6.2	-	-	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	mA
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 RISE TIME TURN OFF DELAY TIME FALL TIME V_{DD} = -50V, I_D = -13A, R_G = 9.1Ω, V_{GS} = -10V	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	-	35 85 85 65	nsec
DIODE FORWARD VOLTAGE T_C = 25°C, I_S = -13A, V_{GS} = 0V	V_{SD}	-	-	-4.2	Volts
REVERSE RECOVERY TIME T_J = 25°C, I_S = -13 A, di/dt ≤ -100A/µsec, V_{DD} ≤ -50 V	t_{rr}	-	-	280	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}	-	1400 600 200	-	pF

SENSITRON
DATA SHEET 871
REVISION -

MECHANICAL DIMENSIONS: in Inches / mm



TO-254

PINOUT TABLE

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

TECHNICAL DATA

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