

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

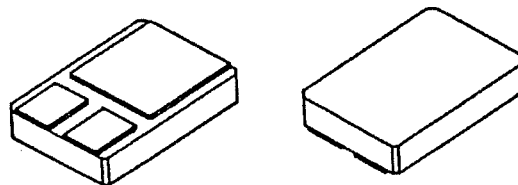
Designer's Data Sheet

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



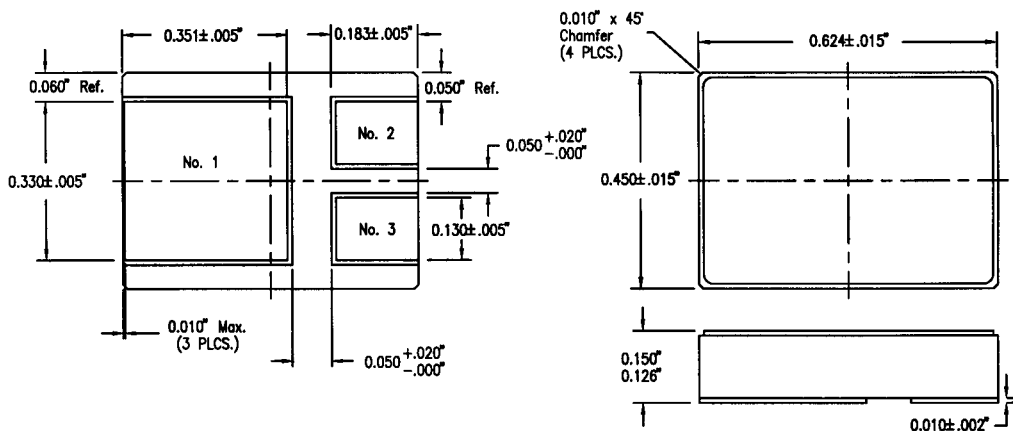
MAXIMUM RATINGS

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°C (Unless Otherwise Specified)

RATING		SYMBOL	MIN	TYP	MAX	UNIT
Drain to Source Breakdown Voltage (V _{GS} =0 V, I _D =1mA)		BV_{DSS}	1000	---	---	V
Drain to Source on State Resistance (V _{GS} =10 V)	I _D = 2.8 A I _D = 4.5 A	R_{DS(on)}	---	---	2.0 2.25	Ω
Temperature Coefficient of Breakdown Voltage (V _{GS} =10 V)		$\frac{\Delta BV_{DSS}}{\Delta T_j}$	---	1.4	---	V/°C
Gate Threshold Voltage (V _{DS} =V _{GS} , I _D =250μA)		V_{GS(th)}	2.0	---	4.0	V
Forward Transconductance (V _{DS} ≥ 50V, I _{DS} =2.8A)		g_{fs}	3	---	---	S(V)
80% Gate Voltage Drain Current (V _{DS} =80% rated voltage, V _{GS} =0 V) (V _{DS} =80% rated V _{DS} , V _{GS} =0 V, T _A =125°C)		I_{DSS}	---	---	25 250	μA
Gate to Source Leakage Forward Gate to Source Leakage Reverse	At rated V _{GS}	I_{GSS}	---	---	100 -100	nA
Total Gate Charge Gate to Source Charge Gate to Drain Charge	V _{GS} =10 Volts V _{DS} = 400 V I _D = 4.5A	Q_g Q_{gs} Q_{gd}	---	---	200 20 110	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	V _{DD} = 400 V I _D = 4.5 A R _G =6.2 Ω	t_{d(on)} t_r t_{d(off)} t_f	---	---	30 44 210 60	nsec
Diode Forward Voltage (I _S =rated I _D , V _{GS} =0 V, T _J =25°C)		V_{SD}	---	---	1.8	V
Diode Reverse Recovery Time Reverse Recovery Charge	T _J =25°C I _F =rated I _D di/dt=100 A/μsec	t_{rr} Q_{RR}	---	---	1200 8.4	nsec μC
Input Capacitance Output Capacitance Reverse Transfer Capacitance	V _{GS} =0 Volts V _{DS} =25 Volts f= 1 MHz	C_{iss} C_{oss} C_{rss}	---	2400 240 80	---	pF