

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

Designer's Data Sheet

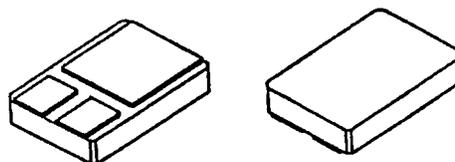
FEATURES:

- 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 surface mount package
- TX, TXV and Space Level screening available
- Replaces: IRF230 Types

SFF230

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

MILPACK



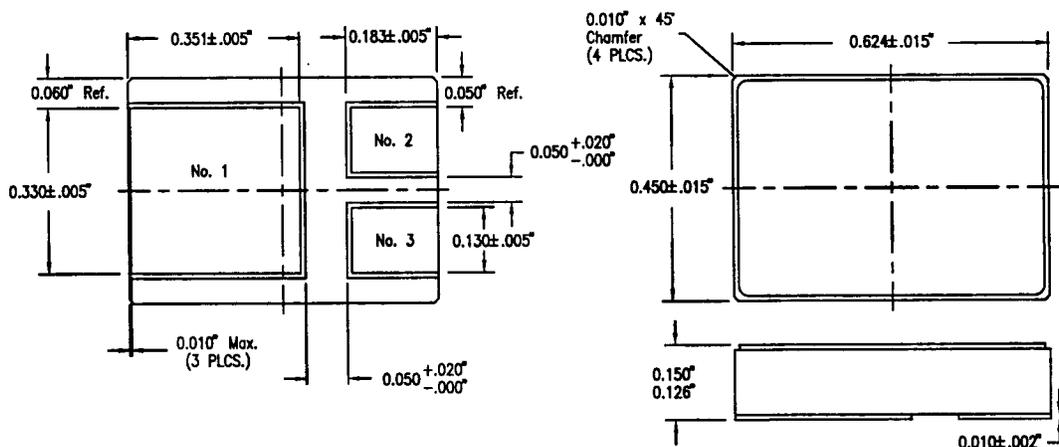
MAXIMUM RATINGS

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	Top & T _{stg}	-55 to +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	2.0	°C/W
Total Device Dissipation @ TC=25°C	P _D	63	Watts
Total Device Dissipation @ TC=55°C		48	

PACKAGE OUTLINE: MILPACK

PIN OUT:

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



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

DATA SHEET #: F0009 C

MED

SFF230

SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada, CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424**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)	BVDSS	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°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= 12 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°C)	VSD	---	---	2.0	V
Diode Reverse Recovery Time Reverse Recovery Charge	TJ=150°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