

14849 Firestone Boulevard · La Mirada, CA 90638
 Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

Designer's Data Sheet

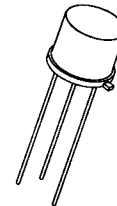
FEATURES:

- 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
- Available in both hot case and isolated versions
- Ideal for low power applications
- TX, TXV and Space Level screening available
- Replaces: IRF230 Types

SFF230/5

**9 AMP
 200 VOLTS
 0.40Ω
 N-CHANNEL
 POWER MOSFET**

TO-5



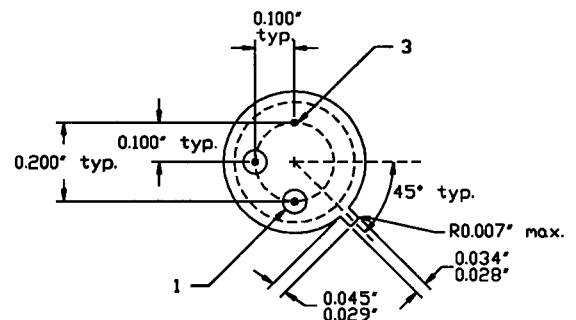
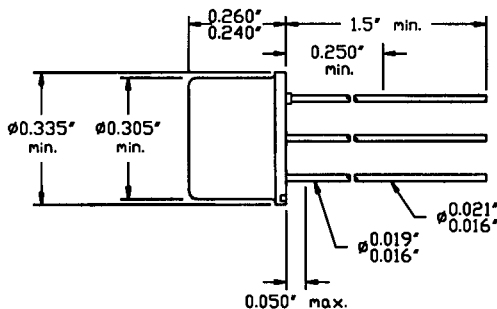
MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V _{DS}	200	Volts
Gate to Source Voltage	V _{GS}	±20	Volts
Continuous Drain Current	I _D	9	Amps
Operating and Storage Temperature	T _{op} & T _{stg}	-55 to +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	5	°C/W
Total Device Dissipation @ TC=25°C	P _D	25	Watts
Total Device Dissipation @ TA=25°C		19	

PACKAGE OUTLINE: TO-5

PIN OUT:

PIN 1: SOURCE
 PIN 2: GATE
 PIN 3: DRAIN



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

DATA SHEET #: F00011 C

MED

SFF230/5

SOLID STATE DEVICES, INC

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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=250 μ A)	BV _{DSS}	200	---	---	V
Drain to Source on State Resistance (VGS=10 V, ID= 5 A)	RDS(on)	---	0.25	0.4	Ω
On State Drain Current (VDS > ID(on) X RDS(on) Max, VGS=10 V)	ID(on)	9	---	---	A
Gate Threshold Voltage (VDS=VGS, ID=250 μ A)	VGS(th)	2	---	4	V
Forward Transconductance (VDS > ID(on) X RDS(on) Max, IDS= 5 A)	gfs	3.0	6	---	S(V)
Zero Gate Voltage Drain Current (VDS=max rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=125 $^\circ$ C)	IDSS	---	---	250 1000	μ A
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=10 Volts 80% rated VDS ID= 9 A Qg Qgs Qgd	---	30 10 9	39 ---	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	VDD=50% rated VDS 50% rated ID RG= 15 Ω td(on) tr td(off) tf	---	---	30 50 50 40	nsec
Diode Forward Voltage (IS=rated ID, VGS=0 V, TJ=25 $^\circ$ C)	VSD	---	---	2.0	V
Diode Reverse Recovery Time Reverse Recovery Charge	TJ=150 $^\circ$ C IF=rated ID di/dt=100 A/ μ sec trr QRR	---	450 3.0	---	nsec μ C
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS=25 Volts f= 1 MHz Ciss Coss Crss	---	600 250 80	800 450 150	pF

 SAFE OPERATING AREA (S.O.A.)
 TC = 25 C, D.C. CONDITION
