

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

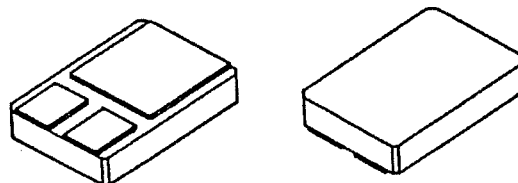
Designer's Data Sheet

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 power package
- TX, TXV and Space Level screening available
- Replaces: IRF340 Types

**4.5 AMP
1000 VOLTS
2Ω
N-CHANNEL
POWER MOSFET**

MILPACK



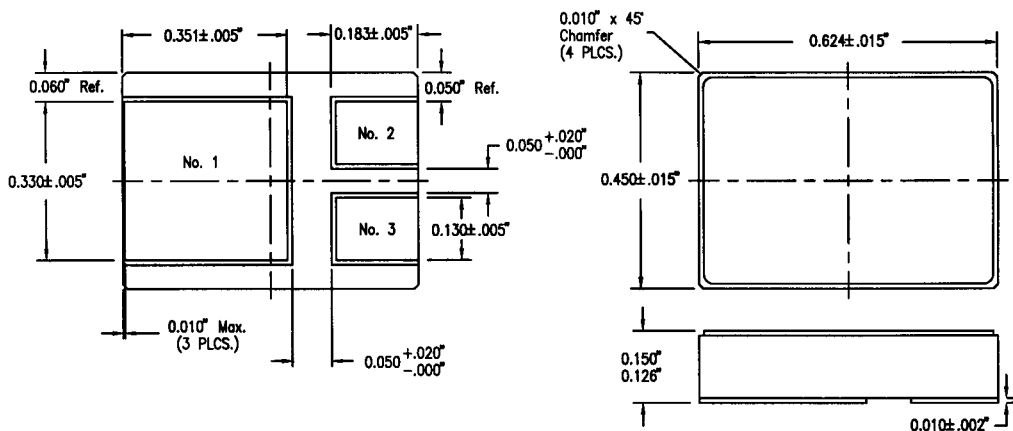
MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V _{DS}	1000	Volts
Gate to Source Voltage	V _{GS}	±20	Volts
Continuous Drain Current @ 25°C @ 100°C	I _D	4.5 2.8	Amps
Operating and Storage Temperature	Top & Tstg	-55 to +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	1.25	°C/W
Total Device Dissipation @ TC=25°C Total Device Dissipation @ TC=55°C	P _D	100 76	Watts
Single Pulse Avalanche Energy	EAS	860	mJ

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 #: F00301 B

MED

SFF6N100

PRELIMINARY

**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=1mA)		BVDSS	1000	---	---	V
Drain to Source on State Resistance (VGS=10 V)	ID = 2.8 A ID = 4.5 A	RDS(on)	---	---	2.0 2.25	Ω
Temperature Coefficient of Breakdown Voltage (VGS=10 V)		$\frac{\Delta BVDSS}{\Delta T_J}$	---	1.4	---	V/ $^{\circ}\text{C}$
Gate Threshold Voltage (VDS=VGS, ID=250 μ A)		VGS(th)	2.0	---	4.0	V
Forward Transconductance (VDS $\geq$ 50V, IDS=2.8A)		gfs	3	---	---	S(V)
80% Gate Voltage Drain Current (VDS=80% rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=125 $^{\circ}\text{C}$)		IDSS	---	---	25 250	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 VDS = 400 V ID= 4.5A	Qg Qgs Qgd	---	---	200 20 110	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	VDD= 400 V ID= 4.5 A RG=6.2 Ω	td(on) tr td(off) tf	---	---	30 44 210 60	nsec
Diode Forward Voltage (IS=rated ID, VGS=0 V, TJ=25 $^{\circ}\text{C}$)		VSD	---	---	1.8	V
Diode Reverse Recovery Time Reverse Recovery Charge	TJ=25 $^{\circ}\text{C}$ IF=rated ID di/dt=100 A/ μ sec	trr QRR	---	---	1200 8.4	nsec μ C
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS=25 Volts f= 1 MHz	Ciss Coss Crss	---	2400 240 80	---	pF