PRELIMINARY

SFF150/3

SOLID STATE DEVICES, INC

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

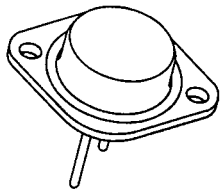
Designer's Data Sheet

30 AMP
100 VOLTS
0.055 Ω
N-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 package
- TX, TXV and Space Level screening available
- Replaces: IRF150 Types

TO-3



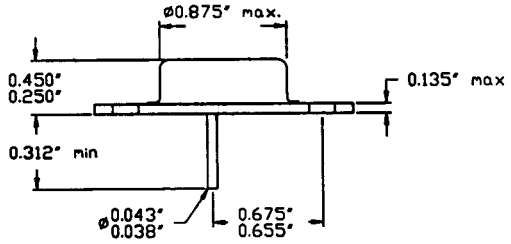
MAXIMUM RATINGS

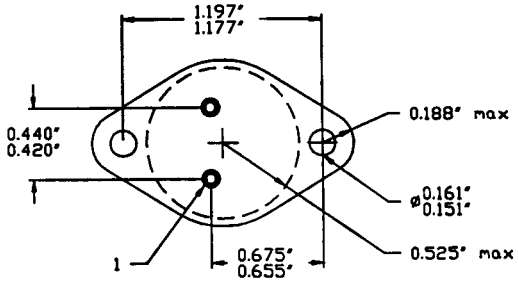
CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V_{DS}	100	Volts
Gate to Source Voltage	V_{GS}	± 20	Volts
Continuous Drain Current	I_D	30	Amps
Operating and Storage Temperature	T_{op} & T_{stg}	-55 to +150	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.83	°C/W
Total Device Dissipation @ 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

PRELIMINARY

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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}	100	---	---	V
Drain to Source on State Resistance (VGS=10 V, ID=20 A)		$R_{DS(on)}$	---	---	0.055	Ω
On State Drain Current (VDS >ID(on) X RDS(on) Max, VGS=10 V		$I_{D(on)}$	30	---	---	A
Gate Threshold Voltage (VDS=VGS, ID=250μA)		$V_{GS(th)}$	2	---	4	V
Forward Transconductance (VDS >ID(on) X RDS(on) Max, IDS=20 A)		gfs	9	11	---	S(℧)
Zero Gate Voltage Drain Current (VDS=max 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	At rated VGS	I_{GSS}	--- ---	--- ---	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)		V_{SD}	---	---	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.