

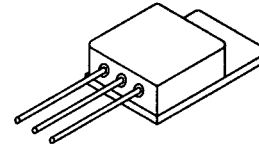


PRELIMINARY

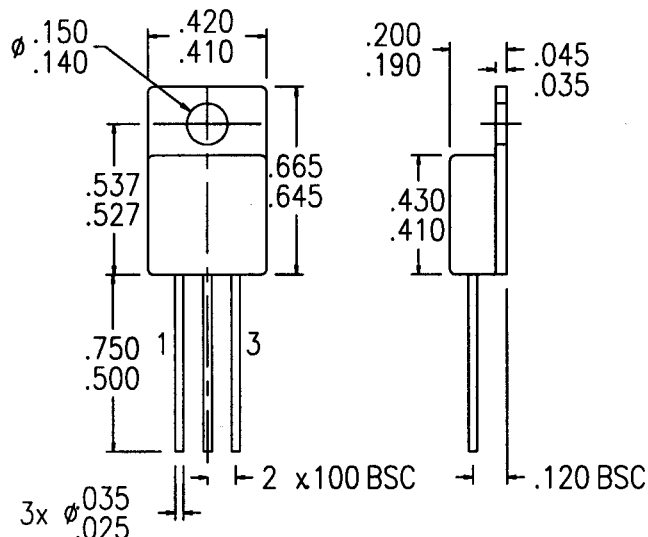
SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada, CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424**Designer's Data Sheet****FEATURES:**

- Logic Level Gate Drive
- 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: IRLIZ44G Types

SFL044J**30 AMP
60 VOLT
0.030 Ω
N-CHANNEL
LOGIC LEVEL
POWER MOSFET****TO-257****MAXIMUM RATINGS**

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V _{DS}	60	Volts
Gate to Source Voltage	V _{GS}	±10	Volts
Continuous Drain Current @ V _{GS} =5V	I _D	30	Amps
Operating and Storage Temperature	T _{op} & T _{stg}	-55 to +175	°C
Thermal Resistance, Junction to Case	R _{θJC}	2	°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****NOTE:** All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.**DATA SHEET #: F00265 B****MED**

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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	60	---	---	V
Drain to Source on State Resistance (VGS=5 V, ID= 18 A)		RDS(on)	---	0.026	0.030	Ω
Drain to Source On Resistance (VGS =4V, ID=15A)		RDS(on)	---	0.034	0.040	Ω
Gate Threshold Voltage (VDS=VGS, ID=250μA)		VGS(th)	1.0	1.5	2.0	V
Forward Transconductance (VDS ≥ 10V, IDS= 18 A)		gfs	22	35	---	S(τ)
Zero Gate Voltage Drain Current (VDS=max rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=150°C)		IDSS	---	---	25 250	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=5 Volts 80% rated VDS Rated ID	Qg Qgs Qgd	---	50 10 38	66 12 43	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	VDD=50% rated VDS ID = 51A RG= 4.6Ω RD= 0.56Ω	td(on) tr td(off) tf	---	17 230 42 110	---	nsec
Diode Forward Voltage (IS=rated ID, VGS=0 V, TJ=25°C)		VSD	---	---	2.5	V
Diode Reverse Recovery Time Reverse Recovery Charge	TJ=25°C IF= 51A di/dt=100 A/ sec	trr	---	100	180	nsec
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS=25 Volts f= 1 MHz	Ciss Coss Crss	---	3300 1200 200	---	pF

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