



PRELIMINARY

SOLID STATE DEVICES, INC

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Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

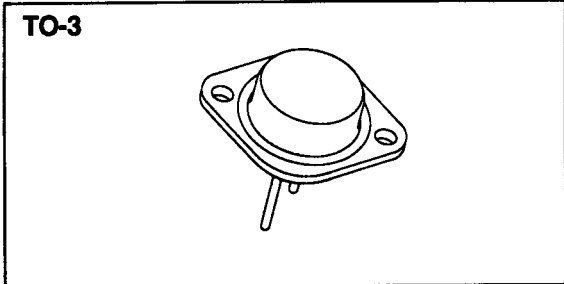
**SFF9240/3**

**-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



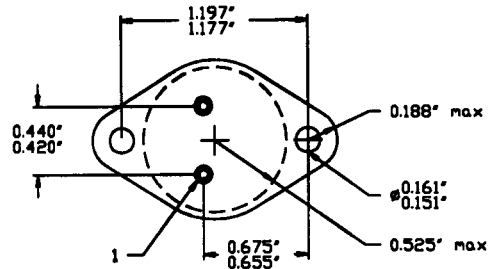
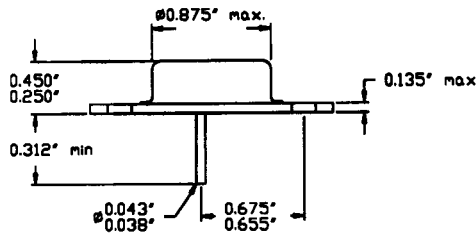
**MAXIMUM RATINGS**

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

**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**

**SFF9240/3**

PRELIMINARY

**SSDI****SOLID STATE DEVICES, INC**14849 Firestone Boulevard · La Mirada, CA 90638  
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424**ELECTRICAL CHARACTERISTICS @ T<sub>J</sub>=25°C (Unless Otherwise Specified)**

RATING	SYMBOL	MIN	TYP	MAX	UNIT
Drain to Source Breakdown Voltage (VGS=0 V, ID=-250 $\mu$ A)	BV <sub>DSS</sub>	-200	---	---	V
Drain to Source on State Resistance (VGS= -10 V, ID= -6 A)	RDS(on)	---	0.35	0.50	$\Omega$
On State Drain Current (VDS > ID(on) X RDS(on) Max, VGS= -10 V)	ID(on)	-11	---	---	A
Gate Threshold Voltage (VDS=VGS, ID=-250 $\mu$ A)	VGS(th)	-2.0	---	-4.0	V
Forward Transconductance (VDS $\geq$ ID(on) X RDS(on) max., IDS= -6.0 A)	gfs	4	6	---	S( $\bar{v}$ )
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	$\mu$ A
Gate to Source Leakage Forward Gate to Source Leakage Reverse	VGS= $\pm$ 20V IGSS	---	---	-100 100	nA
Total Gate Charge Gate to Source Charge Gate to Drain Charge	VGS= -15 Volts 80% rated VDS ID= -22 A Qg Qgs Qgd	---	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= 4.7 $\Omega$ td(on) tr td(off) tf	---	13 45 29 29	30 15 18 12	nsec
Diode Forward Voltage (IS= -11 A, VGS=0 V, T <sub>J</sub> =25°C)	VSD	---	---	-4.6	V
Diode Reverse Recovery Time Reverse Recovery Charge	T <sub>J</sub> =150°C IF=-11 A di/dt=100 A/ sec trr QRR	---	270 2.0	---	nsec $\mu$ C
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS= -25 Volts f= 1 MHz Ciss Coss Crss	---	1100 375 150	1300 450 250	pF

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