PRELIMINARY

SOLID STATE DEVICES, INC

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

SFF11N80N
SFF11N80P

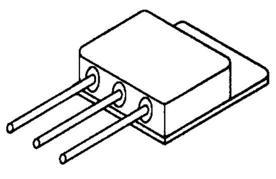
Designer's Data Sheet

11 AMPS
800 VOLTS
0.95Ω
N-CHANNEL
POWER MOSFET

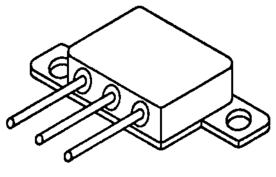
FEATURES:

- 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 power package
- TX, TXV and Space Level screening available
- Replaces: IXTH11N80 Types

TO-258



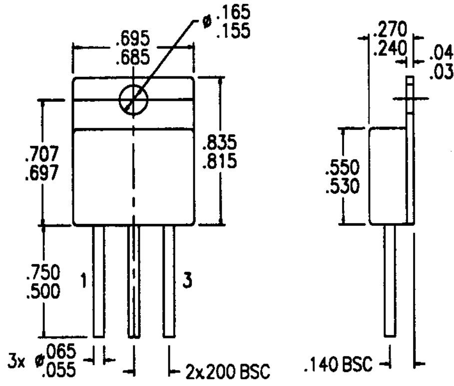
TO-259



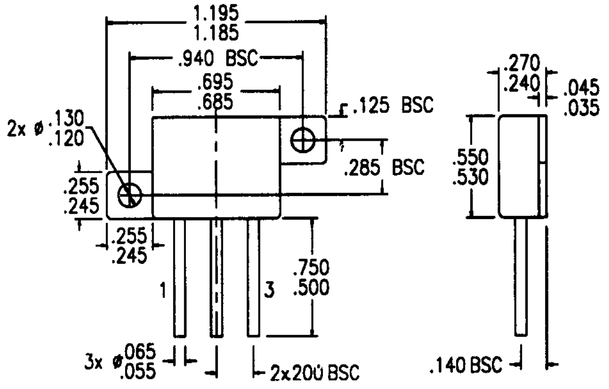
MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V_{DS}	800	Volts
Gate to Source Voltage	V_{GS}	±20	Volts
Continuous Drain Current	I_D	11	Amps
Operating and Storage Temperature	T_{op} & T_{stg}	-55 to +175	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.83	°C/W
Total Device Dissipation @ TC=25°C Total Device Dissipation @ TC=55°C	P_D	150 114	Watts

PACKAGE OUTLINE: TO-258 (N)
PIN OUT:
PIN 1: DRAIN
PIN 2: SOURCE
PIN 3: GATE



PACKAGE OUTLINE: TO-259 (P)
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 #: F00217 A

MED

SFF11N80N
SFF11N80P

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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	800	---	---	V
Drain to Source on State Resistance (VGS=10 V, ID=50% Rated ID		RDS(on)	---	---	0.95	Ω
On State Drain Current (VDS >ID(on) X RDS(on) 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 RDS(on) Max, IDS=50% rated ID)		gfs	8.0	14	---	S(℧)
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	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	--- --- ---	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	td(on) tr td(off) tf	--- --- --- ---	20 33 63 32	50 50 100 50	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=rated ID di/dt=100 A/µsec	trr QRR	--- ---	--- ---	250 ---	nsec µC
Input Capacitance **Output Capacitance** **Reverse Transfer Capacitance**	VGS=0 Volts VDS=25 Volts f= 1 MHz	Ciss Coss Crss	--- --- ---	4200 360 100	--- --- ---	pF

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