

2N7236

## HERMETIC POWER MOSFET P-CHANNEL

**FEATURES:**

- -100 Volt, 0.20 Ohm MOSFET
- Isolated and Hermetically Sealed
- Simple Drive Requirements
- Repetitive Avalanche Rating

**MAXIMUM RATINGS**

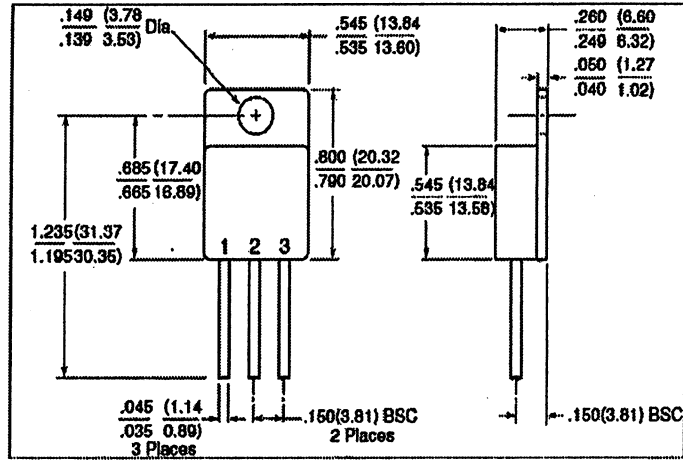
ALL RATINGS ARE AT  $T_A = 25^\circ\text{C}$  UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	$V_{GS}$	-	-	$\pm 20$	Volts
CONTINUOUS DRAIN CURRENT $V_{GS}=10\text{V}, T_C=25^\circ\text{C}$ $V_{GS}=10\text{V}, T_C=100^\circ\text{C}$	$I_D$	-	-	-18 -11	Amps
PULSED DRAIN CURRENT @ $T_C=25^\circ\text{C}$	$I_{DM}$	-	-	-72	Amps
OPERATING AND STORAGE TEMPERATURE	$T_{OP}/T_{STG}$	-55	-	150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	0.83	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C=25^\circ\text{C}$	$P_D$	-	-	125	Watts

**ELECTRICAL CHARACTERISTICS**

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 1.0\text{mA}$	$BV_{DSS}$	-100	-	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = -10\text{V}, I_D = -11\text{A}$ $V_{GS} = -10\text{V}, I_D = -18\text{A}$	$R_{DS(ON)}$	-	-	0.20 0.22	$\Omega$
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = -250\mu\text{A}$	$V_{GS(th)}$	-2.0	-	-4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} \geq -15\text{V}, I_{DS} = -11\text{A}$	$g_{fs}$	6.2	-	-	$\text{S}(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0\text{V}$ $V_{DS} = 0.8 \times \text{Max. Rating}$ $V_{GS} = 0\text{V}, T_J = 125^\circ\text{C}$	$I_{DSS}$	-	-	-25 -250	$\mu\text{A}$
GATE TO SOURCE LEAKAGE FORWARD @ RATED GATE TO SOURCE LEAKAGE REVERSE $V_{GS}$	$I_{GSS}$	-	-	100 -100	nA
TOTAL GATE CHARGE $V_{GS} = 10\text{ VOLTS},$ GATE TO SOURCE CHARGE $50\% \text{ RATED } V_{DS},$ GATE TO DRAIN CHARGE $\text{RATED } I_D$	$Q_g$ $Q_{gs}$ $Q_{gd}$	31 3.7 7.0	-	60 13 35.2	nC
TURN ON DELAY TIME $V_{DD} = -50\text{V},$ RISE TIME $\text{RATED } I_D,$ TURN OFF DELAY TIME $R_G = 9.1\Omega$ FALL TIME	$t_{d(ON)}$ $t_r$ $t_{d(OFF)}$ $t_f$	-	-	35 85 85 65	nsec
DIODE FORWARD VOLTAGE $T_J = 25^\circ\text{C}, I_S = 34\text{A},$ $V_{GS} = 0\text{V}$	$V_{SD}$	-	-	-4.2	Volts
DIODE REVERSE RECOVERY TIME $T_J = 25^\circ\text{C},$ REVERSE RECOVERY CHARGE $I_t = \text{RATED } I_D,$ $di/dt = -100\text{A/sec}$	$t_{rr}$ $Q_{rr}$	-	-	280 3.6	nsec $\mu\text{C}$
INPUT CAPACITANCE $V_{GS} = 0\text{ Volts},$ OUTPUT CAPACITANCE $V_{DS} = 25\text{ Volts},$ REVERSE TRANSFER CAPACITANCE $f = 1\text{ MHz}$	$C_{iss}$ $C_{oss}$ $C_{rfs}$	-	1400 600 200	-	pF

**MECHANICAL DIMENSIONS: In Inches / mm**



**TO-254**

**PINOUT TABLE**

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