

SFF340J

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

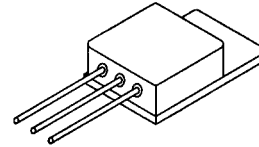
Designer's Data Sheet

FEATURES:

- Rugged construction with poly silicon 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
- Hermetically sealed package
- TX, TXV and Space Level screening available
- Replaces: IRF340 Types

**10 AMP
 400 VOLTS
 0.58Ω
 N-CHANNEL
 POWER MOSFET**

TO-257



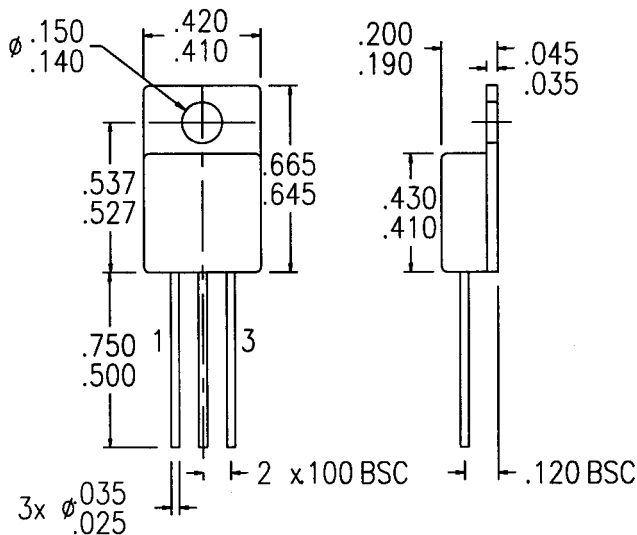
MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V _{DS}	400	Volts
Gate to Source Voltage	V _{GS}	±20	Volts
Continuous Drain Current	I _D	8.5	Amps
Operating and Storage Temperature	T _{OP} & T _{STG}	-55 to +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	2	°C/W
Total Device Dissipation @ TC=25°C	P _D	63	Watts
Total Device Dissipation @ TC=55°C		48	

PACKAGE OUTLINE: TO-257

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 #: F00075 B

MED

SFF340J

PRELIMINARY



SOLID STATE DEVICES, INC

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ELECTRICAL CHARACTERISTICS @ $T_J=25^\circ\text{C}$ (Unless Otherwise Specified)

RATING	SYMBOL	MIN	TYP	MAX	UNIT
Drain to Source Breakdown Voltage (VGS=0 V, ID=250 μ A)	BVDSS	400	---	---	V
Drain to Source on State Resistance (VGS=10 V, ID=60% Rated ID)	RDS(on)	---	0.42	0.58	Ω
On State Drain Current (VDS > ID(on) X RDS(on) Max, VGS=10 V)	ID(on)	10	---	---	A
Gate Threshold Voltage (VDS=VGS, ID=250 μ A)	VGS(th)	2.0	---	4.0	V
Forward Transconductance (VDS \geq 50V, IDS=60% rated ID)	gfs	5.8	8.7	---	S(\bar{v})
Zero Gate Voltage Drain Current (VDS=max rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=125 $^\circ$ C)	IDSS	---	---	250 1000	μ A
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 ID=10A Qg Qgs Qgd	---	43 6 22	65 9.3 33	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	VDD=50% rated VDS ID=10A RG=9.1 Ω RD=20 Ω td(on) tr td(off) tf	---	14 27 50 24	30 30 74 36	nsec
Diode Forward Voltage (IS=rated ID, VGS=0 V, TJ=25 $^\circ$ C)	VSD	---	---	2.0	V
Diode Reverse Recovery Time Reverse Recovery Charge	TJ=25 $^\circ$ C IF=rated ID di/dt=100 A/ μ sec trr QRR	170 1.6	370 3.8	790 8.2	nsec μ C
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS=25 Volts f= 1 MHz Ciss Coss Crss	---	1300 210 37	---	pF

SAFE OPERATING AREA (S.O.A.)
 TC = 25 C, D.C. CONDITION

