PRELIMINARY

SOLID STATE DEVICES, INC

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

SFF9240M
SFF9240Z

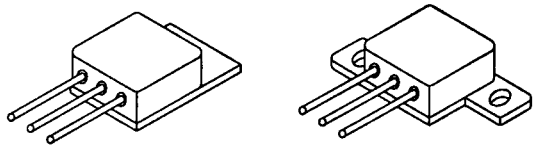
Designer's Data Sheet

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

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

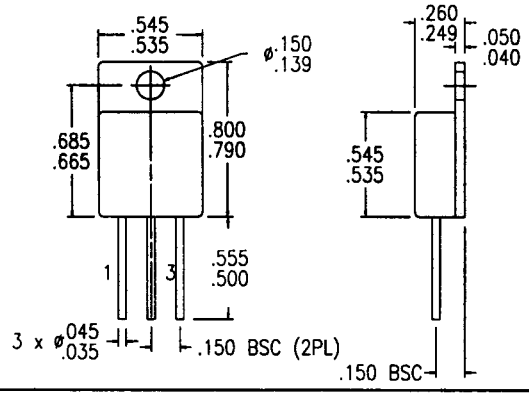
TO-254 **TO-254Z**



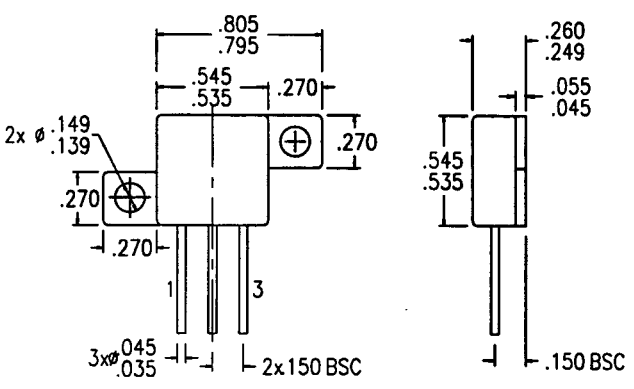
MAXIMUM RATINGS

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	$R_{\theta JC}$	1.7	°C/W
Total Device Dissipation @ TC=25°C Total Device Dissipation @ TC=55°C	P_D	74 56	Watts

PACKAGE OUTLINE: TO-254
PIN OUT:
PIN 1: DRAIN
PIN 2: SOURCE
PIN 3: GATE



PACKAGE OUTLINE: TO-254Z
PIN OUT:
PIN 1: DRAIN
PIN 2: SOURCE
PIN 3: GATE



Available with Glass or Ceramic Seals. Contact Factory for details.

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	DATA SHEET #: FP0003 C	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		$I_{D(on)}$	-11	---	---	A
Gate Threshold Voltage (VDS=VGS, ID=-250µA)		$V_{GS(th)}$	-2.0	---	-4.0	V
Forward Transconductance (VDS ≥ ID(on) X RDS(on) max., IDS= -6.0 A)		gfs	4	6	---	S(℧)
Zero Gate Voltage Drain Current (VDS=80% rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=125°C)		I_{DSS}	--- ---	--- ---	-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= 10 Volts 80% rated VDS ID= -11 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= 7 A RG= 9.1Ω	$t_{d(on)}$ t_r $t_{d(off)}$ t_f	--- --- --- ---	13 45 29 29	35 85 85 65	nsec
Diode Forward Voltage (IS= -11 A, VGS=0 V, TJ=25°C)		V_{SD}	---	---	-4.6	V
Diode Reverse Recovery Time **Reverse Recovery Charge**	TJ=25°C IF=-11 A di/dt=100 A/µsec	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	Ciss Coss Crss	--- --- ---	1100 375 150	1300 450 250	pF

For thermal derating curves and other characteristic curves please contact SSDI Marketing Department.