



PRELIMINARY

SOLID STATE DEVICES, INC

SFF150/3

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

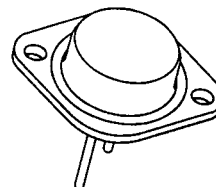
Designer's Data Sheet

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 package
- TX, TXV and Space Level screening available
- Replaces: IRF150 Types

**30 AMP
 100 VOLTS
 0.055 Ω
 N-CHANNEL
 POWER MOSFET**

TO-3



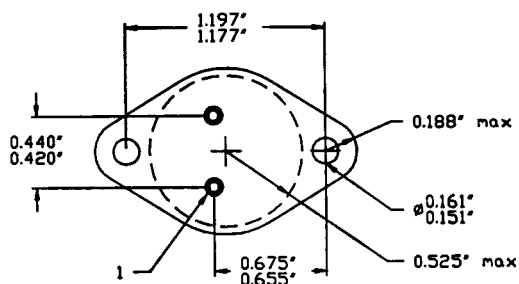
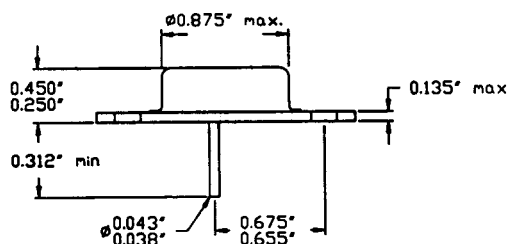
MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V _{DS}	100	Volts
Gate to Source Voltage	V _{GS}	± 20	Volts
Continuous Drain Current	I _D	30	Amps
Operating and Storage Temperature	Top & Tstg	-55 to +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	0.83	°C/W
Total Device Dissipation @ TC=25°C Total Device Dissipation @ TC=55°C	P _D	150 114	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 #: F00045 B

MED

SFF150/3

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ELECTRICAL CHARACTERISTICS @ $T_J=25^{\circ}\text{C}$ (Unless Otherwise Specified)

RATING		SYMBOL	MIN	TYP	MAX	UNIT
Drain to Source Breakdown Voltage (VGS=0 V, ID=250μA)		BVDSS	100	---	---	V
Drain to Source on State Resistance (VGS=10 V, ID=20 A)		RDS(on)	---	---	0.055	Ω
On State Drain Current (VDS >ID(on) X RDS(on) Max, VGS=10 V		ID(on)	30	---	---	A
Gate Threshold Voltage (VDS=VGS, ID=250μA)		VGS(th)	2	---	4	V
Forward Transconductance (VDS >ID(on) X RDS(on) Max, IDS=20 A)		gfs	9	11	---	S(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	μA
Gate to Source Leakage Forward Gate to Source Leakage Reverse	At rated VGS	IGSS	---	---	100 100	nA
Total Gate Charge Gate to Source Charge Gate to Drain Charge	VGS=10 Volts 80% rated VDS Rated ID	Qg Qgs Qgd	---	63 27 36	120 ---	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	VDD= 24 V ID= 20 A RG= 6.2 Ω	td(on) tr td(off) tf	---	---	35 100 125 100	nsec
Diode Forward Voltage (IS= 40 A, VGS=0 V, TJ=25°C)		VSD	---	---	2.5	V
Diode Reverse Recovery Time Reverse Recovery Charge	TJ=25°C IF=40 A di/dt=100 A/μsec	trr QRR	---	600 3.3	---	nsec μC
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS=25 Volts f= 1 MHz	Ciss Coss Crss	---	2000 1000 350	3000 1500 500	pF

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