

TECHNICAL DATA
DATA SHEET 825, REV. -

HERMETIC POWER MOSFET N-CHANNEL

FEATURES:

- 200 Volt, 0.045 Ohm, 50A MOSFET
- Isolated Hermetic Metal Package
- Low $R_{DS(on)}$

MAXIMUM RATINGS

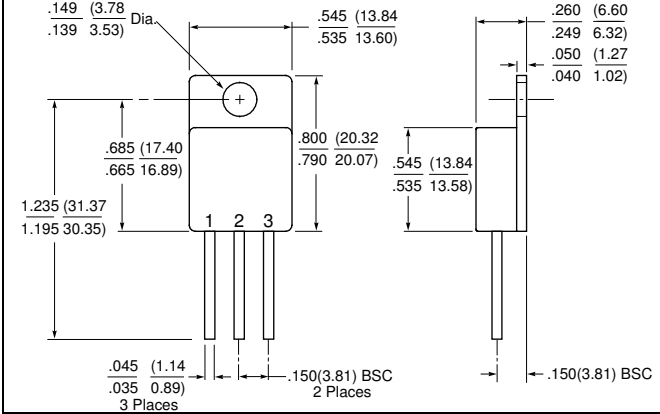
ALL RATINGS ARE AT $T_C = 25^\circ\text{C}$ UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
ON-STATE DRAIN CURRENT	I_{D25}	-	-	50	Amps
PULSED DRAIN CURRENT	I_{DM}	-	-	200	Amps
OPERATING AND STORAGE TEMPERATURE	T_J/T_{STG}	-55	-	+150	$^\circ\text{C}$
TOTAL DEVICE DISSIPATION	P_D	-	-	270	Watts
THERMAL RESISTANCE, JUNCTION TO CASE	$R_{\theta JC}$	-	-	0.45	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = 250\mu\text{A}$	BV_{DSS}	200	-	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10V, I_D = 0.5I_{D25}$	$R_{DS(ON)}$	-	-	0.045	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 4.0\text{ mA}$	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} = 10V, I_D = 0.5I_{D25}$	g_{fs}	26	32	-	$S(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 0.8 \times \text{Max. rating}, V_{GS} = 0V, T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	I_{DSS}	-	-	200 1000	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 RISE TIME $V_{DS} = 0.5V \bullet$ $V_{DSS}, I_D = 0.5 \bullet I_{D25}$	$t_{d(ON)}$ t_r	-	18 15	25 20	nsec
TURN OFF DELAY TIME FALL TIME $V_{GS} = 10V$ $R_G = 1.0\Omega$	$t_{d(OFF)}$ t_f	-	72 16	90 25	
DIODE FORWARD VOLTAGE $I_F = I_S, V_{GS} = 0V$ Pulse test, $t \leq 300\mu\text{s}$, duty cycle $d \leq 2\%$	V_{SD}	-	-	1.5	Volts
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C}$, $I_F = 25A, V_R = 100V$ $di/dt = 100A/\mu\text{sec}$	t_{rr}	-	400	-	nsec
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE $V_{GS} = 0V$, $V_{DS} = 25V$, $f = 1.0\text{MHz}$	C_{iss} C_{oss} C_{rss}	-	4400 800 280	-	pF

MECHANICAL DIMENSIONS: in Inches / mm



TO-254

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

TECHNICAL DATA

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