TECHNICAL DATA
DATA SHEET 972, REV. A

HERMETIC POWER MOSFET
N-CHANNEL

FEATURES

- **60 Volt, 0.04 Ohm, 20A MOSFET**
- **Isolated Hermetic Metal Package**
- **Fast Switching**
- **Low $R_{DS\ (on)}$**
- **Equivalent to IRFM044 Series**

MAXIMUM RATINGS

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

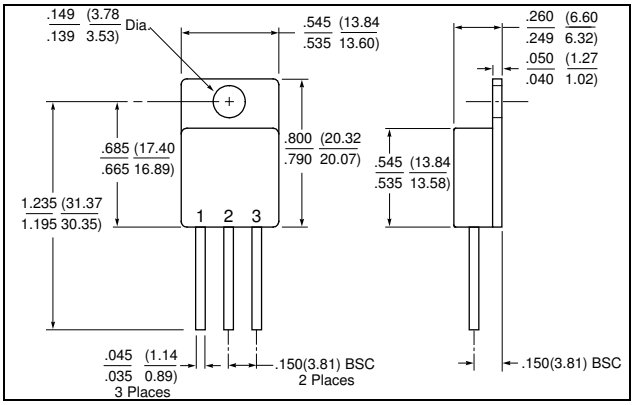
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	±20	Volts
ON-STATE DRAIN CURRENT @ T_C = 25°C	I_D	-	-	20	Amps
PULSED DRAIN CURRENT	I_{DM}	-	-	128	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	°C
THERMAL RESISTANCE, JUNCTION TO CASE	R_{thJC}	-	-	0.75	°C/W
TOTAL DEVICE DISSIPATION @ T_C = 25°C	P_D	-	-	165	Watts

ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE V_{GS} = 0V, I_D = 1.0mA	BV_{DSS}	60	-	-	Volts
TOTAL GATE CHARGE V_{GS} = 10V, I_D = 20A, V_{DS} = 0.5 x V_{DS} Max.	Q_g	39	-	88	nC
GATE TO SOURCE ON-STATE VOLTAGE V_{GS} = 10V, I_D = 20A, V_{DS} = 0.5 x V_{DS} Max.	Q_{gs}	6.7	-	15	nC
GATE DRAIN CHARGE V_{GS} = 10V, I_D = 20A, V_{DS} = 0.5 x V_{DS} Max.	Q_{gd}	18	-	52	nC
STATIC DRAIN TO SOURCE ON STATE RESISTANCE V_{GS} = 10V, I_D = 20A	$R_{DS(ON)}$	-	-	0.035	Ω
GATE THRESHOLD VOLTAGE V_{DS} = V_{GS}, I_D = 250µA	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE V_{DS} ≥ 15V, I_D = 20A	g_{fs}	17	-	-	S(1/Ω)
ZERO GATE VOLTAGE DRAIN CURRENT V_{DS} = 0.8xMax. Rating, V_{GS} = 0V V_{DS} = 0.8xMax. 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} = 30V, RISE TIME I_D = 20A, TURN OFF DELAY TIME R_G = 9.1Ω, FALL TIME V_{GS} = 10V	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	-	23 130 81 79	nsec
DIODE FORWARD VOLTAGE T_C = 25°C, I_S = 20A, V_{GS} = 0V	V_{SD}	-	-	2.5	Volts
REVERSE RECOVERY TIME T_J = 25°C, I_S = 20A, di/ds ≤ 100A/µsec, V_{DD} ≤ 50V	t_{rr}	-	-	220	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}	-	2400 1100 230	-	pF

SENSITRON
DATA SHEET 972
REVISION A

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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