



PRELIMINARY

SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada, CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

SFF9240/3

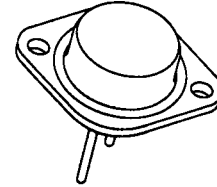
**-11 AMP
-200 VOLTS
0.50Ω
P-CHANNEL
POWER MOSFET**

Designer's Data Sheet

FEATURES:

- Rugged construction with poly silicon gate
- Low RDS(on) and high transconductance
- Excellent high temperature stability
- Very fast switching speed
- Fast recovery and superior dv/dt performance
- Increased reverse energy capability
- Low input and transfer capacitance for easy paralleling
- Hermetically sealed
- TX, TXV and Space Level Screening available
- Replaces: IRF9240 Types

TO-3



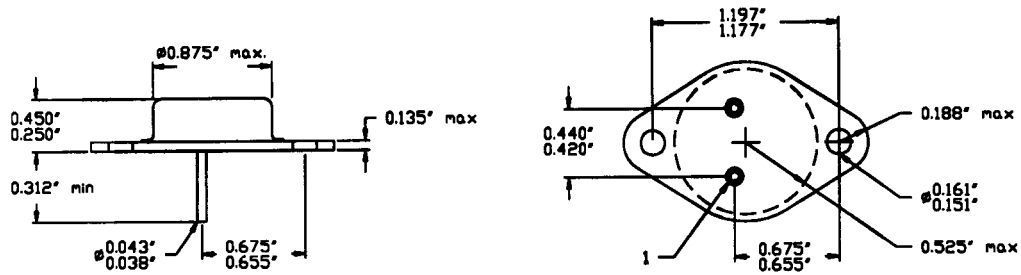
MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V _{DS}	-200	Volts
Gate to Source Voltage	V _{GS}	±20	Volts
Continuous Drain Current	I _D	-9.3	Amps
Operating and Storage Temperature	T _{OP} & T _{STG}	-55 to +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	1.0	°C/W
Total Device Dissipation @ TC=25°C	P _D	125	Watts
Total Device Dissipation @ TC=55°C		95	

PACKAGE OUTLINE: TO-3

PIN OUT:

**PIN 1: SOURCE
PIN 2: GATE
CASE DRAIN**



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	DATA SHEET #: FP0009 A	MED
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ELECTRICAL CHARACTERISTICS @ T_J=25 °C (Unless Otherwise Specified)						
RATING		SYMBOL	MIN	TYP	MAX	UNIT
Drain to Source Breakdown Voltage (VGS=0 V, ID=-250µA)		BV_{DSS}	-200	---	---	V
Drain to Source on State Resistance (VGS= -10 V, ID= -6 A)		R_{DS(on)}	---	0.35	0.50	Ω
On State Drain Current (VDS > ID(on) X RDS(on) Max, VGS= -10 V)		ID(on)	-11	---	---	A
Gate Threshold Voltage (VDS=VGS, ID=-250µA)		VGS(th)	-2.0	---	-4.0	V
Forward Transconductance (VDS ≥ ID(on) X RDS(on) max., IDS= -6.0 A)		g_{fs}	4	6	---	S(Ω)
Zero Gate Voltage Drain Current (VDS=max rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=125°C)		IDSS	---	---	-250 -1000	µA
Gate to Source Leakage Forward Gate to Source Leakage Reverse	VGS= ±20V	I_{GSS}	---	---	-100 100	nA
Total Gate Charge Gate to Source Charge Gate to Drain Charge	VGS= -15 Volts 80% rated VDS ID= -22 A	Q_g Q_{gs} Q_{gd}	---	38 8.0 21	90 ---	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	VDD= -100 V ID= -6 A RG= 4.7Ω	t_{d(on)} t_r t_{d(off)} t_f	---	13 45 29 29	30 15 18 12	nsec
Diode Forward Voltage (IS= -11 A, VGS=0 V, T _J =25°C)		VSD	---	---	-4.6	V
Diode Reverse Recovery Time Reverse Recovery Charge	T _J =150°C I _F =-11 A di/dt=100 A/ sec	t_{rr} Q_{RR}	---	270 2.0	---	nsec µC
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS= -25 Volts f= 1 MHz	C_{iss} C_{oss} C_{rss}	---	1100 375 150	1300 450 250	pF

SAFE OPERATING AREA (S.O.A.)
 T_C = 25 °C, D.C. CONDITION

