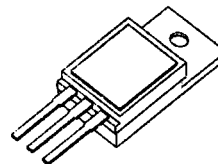




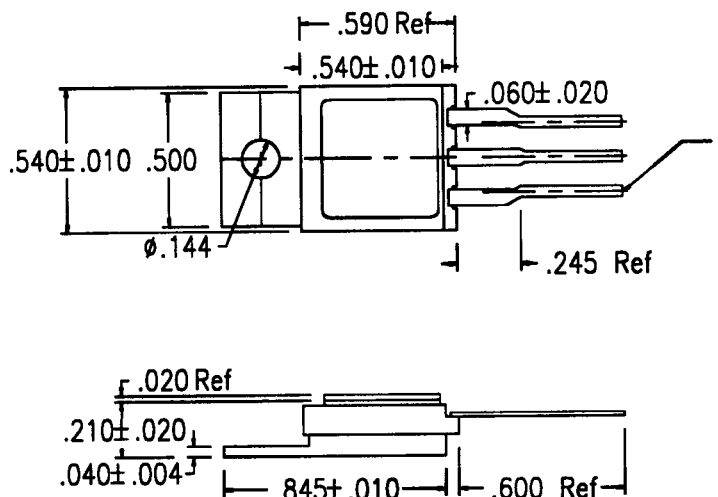
PRELIMINARY

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 $R_{DS(on)}$ 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 ceramic power package
- Flat leads for high frequency applications
- TX, TXV and Space Level screening available
- Replaces: IRF150 Types

SFF150C**40 AMP
100 VOLTS
0.040 Ω
N-CHANNEL
POWER MOSFET****TO-254C****MAXIMUM RATINGS**

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V_{DS}	100	Volts
Gate to Source Voltage	V_{GS}	± 20	Volts
Continuous Drain Current	I_D	40	Amps
Operating and Storage Temperature	$T_{op} \text{ \& } T_{stg}$	-65 to +150	$^{\circ}C$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.0	$^{\circ}C/W$
Total Device Dissipation @ $T_C=25^{\circ}C$ Derate 1 W/ $^{\circ}C$ above $25^{\circ}C$	P_D	125	Watts

PACKAGE OUTLINE: CERAMIC TO-254**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 #: F00069 A****MED**

SFF150C

PRELIMINARY

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 (V _{GS} =0 V, I _D =250μA)		BV_{DSS}	100	---	---	V
Drain to Source on State Resistance (V _{GS} =10 V, I _D =25A)		R_{DS(on)}	---	---	0.040	Ω
On State Drain Current (V _{DS} >I _{D(on)} X R _{DS(on)} Max, V _{GS} =10 V)		I_{D(on)}	---	---	---	A
Gate Threshold Voltage (V _{DS} =4.5V, I _D =1mA)		V_{GS(th)}	2	---	4	V
Forward Transconductance (V _{DS} ≥ 15 V, I _{DS} = 60% rated I _D)		g_{fs}	10	25	---	S(15)
Zero Gate Voltage Drain Current (V _{DS} =max rated voltage, V _{GS} =0 V, T _A =25°C) (V _{DS} =max rated voltage, V _{GS} =0 V, T _A =100°C)		I_{DSS}	---	---	200 1	μA mA
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} rated I _D	Q_g Q_{gs} Q_{gd}	---	100 75 30	120 100 50	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	V _{DD} =25 V I _D =12.5 A R _G = 50Ω	t_{d(on)} t_r t_{d(off)} t_f	---	17 80 40 20	50 300 150 100	nsec
Diode Forward Voltage (I _S = rated I _D , V _{GS} =0 V, T _J =25°C)		V_{SD}	---	1	2	V
Diode Reverse Recovery Time Reverse Recovery Charge	T _J =25°C I _F =rated I _D di/dt=100 A/ sec	t_{rr} Q_{RR}	---	120 0.3	250 ---	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}	---	3000 750 150	5000 2500 1000	pF

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