



PRELIMINARY

SOLID STATE DEVICES, INC

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

SFF9240J

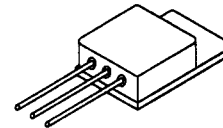
**-11 AMP
-200 VOLTS
0.50Ω
P-CHANNEL
POWER MOSFET**

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: IRF9140 Types

TO-257



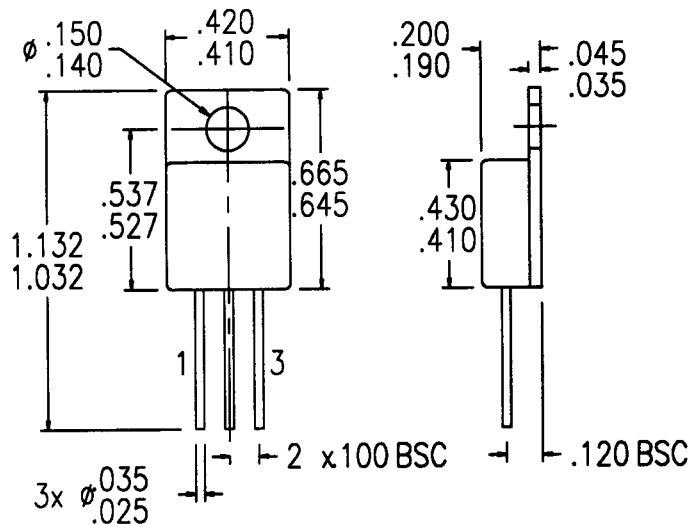
MAXIMUM RATINGS

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	-11	Amps
Operating and Storage Temperature	T _{OP} & T _{STG}	-55 to +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	2.0	°C/W
Total Device Dissipation @ TC=25°C Total Device Dissipation @ TC=55°C	P _D	63 48	Watts

PACKAGE OUTLINE: TO-257

PIN OUT:

- PIN 1: DRAIN**
- PIN 2: SOURCE**
- PIN 3: GATE**



<p>NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.</p>	<p>DATA SHEET #: FP0001 A</p>	<p>MED</p>
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SSDI**SOLID STATE DEVICES, INC**14849 Firestone Boulevard · La Mirada, CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424**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