



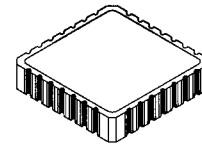
PRELIMINARY

SOLID STATE DEVICES, INC14849 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
- TX, TXV and Space Level Screening available
- Replaces: IRF9240 Types

SFF9240-28

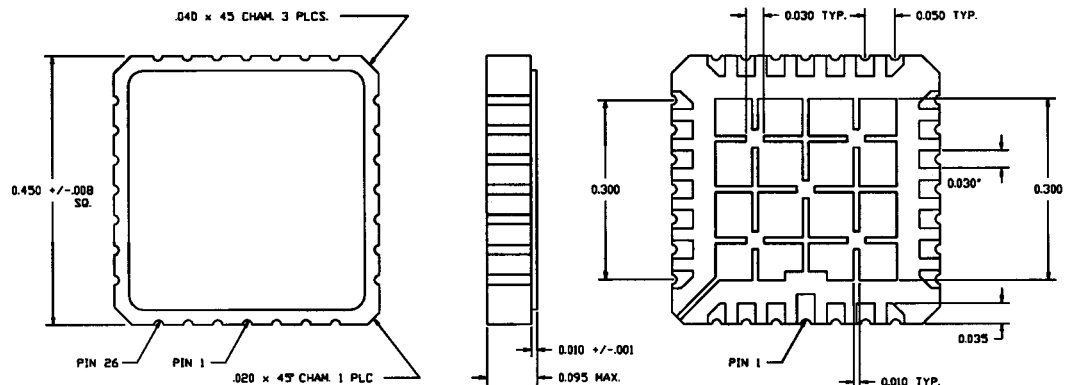
**-11 AMP
-200 VOLTS
0.50Ω
P-CHANNEL
POWER MOSFET**

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	-11	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 Total Device Dissipation @ TC=55°C	P _D	36 27	Watts

PACKAGE OUTLINE: 28 PIN CLCC**PIN OUT:**

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



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

DATA SHEET #: FP0007 D**MED**

SFF9240-28

PRELIMINARY

**SOLID STATE DEVICES, INC**14849 Firestone Boulevard · La Mirada, CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424**ELECTRICAL CHARACTERISTICS @ $T_J=25^{\circ}\text{C}$ (Unless Otherwise Specified)**

RATING		SYMBOL	MIN	TYP	MAX	UNIT
Drain to Source Breakdown Voltage ($V_{GS}=0\text{ V}$, $I_D=-250\mu\text{A}$)		BV_{DSS}	-200	---	---	V
Drain to Source on State Resistance ($V_{GS}=-10\text{ V}$, $I_D=-6\text{ A}$)		$R_{DS(on)}$	---	0.35	0.50	Ω
On State Drain Current ($V_{DS} > I_D(on) \times R_{DS(on)}$ Max, $V_{GS}=-10\text{ V}$)		$I_D(on)$	-11	---	---	A
Gate Threshold Voltage ($V_{DS}=V_{GS}$, $I_D=-250\mu\text{A}$)		$V_{GS(th)}$	-2.0	---	-4.0	V
Forward Transconductance ($V_{DS} \geq I_D(on) \times R_{DS(on)}$ max., $I_{DS}=-6.0\text{ A}$)		g_{fs}	4	6	---	S(Ω)
Zero Gate Voltage Drain Current ($V_{DS}=\text{max rated voltage}$, $V_{GS}=0\text{ V}$) ($V_{DS}=80\%$ rated V_{DS} , $V_{GS}=0\text{ V}$, $T_A=125^{\circ}\text{C}$)		I_{DSS}	---	---	-250 -1000	μA
Gate to Source Leakage Forward Gate to Source Leakage Reverse	$V_{GS}=\pm 20\text{ V}$	I_{GSS}	---	---	-100 100	nA
Total Gate Charge Gate to Source Charge Gate to Drain Charge	$V_{GS}=-10\text{ Volts}$ 80% rated V_{DS} $I_D=-11\text{ A}$	Q_g Q_{gs} Q_{gd}	---	38 8.0 21	90 ---	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	$V_{DD}=-100\text{ V}$ $I_D=-7\text{ A}$ $R_G=9.1\Omega$	$t_{d(on)}$ t_r $t_{d(off)}$ t_f	---	13 45 29 29	35 85 85 65	nsec
Diode Forward Voltage ($I_S=-11\text{ A}$, $V_{GS}=0\text{ V}$, $T_J=25^{\circ}\text{C}$)		V_{SD}	---	---	-4.6	V
Diode Reverse Recovery Time Reverse Recovery Charge	$T_J=25^{\circ}\text{C}$ $I_F=-11\text{ A}$ $di/dt=100\text{ A}/\mu\text{sec}$	t_{rr} Q_{RR}	---	270 2.0	---	nsec μC
Input Capacitance Output Capacitance Reverse Transfer Capacitance	$V_{GS}=0\text{ Volts}$ $V_{DS}=-25\text{ Volts}$ $f=1\text{ MHz}$	C_{iss} C_{oss} C_{rss}	---	1100 375 150	1300 450 250	pF

SAFE OPERATING AREA (S.O.A.)
 $T_C = 25^{\circ}\text{C}$, D.C. CONDITION