



PRELIMINARY

SOLID STATE DEVICES, INC

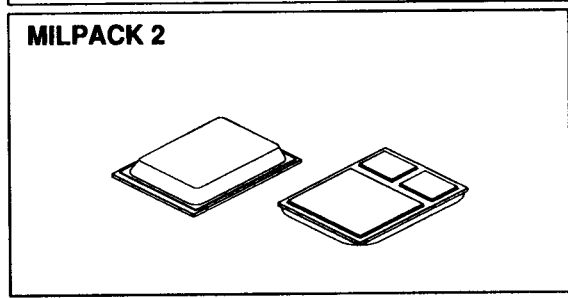
14849 Firestone Boulevard · La Mirada, CA 90638  
 Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

**SFF11N80B**

**11 AMPS  
 800 VOLTS  
 0.95Ω  
 N-CHANNEL  
 POWER MOSFET**

**Designer's Data Sheet**

- 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: IXTH11N80 Types



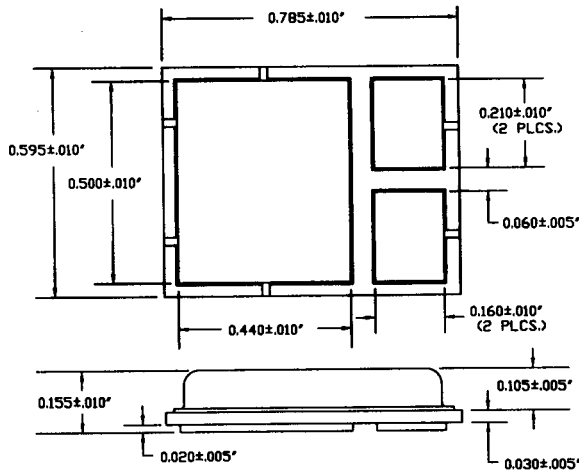
**MAXIMUM RATINGS**

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V <sub>DS</sub>	800	Volts
Gate to Source Voltage	V <sub>GS</sub>	±20	Volts
Continuous Drain Current	I <sub>D</sub>	11	Amps
Operating and Storage Temperature	T <sub>op</sub> & T <sub>stg</sub>	-55 to +175	°C
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	0.5	°C/W
Total Device Dissipation @ TC=25°C	P <sub>D</sub>	250	Watts
Total Device Dissipation @ TC=55°C		190	

**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 #: F00221 B**

**MED**

**SFF11N80B**

PRELIMINARY

**SSDI****SOLID STATE DEVICES, INC**14849 Firestone Boulevard · La Mirada, CA 90638  
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424**ELECTRICAL CHARACTERISTICS @ T<sub>J</sub>=25 °C (Unless Otherwise Specified)**

RATING		SYMBOL	MIN	TYP	MAX	UNIT
Drain to Source Breakdown Voltage (VGS=0 V, ID=250μA)		BV <sub>DSS</sub>	800	---	---	V
Drain to Source on State Resistance (VGS=10 V, ID=50% Rated ID)		R <sub>DS(on)</sub>	---	---	0.95	Ω
On State Drain Current (VDS > ID(on) X R <sub>DS(on)</sub> Max, VGS=10 V)		ID(on)	11	---	---	A
Gate Threshold Voltage (VDS=VGS, ID=250μA)		VGS(th)	2.0	---	4.5	V
Forward Transconductance (VDS > ID(on) X R <sub>DS(on)</sub> Max, IDS=50% rated ID)		g <sub>fs</sub>	8.0	14	---	S(Ω)
Zero Gate Voltage Drain Current (VDS=max rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=125°C)		I <sub>DSS</sub>	---	---	250 1000	μA
Gate to Source Leakage Forward Gate to Source Leakage Reverse	At rated VGS	I <sub>GSS</sub>	---	---	+100 -100	nA
Total Gate Charge Gate to Source Charge Gate to Drain Charge	VGS=10 Volts 80% rated VDS 50% Rated ID	Q <sub>g</sub> Q <sub>gs</sub> Q <sub>gd</sub>	---	128 30 55	155 45 80	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	VDD=50% rated VDS 50% rated ID RG=2.0Ω	t <sub>d(on)</sub> t <sub>r</sub> t <sub>d(off)</sub> t <sub>f</sub>	---	20 33 63 32	50 50 100 50	nsec
Diode Forward Voltage (IS=rated ID, VGS=0 V, T <sub>J</sub> =25°C)		VSD	---	---	1.5	V
Diode Reverse Recovery Time Reverse Recovery Charge	T <sub>J</sub> =25°C IF=rated ID di/dt=100 A/μsec	t <sub>rr</sub> Q <sub>RR</sub>	---	250 ---	---	nsec μC
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS=25 Volts f= 1 MHz	C <sub>iss</sub> C <sub>oss</sub> C <sub>rss</sub>	---	4200 360 100	---	pF

For thermal derating curves and other characteristic curves please contact SSDI Marketing Department.