

SFF340/66

14849 Firestone Boulevard · La Mirada, CA 90638
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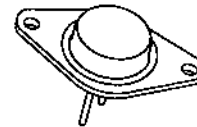
Designer's Data Sheet

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
 0.55Ω
 N-CHANNEL
 POWER MOSFET**

TO-66



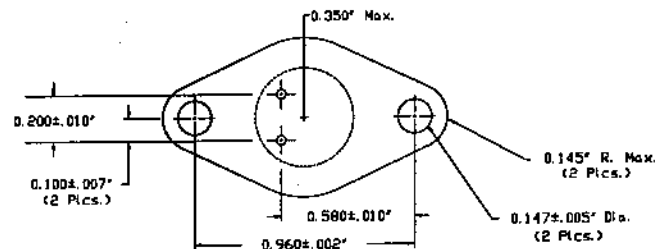
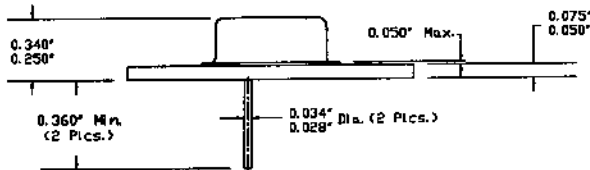
MAXIMUM RATINGS

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-66

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 #: F00317 A

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PRELIMINARY



SOLID STATE DEVICES, INC

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ELECTRICAL CHARACTERISTICS @ T_J=25° C (Unless Otherwise Specified)

RATING	SYMBOL	MIN	TYP	MAX	UNIT
Drain to Source Breakdown Voltage (V _{GS} =0 V, I _D =250μA)	BV _{DSS}	400	---	---	V
Drain to Source on State Resistance (V _{GS} =10 V, I _D =60% Rated ID)	R _{DS(on)}	---	0.42	0.55	Ω
On State Drain Current (V _{DS} > I _{D(on)} X R _{DS(on)} Max, V _{GS} =10 V)	I _{D(on)}	10	---	---	A
Gate Threshold Voltage (V _{DS} =V _{GS} , I _D =250μA)	V _{GS(th)}	2.0	---	4.0	V
Forward Transconductance (V _{DS} ≥ 50V, I _{DS} =60% rated ID)	g _{fs}	5.8	8.7	---	S(V)
Zero Gate Voltage Drain Current (V _{DS} =max rated voltage, V _{GS} =0 V) (V _{DS} =80% rated V _{DS} , V _{GS} =0 V, T _A =125° C)	I _{DSS}	---	---	250 1000	μA
Gate to Source Leakage Forward Gate to Source Leakage Reverse	At rated V _{GS} I _{GSS}	---	---	100 -100	nA
Total Gate Charge Gate to Source Charge Gate to Drain Charge	V _{GS} =10 Volts 80% rated V _{DS} I _D =10A Q _g Q _{gs} Q _{gd}	---	43 6 22	65 9.3 33	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	V _{DD} =50% rated V _{DS} I _D =10A R _G =9.1Ω R _D =20Ω t _{d(on)} t _r t _{d(off)} t _f	---	14 27 50 24	30 30 74 36	nsec
Diode Forward Voltage (I _S =rated I _D , V _{GS} =0 V, T _J =25° C)	V _{SD}	---	---	2.0	V
Diode Reverse Recovery Time Reverse Recovery Charge	T _J =25° C I _F =rated I _D di/dt=100 A/μsec t _{rr} Q _{RR}	170 1.6	370 3.8	790 8.2	nsec μC
Input Capacitance Output Capacitance Reverse Transfer Capacitance	V _{GS} =0 Volts V _{DS} =25 Volts f= 1 MHz C _{iss} C _{oss} C _{rss}	---	1300 350 130	1600 450 190	pF

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

