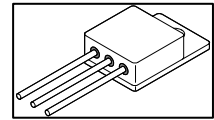


TECHNICAL DATA
DATA SHEET 271, REV. A

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

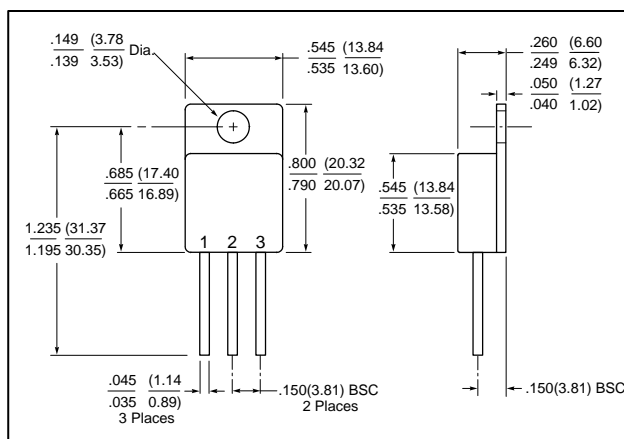
ALL RATINGS ARE AT $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 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	Ω
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	μA
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% RATED V_{DS} GATE TO DRAIN CHARGE RATED I_D	Q_g Q_{gs} Q_{gd}	55 8.0 30	-	115 22 60	nC
TURN ON DELAY TIME $V_{DD}=100\text{V}$ RISE TIME RATED I_D TURN OFF DELAY TIME $R_G=2.35\Omega$ FALL TIME	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	-	35 190 170 130	nsec
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 $T_J=25^\circ\text{C}$ REVERSE RECOVERY CHARGE $I_f = \text{RATED ID}$ $di/dt = 100\text{A/sec}$	t_{rr} Q_{rr}	-	-	950 9.0	nsec μC
INPUT CAPACITANCE $V_{GS}=0\text{ VOLTS}$ OUTPUT CAPACITANCE $V_{DS}=25\text{ VOLTS}$	C_{iss} C_{oss}	-	3500 700	-	pF

REVERSE TRANSFER CAPACITANCE	f = 1 MHz	C _{rss}		110		
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SENSITRON
DATA SHEET 271, REV. A
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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