

TECHNICAL DATA
DATA SHEET 4144, REV. -

HERMETIC POWER MOSFET N-CHANNEL ULTRA LOW $R_{DS(ON)}$

FEATURES:

- 200 Volt, 0.03 Ohm, 90A MOSFET
- Isolated Hermetic Metal Package
- Fast Switching
- Ultra Low $R_{DS(on)}$

MAXIMUM RATINGS

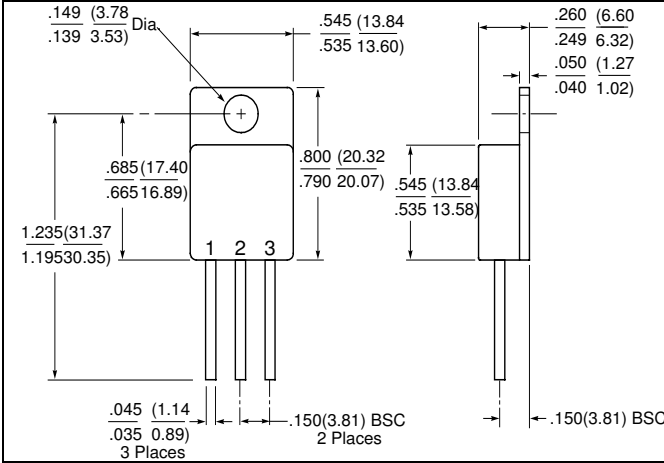
ALL RATINGS ARE AT $T_C = 25^\circ\text{C}$ UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 30	Volts
ON-STATE DRAIN CURRENT	I_D	-	-	90	Amps
PULSED DRAIN CURRENT	I_{DM}	-	-	380	Amps
OPERATING AND STORAGE TEMPERATURE	T_J/T_{STG}	-55	-	+150	$^\circ\text{C}$
TOTAL DEVICE DISSIPATION	P_D	-	-	150	Watts

ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = 0.25 \text{ mA}$	BV_{DSS}	200	-	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10V, I_D = 56A$	$R_{DS(ON)}$	-	-	0.03	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 0.25 \text{ mA}$	$V_{GS(th)}$	3	-	5	Volts
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}	-	-	25 250	μA
GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 30V$	I_{GSS}	-	-	100	nA
GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -30V$				-100	
TURN ON DELAY TIME RISE TIME $V_{DD} = 100V,$ $I_D = 56A$	$t_{d(ON)}$ t_r	-	23 160	-	nsec
TURN OFF DELAY TIME FALL TIME $V_{GS} = 10V$ $R_G = 1.2\Omega$	$t_{d(OFF)}$ t_f		43 79		
DIODE FORWARD VOLTAGE $I_S = 56A, V_{GS} = 0V$ Pulse test, $t \leq 300 \mu\text{s}$, duty cycle $d \leq 2\%$	V_{SD}	-	-	1.5	Volts
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C},$ $I_F = 56A, di/dt = 100A/\mu\text{sec}$	t_{rr}	-	230	340	nsec
INPUT CAPACITANCE $V_{GS} = 0V$	C_{iss}	-	6040	-	pF
OUTPUT CAPACITANCE $V_{DS} = 25V$	C_{oss}		1070		
REVERSE TRANSFER CAPACITANCE $f = 1.0\text{MHz}$	C_{rss}		170		
THERMAL RESISTANCE, JUNCTION TO CASE	R_{thJC}	-	-	1	$^\circ\text{C/W}$

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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