

DESIGNER'S DATA SHEET

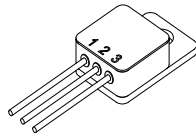
Part Number / Ordering Information ^{1/}

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



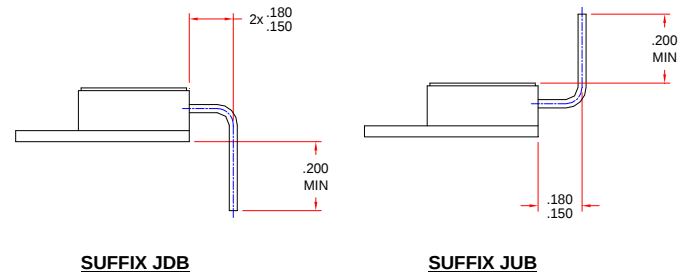
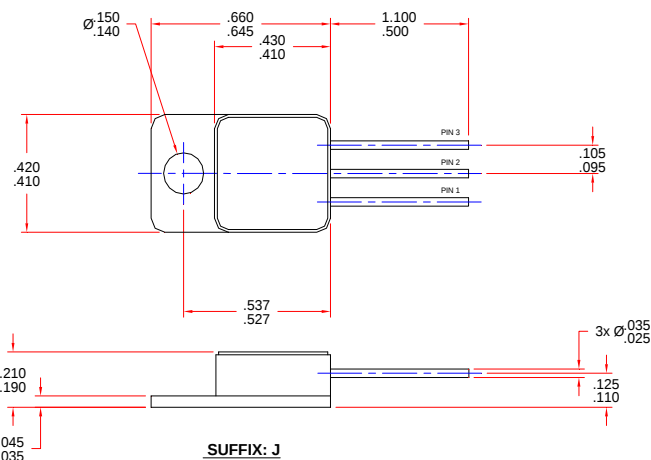
SFL044J

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	$^{\circ}C$
Thermal Resistance, Junction to Case		$R_{\theta JC}$	2	$^{\circ}C/W$
Power Dissipation	$T_C = 25^{\circ}C$ $T_C = 55^{\circ}C$	P_D	63 48	W



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

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

DATA SHEET #: F00265D

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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}	—	0.026	0.030	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 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= 51 A	Q _g Q _{gs} Q _{gd}	— — —	50 10 38	66 12 43	nC
Turn on Delay Time Rise Time Turn on Delay Time Fall Time	VDD=50% Rated VDS ID= 51 A 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)		V _{SD}	—	—	2.5	V
Diode Reverse Recovery Time	T _J =25°C, IF=51A di/dt=100A/μsec	t _{rr}	—	100	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 1200 200	— — —	pF

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

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