



PRELIMINARY

SOLID STATE DEVICES, INC

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

SFF10N100N SFF10N100P

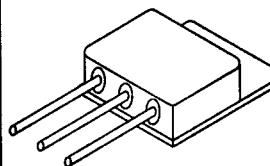
**10 AMP
1000 VOLTS
1.2 Ω
N-CHANNEL
POWER MOSFET**

Designer's Data Sheet

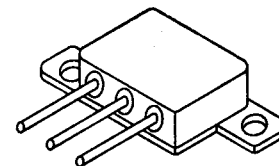
FEATURES:

- 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: IXTH10N100 Types

TO-258



TO-259

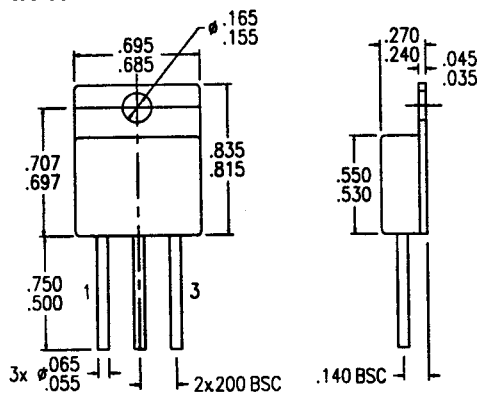


MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V _{DS}	1000	Volts
Gate to Source Voltage	V _{GS}	±20	Volts
Continuous Drain Current	I _D	10	Amps
Operating and Storage Temperature	T _{op} & T _{stg}	-55 to +150	°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	

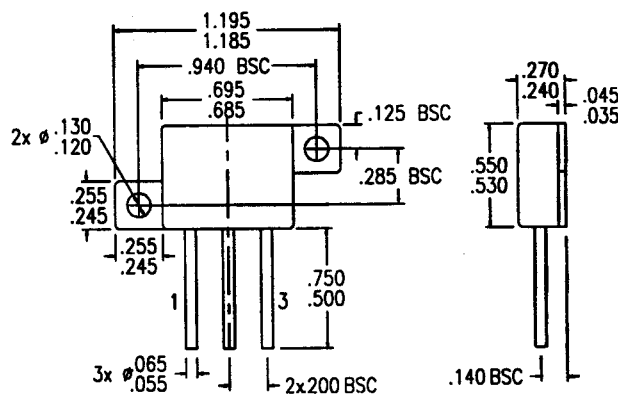
PACKAGE OUTLINE: TO-258 (N)

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 #: F00181 B

MED

SFF10N100N
SFF10N100P

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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=3mA)		BV _{DSS}	1000	---	---	V
Drain to Source on State Resistance (VGS=10 V, ID=50% Rated ID)		R _{DS(on)}	---	1.05	1.2	Ω
On State Drain Current (VDS =15V, VGS=10 V)		I _{D(on)}	10	---	---	A
Gate Threshold Voltage (VDS≥VGS, ID=4mA)		VGS(th)	2.0	---	4.5	V
Forward Transconductance (VDS > I _{D(on)} X R _{DS(on)} Max, IDS=50% rated ID)		g _{fs}	5	8	---	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 50% rated VDS Rated ID	Q _g Q _{gs} Q _{gd}	---	110 20 40	155 45 80	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	VDD=50% rated VDS 50% rated ID RG=6.2Ω VGS=10V	t _{d(on)} t _r t _{d(off)} t _f	---	30 20 110 40	50 50 130 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}	---	850 ---	1200 ---	nsec μC
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS=25 Volts f= 1 MHz	C _{iss} C _{oss} C _{rss}	---	4000 310 70	---	pF

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