



PRELIMINARY

SOLID STATE DEVICES, INC

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

SFF220-28

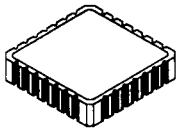
**5 AMP
 200 VOLTS
 0.8 Ω
 N-CHANNEL
 POWER MOSFET**

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 package
- TX, TXV and Space Level screening available
- Replaces: IRF220 Types

28 PIN CLCC



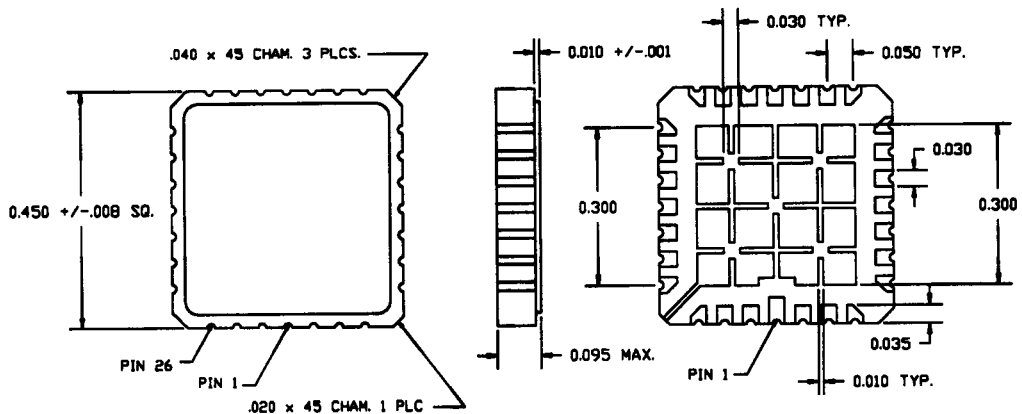
MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V _{DS}	200	Volts
Gate to Source Voltage	V _{GS}	± 20	Volts
Continuous Drain Current @ TC=25°C Continuous Drain Current @ TA=25°C	I _D	5.0 0.8	Amps
Operating and Storage Temperature	Top & Tstg	-55 to +150	°C
Thermal Resistance, Junction to Case Thermal Resistance, Junction to Ambient	R _{θJC} R _{θJA}	10 120	°C/W
Total Device Dissipation @ TC=25°C Total Device Dissipation @ TC=55°C Total Device Dissipation @ TA=25°C	P _D	12.5 9.5 1.0	Watts

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 #: F00125 A

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SFF220-28

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SSDI**SOLID STATE DEVICES, INC**14849 Firestone Boulevard · La Mirada, CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424**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	230	---	V
Drain to Source on State Resistance (VGS=10 V, ID=60% Rated ID)		RDS(on)	---	0.7	0.8	Ω
On State Drain Current (VDS > ID(on) X RDS(on) Max, VGS=10 V)		ID(on)	5.0	6.0	---	A
Gate Threshold Voltage (VDS=VGS, ID=250µA)		VGS(th)	2.0	3.3	4.0	V
Forward Transconductance (VDS > ID(on) X RDS(on) Max, IDS=50% rated ID)		gfs	1.3	2.5	---	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	---	11 5.0 6.0	15 8 10	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	VDD=50% rated VDS 50% rated ID RG=50Ω	td(on) tr td(off) tf	---	20 30 50 30	40 60 100 60	nsec
Diode Forward Voltage (IS=rated ID, VGS=0 V, TJ=25°C)		VSD	---	1.0	2.0	V
Diode Reverse Recovery Time Reverse Recovery Charge	TJ=25°C IF=rated ID di/dt=100 A/µsec	trr QRR	---	350 2.3	---	nsec µC
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS=25 Volts f= 1 MHz	Ciss Coss Crss	---	450 150 40	600 300 80	pF

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