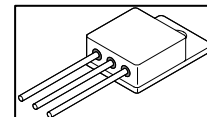


## HERMETIC POWER MOSFET N-CHANNEL



DESCRIPTION: 200 VOLT, 0.105 OHM, 27.4 A MOSFET IN A HERMETIC TO-254 PACKAGE.

(add suffix S for up-screening to JTX Level – 2N7225S)

### MAXIMUM RATINGS

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

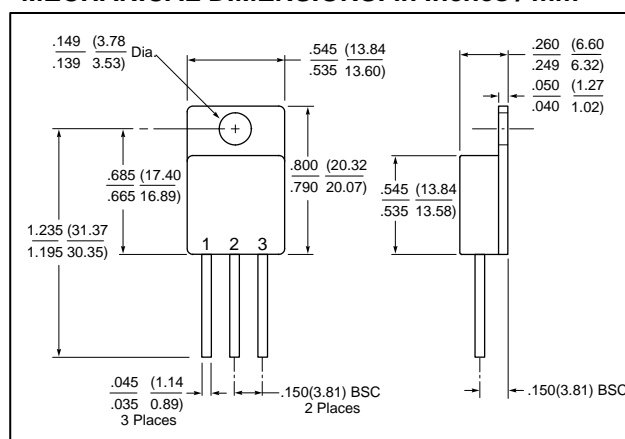
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	$V_{GS}$	-	-	$\pm 20$	Volts
CONTINUOUS DRAIN CURRENT $V_{GS}=10\text{V}, T_C = 25^\circ\text{C}$ $V_{GS}=10\text{V}, T_C = 100^\circ\text{C}$	$I_D$	-	-	27.4 17	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	$I_{DM}$	-	-	110	Amps
OPERATING 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 @ $T_C = 25^\circ\text{C}$	$P_D$	-	-	150	Watts

### ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 1.0\text{mA}$	$BV_{DSS}$	200	-	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10\text{V}, I_D = 17\text{A}$ $V_{GS} = 10\text{V}, I_D = 27.4\text{A}$	$R_{DS(ON)}$	-	-	0.100 0.105	$\Omega$
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} \geq 15\text{V}, I_{DS} = 17\text{A}$	$g_{fs}$	9.0	-	-	$\text{S}(1/\Omega)$
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 $V_{GS} = 10\text{ VOLTS}$	$Q_g$	55	-	115	nC
GATE TO SOURCE CHARGE $V_{DS}$	$Q_{gs}$	8.0	-	22	
GATE TO DRAIN CHARGE RATED $I_D$	$Q_{gd}$	30	-	60	
TURN ON DELAY TIME $V_{DD} = 100\text{V}$	$t_{d(ON)}$	-	-	35	nsec
RISE TIME RATED $I_D$	$t_r$	-	-	190	
TURN OFF DELAY TIME $R_G = 2.35\Omega$	$t_{d(OFF)}$	-	-	170	
FALL TIME	$t_f$	-	-	130	
DIODE FORWARD VOLTAGE $T_J = 25^\circ\text{C}, I_S = 27.4\text{A},$ $V_{GS} = 0\text{V}$	$V_{SD}$	-	-	1.9	Volts
DIODE REVERSE RECOVERY TIME REVERSE RECOVERY CHARGE $T_J = 25^\circ\text{C}$ $I_f = \text{RATED ID}$ $di/dt = 100\text{A}/\text{sec}$	$t_{rr}$ $Q_{rr}$	-	-	950 9.0	nsec $\mu\text{C}$
INPUT CAPACITANCE OUTPUT CAPACITANCE $V_{GS} = 0\text{ VOLTS}$ $V_{DS} = 25\text{ VOLTS}$	$C_{iss}$ $C_{oss}$	-	3500 700	-	pF

REVERSE TRANSFER CAPACITANCE	f = 1 MHz	C <sub>rss</sub>		110		
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**MECHANICAL DIMENSIONS: in Inches / mm**

**TO-254**
**PINOUT TABLE**

DEVICE TYPE	PIN 1	PIN 2	PIN 3
N-CHANNEL MOSFET IN A TO-254 PACKAGE	DRAIN	SOURCE	GATE

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