



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-7855 * Fax: (562) 404-1773
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DESIGNER'S DATA SHEET

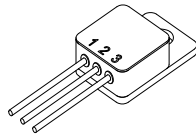
Part Number / Ordering Information ^{1/}

SFL044 J

Screening ^{2/} __ = Not Screen
 TX = TX Level
 TXV = TXV Level
 S = S Level
 Lead Option ^{3/} __ = Straight
 UB = Up Bend
 DB = Down Bend

Package: TO-257

TO-257 Pin Out: Pin1: Drain
 Pin2: Source
 Pin3: Gate



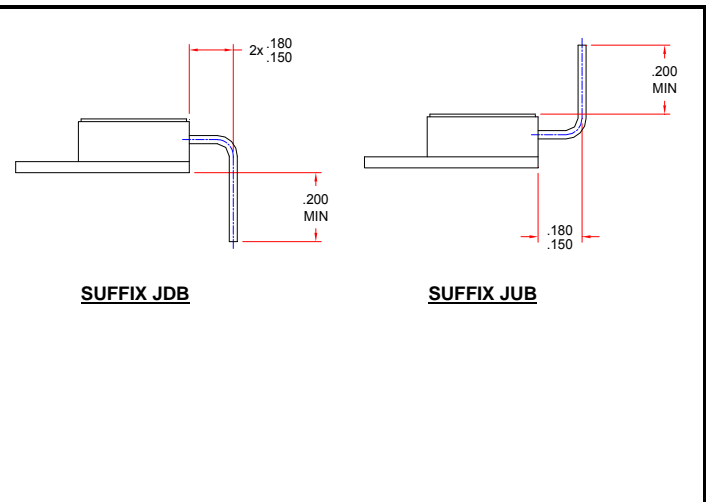
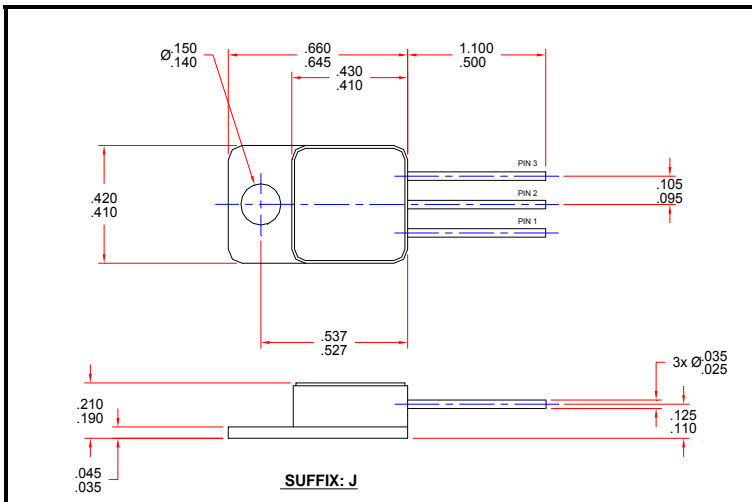
SFL044J

**30 AMP / 60 Volts / 0.030 Ω
 N-Channel, Logic Level
 POWER MOSFET**

Features:

- Logic Level Gate Drive
- Rugged Construction with Polysilicon Gate
- Low $R_{DS(ON)}$ 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 Surface Mount Power Package
- Ceramic Seals Available for Improved Hermeticity
- TX, TXV, Space Level Screening Available
- Replacement for IRLIZ44G Types

Maximum Ratings	Symbol	Value	Units
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 & Storage Temperature	Top & Tstg	-55 to +175	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	2	°C/W
Power Dissipation	P_D	63 48	W
	$T_C = 25^\circ C$ $T_C = 55^\circ C$		



Notes: 1/ For ordering information, Price, and Availability, Contact Factory.
 2/ Screened to MIL-PRF-19500.
 3/ Per Leg.

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Electrical Characteristics @ T_J = 25°C (Unless Otherwise Specified)		Symbol	Min	Typ	Max	Units
Drain to Source Breakdown Voltage (VGS=0 V, ID=250 μA)		BV_{DSS}	60	—	—	Volts
Drain to Source On State Resistance (VGS=5 V, ID=18A)		R_{DS(on)1}	—	0.032	0.036	Ω
Drain to Source On Resistance (VGS=4 V, ID= 15A)		R_{DS(on)2}		0.034	0.040	Ω
Gate Threshold Voltage (VDS=VGS, ID= 250μA)		V_{GS(th)}	1.0	1.5	2.0	V
Forward Transconductance (VDS>10V, IDS=18A)		g_{fs}	22	35	—	S(mho)
Zero Gate Voltage Drain Current (VDS=max rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=150°C)		I_{DSS}	— —	— —	25 250	μA
Gate to Source Leakage Forward	At rated VGS	I_{GSS}	—	—	+100	nA
Gate to Source Leakage Reverse			—	—	-100	
Total Gate Charge	VGS= 5 Volts 80% rated VDS ID= 15 A	Q_g	—	45	66	nC
Gate to Source Charge		Q_{gs}	—	15	20	
Gate to Drain Charge		Q_{gd}	—	15	43	
Turn on Delay Time	VDD=50% Rated VDS ID= 15 A RG= 4.6 Ω RD= 0.56 Ω	td_(on)	—	30	—	nsec
Rise Time		tr	—	10	—	
Turn on Delay Time		td_(off)	—	70	—	
Fall Time		tf	—	25	—	
Diode Forward Voltage (IS= Rated ID, VGS=0 V, T _J =25°C)		V_{SD}	—	1.2	2.5	V
Diode Reverse Recovery Time	T _J =25°C, IF= 10 A di/dt=100A/μsec	t_{rr}	—	100	180	nsec
Input Capacitance	VGS=0 Volts VDS=25 Volts f=1 MHz	C_{iss}	—	3300	—	pF
Input Capacitance		C_{oss}	—	1100	—	
Reverse Transfer Capacitance		C_{rss}	—	50	—	

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

NOTE: All specifications are subject to change without notification.
 SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: F00265E**DOC**