Solid State Devices, Inc.
14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SFF11N80 Series

DESIGNER'S DATA SHEET

11 AMP / 800 Volts
0.95 Ω
N-Channel MOSFET

Part Number / Ordering Information [1/]

SFF11N80

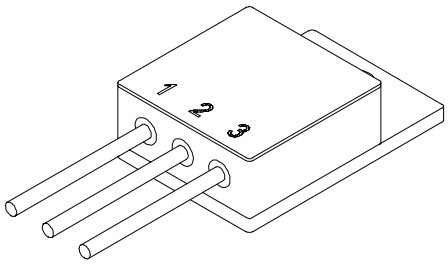
- **Screening** [2/] __ = Not Screen, TX = TX Level, TXV = TXV Level, S = S Level
- **Lead Option** [3/] __ = Straight Leads, DB = Down Bend, UB = Up Bend
- **Package** [3/] M = TO-254, Z = TO-254Z

Features:

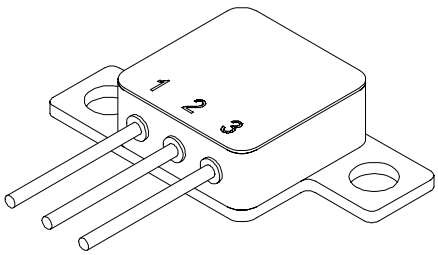
- Rugged Construction with Polysilicon Gate Cell
- Low $R_{DS(ON)}$ and High Transconductance
- Excellent High Temperature Stability
- Very Fast Switching Speed
- Fast Recovery and Superior dV/dt performance
- Increased Reverse Energy Capability
- Low Input and Transfer Capacitance for Easy Paralleling
- Hermetically Sealed, Isolated Package
- Ceramic Seal Package Available. Contact Factory
- TX, TXV, S-Level screening available
- Replacement for IXTH11N80 Types

Maximum Ratings		Symbol	Value	Units
Drain – Source Voltage		V_{DS}	800	Volts
Gate – Source Voltage		V_{GS}	±20	Volts
Continues Collector Current		I_D	11	Amps
Power Dissipation	T_C = 25ºC T_C = 55ºC	P_D	150 114	W
Operating & Storage Temperature		Top & Tstg	-55 to +175	ºC
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	0.83	ºC/W

TO-254 (M)



TO-254Z (Z)



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	DATA SHEET #: F00213C	DOC

Solid State Devices, Inc.
14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SFF11N80 Series

Electrical Characteristics [4/]		Symbol	Min	Typ	Max	Units
Drain to Source Breakdown Voltage (V_{GS} = 0V, I_D = 250µA)		BV_{DSS}	800	—	—	Volts
Drain to Source On State Resistance (V_{GS} = 10V, I_D = 5.5A)		$R_{DS(on)}$	—	—	0.95	Ω
On State Drain Current (V_{DS} > $I_{D(on)}$ x $R_{DS(on)}$ Max, V_{GS} = 10V)		$I_{D(on)}$	11	—	—	A
Gate Threshold Voltage (V_{DS} = V_{GS}, I_D = 250µA)		$V_{GS(th)}$	2.0	—	4.5	V
Gate to Source Leakage (V_{GS} = ±20V)		I_{GSS}	—	—	±100	nA
Zero Gate Voltage Drain Current (V_{GS} = 0V)	V_{DS} = 800V, T_A = 25ºC V_{DS} = 640V, T_A = 125ºC	I_{DSS}	— —	— —	250 1.0	µA mA
Forward Transconductance * (V_{DS} > $I_{D(on)}$ x $R_{DS(on)}$ Max, I_D = 5.5A)		g_{fs}	8.0	14	—	Mho
Total Gate Charge **Gate to Source Charge** **Gate to Drain Charge**	V_{GS} = 10V V_{DS} = 640V I_D = 5.5A	Q_g Q_{gs} Q_{gd}	— — —	128 30 55	145 55 80	nC
Turn on Delay Time **Rise Time** **Turn on Delay Time** **Fall Time**	V_{DS} = 400V I_D = 5.5A R_G = 2.0Ω	$t_{d(on)}$ t_r $t_{d(off)}$ t_f	— — — —	20 33 63 32	50 50 100 50	nsec
Diode Forward Voltage * (I_F = 11A, V_{GS} = 0V)		V_{SD}	—	—	1.5	V
Diode Reverse Recovery Time (I_F = 11A, di/dt = 100A/µsec)		t_{rr}	—	—	550	nsec
Input Capacitance **Output Capacitance** **Reverse Transfer Capacitance**	V_{GS} = 0V V_{DS} = 25V f = 1MHz	C_{iss} C_{oss} C_{rss}	— — —	4200 360 100	— — —	pF

NOTES:

* Pulse Test: Pulse Width = 300µsec, Duty Cycle = 2%

1/ For Ordering Information, Price, and Availability Contact Factory.

2/ Screening per MIL-PRF-19500

3/ For Package Outlines Contact Factory.

4/ Unless Otherwise Specified, All Electrical Characteristics @25ºC.

Available Part Numbers:

SFF11N80M; SFF11N80MDB; SFF11N80MUB;
SFF11N80Z; SFF11N80ZDB; SFF11N80ZUB;

PIN ASSIGNMENT (Standard)

Package	Drain	Source	Gate
TO-254 (M)	Pin 1	Pin 2	Pin 3
TO-254Z (Z)	Pin 1	Pin 2	Pin 3

SOLID STATE DEVICES INC.
14830 Valley View, La Mirada, Ca 90631

DATA SHEET APPROVAL FORM

Data Sheet Number **F00213** Rev **C** Check Box to Include on Web: ☐

Part Number(s): **SFF11N80M**

SFF11N80Z

Approval	Sign	Date
Engineering Manager:		
Executive / CEO		
Operation Manager:		
Marketing Manager:		
Quality Manager:		

Revisions

ECO No	REV	DATE	DESCRIPTION	APPROVAL
E-030492	C	08/12/03	Changed Trr 250ns to 550ns	

FORM# Q312 Rev. B