



PRELIMINARY

SOLID STATE DEVICES, INC

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

SFF9240/3

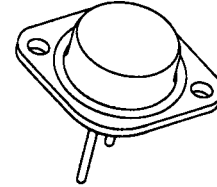
**-11 AMP
-200 VOLTS
0.50Ω
P-CHANNEL
POWER MOSFET**

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



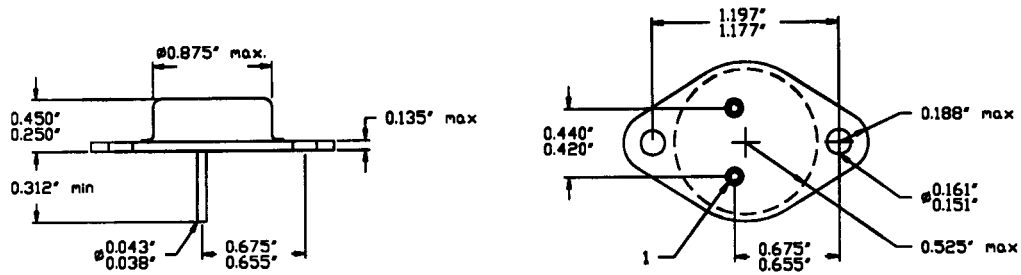
MAXIMUM RATINGS

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

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SFF9240/3

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ELECTRICAL CHARACTERISTICS @ T _J =25 °C (Unless Otherwise Specified)						
RATING	SYMBOL	MIN	TYP	MAX	UNIT	
Drain to Source Breakdown Voltage (V _{GS} =0 V, I _D =-250μA)	BV _{DSS}	-200	---	---	V	
Drain to Source on State Resistance (V _{GS} = -10 V, I _D = -6 A)	R _{DS(on)}	---	0.35	0.50	Ω	
On State Drain Current (V _{DS} > I _{D(on)} X R _{DS(on)} Max, V _{GS} = -10 V)	I _{D(on)}	-11	---	---	A	
Gate Threshold Voltage (V _{DS} =V _{GS} , I _D =-250μA)	V _{GS(th)}	-2.0	---	-4.0	V	
Forward Transconductance (V _{DS} ≥ I _{D(on)} X R _{DS(on)} max., I _{DS} = -6.0 A)	g _{fs}	4	6	---	S(Ω)	
Zero Gate Voltage Drain Current (V _{DS} =max rated voltage, V _{GS} =0 V) (V _{DS} =80% rated V _{DS} , V _{GS} =0 V, T _A =125° C)	I _{DSS}	---	---	-250 -1000	μA	
Gate to Source Leakage Forward Gate to Source Leakage Reverse	V _{GS} = ±20V I _{GSS}	---	---	-100 100	nA	
Total Gate Charge Gate to Source Charge Gate to Drain Charge	V _{GS} = -15 Volts 80% rated V _{DS} I _D = -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	V _{DD} = -100 V I _D = -6 A R _G = 4.7Ω t _{d(on)} t _r t _{d(off)} t _f	---	13 45 29 29	30 15 18 12	nsec	
Diode Forward Voltage (I _S = -11 A, V _{GS} =0 V, T _J =25° C)	V _{SD}	---	---	-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	V _{GS} =0 Volts V _{DS} = -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

