PRELIMINARY

SFF20N60B

SOLID STATE DEVICES, INC

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

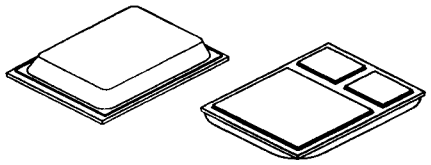
Designer's Data Sheet

20 AMPS
600 VOLTS
0.35 Ω
N-CHANNEL
POWER MOSFET

FEATURES:

- Rugged construction with polysilicon 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
- Ceramic Seals for improved hermeticity
- Hermetically sealed surface mount power package
- TX, TXV and Space Level screening available
- Replaces: IXTH20N60 Types

MILPACK 2



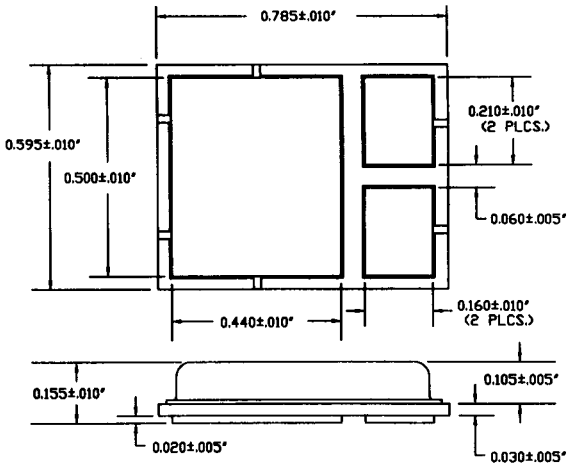
MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V_{DS}	600	Volts
Gate to Source Voltage	V_{GS}	±20	Volts
Continuous Drain Current	I_D	20	Amps
Operating and Storage Temperature	T_{op} & T_{stg}	-55 to +175	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.5	°C/W
Total Device Dissipation @ TC=25°C Total Device Dissipation @ TC=55°C	P_D	250 190	Watts

PACKAGE OUTLINE: MILPACK 2

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 #: F00209 C

MED

SFF20N60B

PRELIMINARY

SOLID STATE DEVICES, INC

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

ELECTRICAL CHARACTERISTICS @ TJ=25 C (Unless Otherwise Specified)

RATING		SYMBOL	MIN	TYP	MAX	UNIT
Drain to Source Breakdown Voltage (VGS=0 V, ID=250μA)		**BVDSS**	600	---	---	**V**
Drain to Source on State Resistance (VGS=10 V, ID=60% Rated ID		**RDS(on)**	---	0.35	0.35	**Ω**
On State Drain Current (VDS >ID(on) X RDS(on) Max, VGS=10 V		**ID(on)**	20	---	---	**A**
Gate Threshold Voltage (VDS=VGS, ID=250μA)		**VGS(th)**	2.0	---	4.5	**V**
Forward Transconductance (VDS >ID(on) X RDS(on) Max, IDS=60% rated ID)		**gfs**	12	18	---	**S(℧)**
Zero Gate Voltage Drain Current (VDS=max rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=125°C)		**IDSS**	--- ---	--- ---	200 1000	**μA**
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 50 %Rated ID	**Qg** **Qgs** **Qgd**	--- --- ---	150 29 60	170 40 85	**nC**
Turn on Delay Time **Rise Time** **Turn Off Delay Time** **Fall Time**	VDD=50% rated VDS 50% rated ID RG=6.2Ω	**td(on)** **tr** **td(off)** **tf**	--- --- --- ---	30 30 110 30	40 60 150 60	**nsec**
Diode Forward Voltage (IS=rated ID, VGS=0 V, TJ=25°C)		**VSD**	---	---	1.5	**V**
Diode Reverse Recovery Time **Reverse Recovery Charge**	TJ=25°C IF=10A di/dt=100 A/μsec	**trr** **QRR**	--- ---	600 ---	800 ---	**nsec** **μC**
Input Capacitance **Output Capacitance** **Reverse Transfer Capacitance**	VGS=0 Volts VDS=25 Volts f= 1 MHz	**Ciss** **Coss** **Crss**	--- --- ---	4500 420 140	--- --- ---	**pF**

