Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SFL044J

30 AMP / 60 Volts / 0.040 Ω
N-Channel, Logic Level
POWER MOSFET

DESIGNER'S DATA SHEET

Part Number / Ordering Information [1/]

SFL044 J ___ ___

- **Screening** [2/]
  - **__ = Not Screened**
  - **TX = TX Level**
  - **TXV = TXV Level**
  - **S = S Level**
- **Lead Option** [3/]
  - **__ = Straight**
  - **UB = Up Bend**
  - **DB = Down Bend**
- **Package: TO-257**

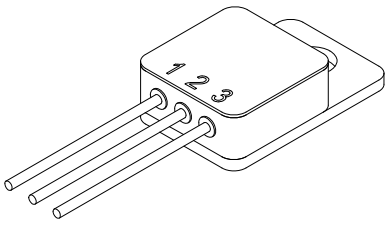
Features:

- 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 Isolated Power Package
- Available in Surface Mount Package
- Available in TO-254 and TO-258 Packages – Contact Factory
- 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 @ VGS = 5V		I_D	30	Amps
Operating & Storage Temperature		Top & Tstg	-55 to +175	ºC
Thermal Resistance, Junction to Case		$R_{\theta JC}$	2	ºC/W
Power Dissipation	T_C = 25ºC T_C = 55ºC	P_D	63 48	W

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

TO-257 (J)



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

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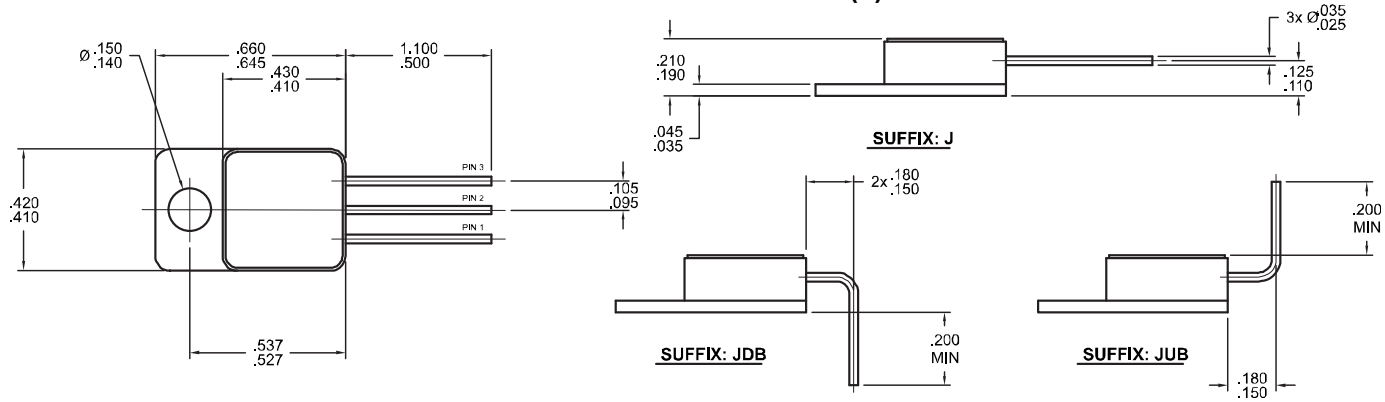
SFL044J

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)		$R_{DS(on)1}$	—	0.040	0.055	**Ω**
Drain to Source On Resistance (VGS=4 V, ID= 15A)		$R_{DS(on)2}$		0.040	0.060	**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	27	—	**S(mho)**
Zero Gate Voltage Drain Current (VDS=max rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=150ºC)		I_{DSS}	— —	— —	25 250	**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= 5 Volts 80% rated VDS ID= 15 A	Q_g Q_{gs} Q_{gd}	— — —	35 15 15	66 20 43	**nC**
Turn on Delay Time **Rise Time** **Turn on Delay Time** **Fall Time**	VDD=50% Rated VDS ID= 15 A RG= 1.0 Ω RD= 2.0 Ω	$td_{(on)}$ tr $td_{(off)}$ tf	— — — —	30 10 70 25	— — — —	**nsec**
Diode Forward Voltage (IS= Rated ID, VGS=0 V, TJ=25ºC)		V_{SD}	—	1.2	2.5	**V**
Diode Reverse Recovery Time	T_J=25ºC, IF= 10 A di/dt=100A/μsec	t_{rr}	—	150	180	**nsec**
Input Capacitance **Input Capacitance** **Reverse Transfer Capacitance**	VGS=0 Volts VDS=25 Volts f=1 MHz	C_{iss} C_{oss} C_{rss}	— — —	3300 1100 50	— — —	**pF**

CASE OUTLINE: TO-257 (J)



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 #: F00265G**	**DOC**