



PRELIMINARY

SOLID STATE DEVICES, INC

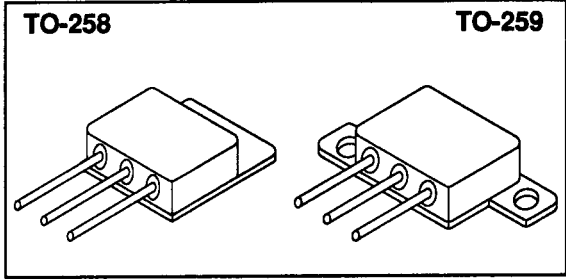
14849 Firestone Boulevard · La Mirada, CA 90638
 Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

SFF11N80N
SFF11N80P

11 AMPS
800 VOLTS
0.95Ω
N-CHANNEL
POWER MOSFET

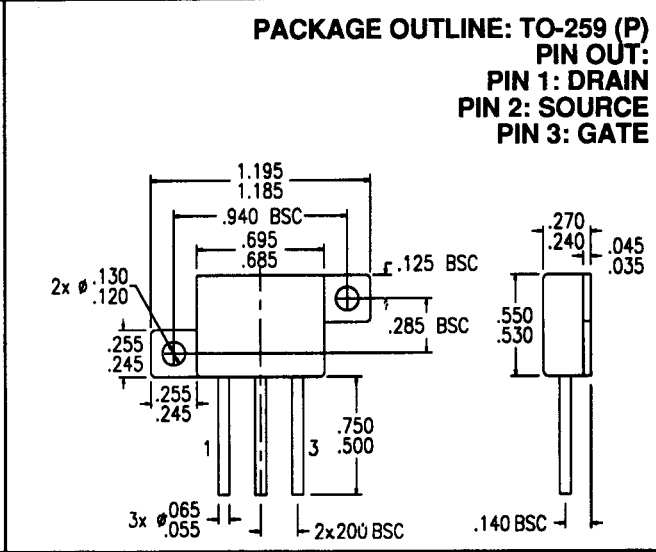
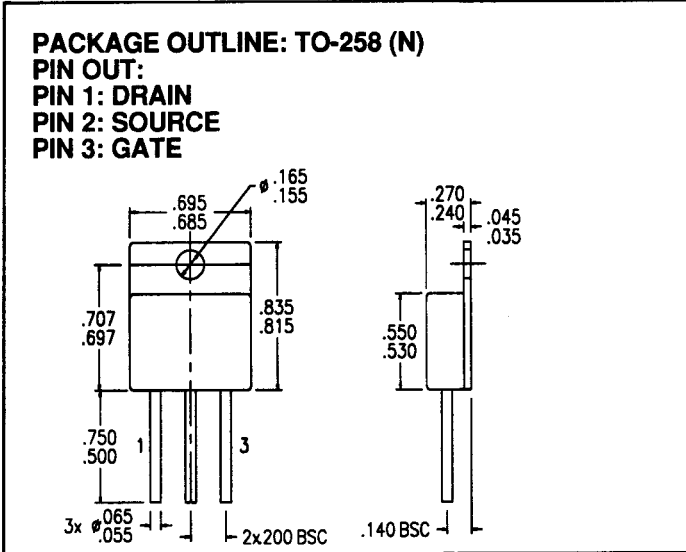
Designer's Data Sheet

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



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 _{θJC}	0.83	°C/W
Total Device Dissipation @ TC=25°C	P _D	150	Watts
Total Device Dissipation @ TC=55°C		114	



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
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ELECTRICAL CHARACTERISTICS @ T_J=25 C (Unless Otherwise Specified)						
RATING		SYMBOL	MIN	TYP	MAX	UNIT
Drain to Source Breakdown Voltage (VGS=0 V, ID=250μA)		BV_{DSS}	800	---	---	V
Drain to Source on State Resistance (VGS=10 V, ID=50% Rated ID)		R_{DS(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)		g_{fs}	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_{DSS}	---	---	250 1000	μA
Gate to Source Leakage Forward Gate to Source Leakage Reverse	At rated VGS	I_{GSS}	---	---	+100 -100	nA
Total Gate Charge Gate to Source Charge Gate to Drain Charge	VGS=10 Volts 80% rated VDS 50% Rated ID	Q_g Q_{gs} Q_{gd}	---	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_{d(on)} t_r t_{d(off)} t_f	---	20 33 63 32	50 50 100 50	nsec
Diode Forward Voltage (IS=rated ID, VGS=0 V, T _J =25°C)		VSD	---	---	1.5	V
Diode Reverse Recovery Time Reverse Recovery Charge	T _J =25°C I _F =rated ID di/dt=100 A/μsec	t_{rr} Q_{RR}	---	---	250 ---	nsec μC
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS=25 Volts f= 1 MHz	C_{iss} C_{oss} C_{rss}	---	4200 360 100	---	pF

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