



Solid State Devices, Inc.
 14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-7855 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com


SFF130/5

8 AMP / 100 Volts
0.18 Ω
N-Channel Power MOSFET

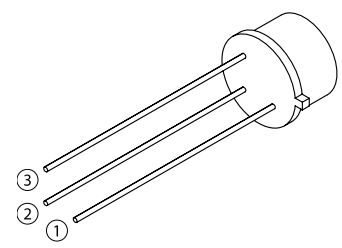
DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SFF130

 Screening ^{2/}
 — = Not Screen
 TX = TX Level
 TXV = TXV Level
 S = S Level

Package
 /5= TO-5



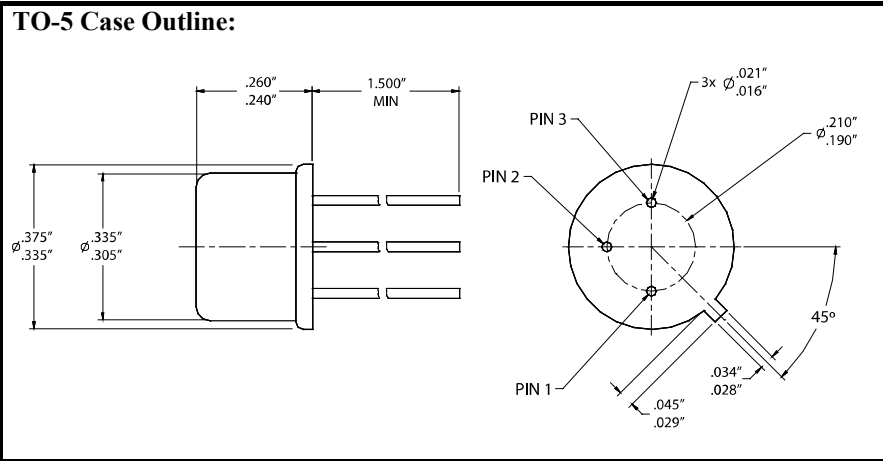
TO-5

- Features:**
- Rugged Construction with Poly Silicon 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 Package
 - Available in both hot case and isolated versions
 - Ideal for low power applications
 - TX, TXV, Space Level Screening Available ^{2/}
 - Replacement for IRFF130 Types

Maximum Ratings ^{3/}		Symbol	Value	Units
Drain – Source Voltage		V _{DS}	100	Volts
Gate – Source Voltage		V _{GS}	±20	Volts
Continuous Collector Current	T _C = 25°C T _C = 100°C	I _D	8 5	Amps
Power Dissipation	T _C = 25°C T _A = 25°C	P _D	25 19	Watts
Operating & Storage Temperature		Top & Tstg	-55 to +150	°C
Thermal Resistance Junction to Case		R _{θJC}	5	°C/W
Single Pulse Avalanche Energy		E _{AS}	75	mJ

NOTES:

- ^{1/} For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.
^{2/} Screened to MIL-PRF-19500.
^{3/} Unless Otherwise Specified, All Maximum Ratings and Electrical Characteristics @25°C.





Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-7855 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

SFF130/5

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}	100	—	—	Volts
Temperature Coefficient of Breakdown Voltage		$\frac{\Delta BV_{DSS}}{\Delta T_j}$	—	100	—	mV/°C
Drain to Source On State Resistance (VGS=10 V)	ID=5A ID=8A	R_{DS(on)}	—	0.13 0.14	0.18 0.21	Ω
Gate Threshold Voltage (VDS=VGS, ID=250 μA)		V_{GS(th)}	2.0	2.8	4.0	V
Forward Transconductance (VDS>ID(on) X RDS(on) Max, IDS= 9A)		g_{fs}	3	7	—	mho
Zero Gate Voltage Drain Current (VDS=80% max rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=125°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=10 Volts 50% rated VDS Rated ID	Q_g Q_{gs} Q_{gd}	12 1 3.8	17 3.7 7.0	28 6.3 16.6	nC
Turn on Delay Time Rise Time Turn on Delay Time Fall Time	VDD=50% Rated VDS ID = 8A RG= 7.5Ω	t_{d(on)} t_r t_{d(off)} t_f	— — — —	9.5 42 22 25	30 75 40 45	nsec
Diode Forward Voltage (IS= Rated ID, VGS=0 V, T _J =25°C)		V_{SD}	—	1	1.5	V
Diode Reverse Recovery Time Reverse Recovery Charge	T _J =25°C IF=10A Di/dt=100A/μsec	t_{rr} Q_{RR}	— —	120 0.7	300 3	nsec nC
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS=25 Volts f=1 MHz	C_{iss} C_{oss} C_{rss}	— — —	650 250 44	— — —	pF

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

Available Part Number:
SFF130/5

PIN ASSIGNMENT (Standard)			
Package	Drain	Source	Gate
TO-5	Pin 3	Pin 1	Pin 2