

SFF240-28

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

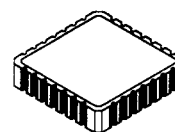
Designer's Data Sheet

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 package
- TX, TXV and Space Level screening available
- Replaces: IRF240 Types

**15 AMP
 200 VOLTS
 0.20Ω
 N-CHANNEL
 POWER MOSFET**

28 PIN CLCC



MAXIMUM RATINGS

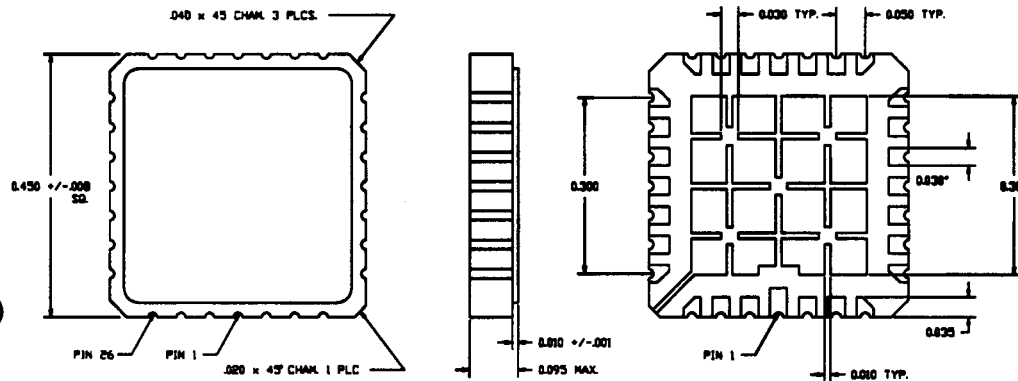
CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V _{DS}	200	Volts
Gate to Source Voltage	V _{GS}	±20	Volts
Continuous Drain Current	I _D	15	Amps
Operating and Storage Temperature	T _{OP} & T _{STG}	-55 to +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	3.5	°C/W
Total Device Dissipation @ TC=25°C	P _D	36	Watts
Total Device Dissipation @ TC=80°C		20	

PACKAGE OUTLINE: 28 PIN CLCC

PIN OUT:
SOURCE: 1, 15-28
DRAIN: 5-11
GATE: 2, 3, 13, 14

NOTE:

All Drain/Source pins must be connected on the PC Board in order to maximize current capability and minimize RDS(on)



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

DATA SHEET #: F00107 A **MED**

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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 (VGS=0 V, ID=250μA)	BVDSS	200	---	---	V
Drain to Source on State Resistance (VGS=10 V, ID= 9 A)	RDS(on)	---	0.13	0.20	Ω
On State Drain Current (VDS > ID(on) X RDS(on) Max, VGS=10 V)	ID(on)	15	---	---	A
Gate Threshold Voltage (VDS=VGS, ID=250μA)	VGS(th)	2.0	---	4.0	V
Forward Transconductance (VDS ≥ 10 V, IDS= 9 A)	gfs	6.5	10	---	S(Ω)
Zero Gate Voltage Drain Current (VDS=max rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=125°C)	IDSS	---	---	250 1000	μA
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 Rated ID Qg Qgs Qgd	---	40 7 21	60 10 32	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	VDD=50% rated VDS 50% rated ID RG= 9.1 Ω RD= 5.6 td(on) tr td(off) tf	---	14 52 45 36	21 77 68 54	nsec
Diode Forward Voltage (IS=rated ID, VGS=0 V, T _J =25°C)	VSD	---	---	2.0	V
Diode Reverse Recovery Time Reverse Recovery Charge	T _J =25°C IF=rated ID di/dt=100 A/μsec trr QRR	120 1.3	250 2.6	530 5.6	nsec μC
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS=25 Volts f= 1 MHz Ciss Coss Crss	---	1300 380 93	---	pF

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

