



PRELIMINARY

SOLID STATE DEVICES, INC

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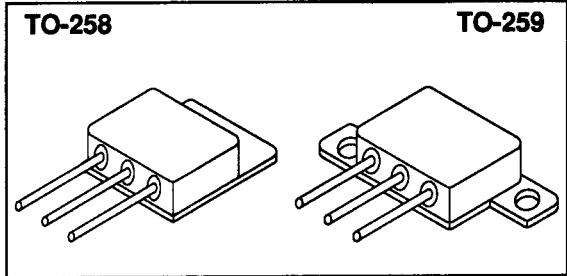
# SFF11N80N SFF11N80P

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

## Designer's Data Sheet

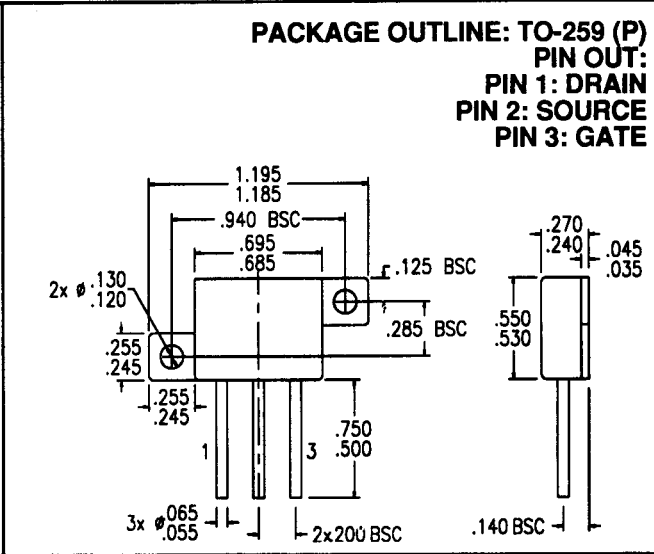
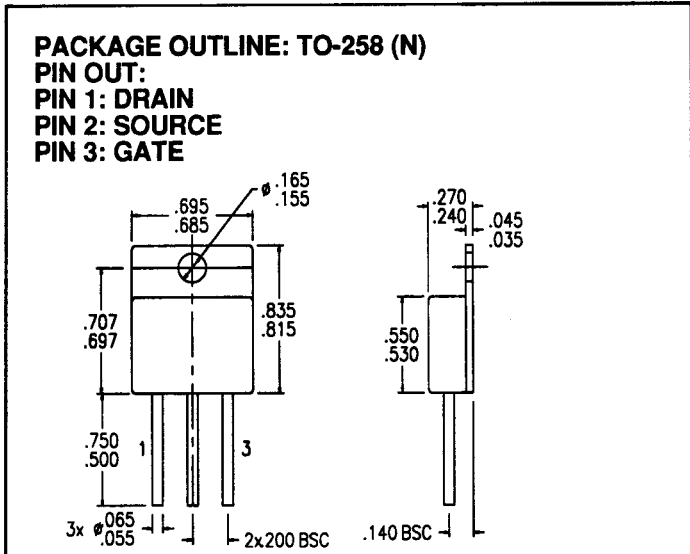
### FEATURES:

- 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 <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>	0.83	°C/W
Total Device Dissipation @ TC=25°C Total Device Dissipation @ TC=55°C	P <sub>D</sub>	150 114	Watts



**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 @ T<sub>J</sub>=25 °C (Unless Otherwise Specified)**

RATING		SYMBOL	MIN	TYP	MAX	UNIT
<b>Drain to Source Breakdown Voltage</b> (VGS=0 V, ID=250µA)		<b>BVDSS</b>	800	---	---	<b>V</b>
<b>Drain to Source on State Resistance</b> (VGS=10 V, ID=50% Rated ID)		<b>RDS(on)</b>	---	---	0.95	<b>Ω</b>
<b>On State Drain Current</b> (VDS > ID(on) X RDS(on) Max, VGS=10 V)		<b>ID(on)</b>	11	---	---	<b>A</b>
<b>Gate Threshold Voltage</b> (VDS=VGS, ID=250µA)		<b>VGS(th)</b>	2.0	---	4.5	<b>V</b>
<b>Forward Transconductance</b> (VDS > ID(on) X RDS(on) Max, IDS=50% rated ID)		<b>gfs</b>	8.0	14	---	<b>S(Ω)</b>
<b>Zero Gate Voltage Drain Current</b> (VDS=max rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=125°C)		<b>IDSS</b>	---	---	250 1000	<b>µA</b>
<b>Gate to Source Leakage Forward</b> <b>Gate to Source Leakage Reverse</b>	At rated VGS	<b>IGSS</b>	---	---	+100 -100	<b>nA</b>
<b>Total Gate Charge</b> <b>Gate to Source Charge</b> <b>Gate to Drain Charge</b>	VGS=10 Volts 80% rated VDS 50% Rated ID	<b>Qg</b> <b>Qgs</b> <b>Qgd</b>	---	128 30 55	155 45 80	<b>nC</b>
<b>Turn on Delay Time</b> <b>Rise Time</b> <b>Turn Off Delay Time</b> <b>Fall Time</b>	VDD=50% rated VDS 50% rated ID RG=2.0Ω	<b>td(on)</b> <b>tr</b> <b>td(off)</b> <b>tf</b>	---	20 33 63 32	50 50 100 50	<b>nsec</b>
<b>Diode Forward Voltage</b> (IS=rated ID, VGS=0 V, T <sub>J</sub> =25°C)		<b>VSD</b>	---	---	1.5	<b>V</b>
<b>Diode Reverse Recovery Time</b> <b>Reverse Recovery Charge</b>	T <sub>J</sub> =25°C IF=rated ID di/dt=100 A/µsec	<b>trr</b> <b>QRR</b>	---	---	250 ---	<b>nsec</b> <b>µC</b>
<b>Input Capacitance</b> <b>Output Capacitance</b> <b>Reverse Transfer Capacitance</b>	VGS=0 Volts VDS=25 Volts f= 1 MHz	<b>Ciss</b> <b>Coss</b> <b>Crss</b>	---	4200 360 100	---	<b>pF</b>

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