

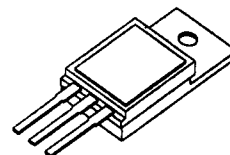
14849 Firestone Boulevard · La Mirada, CA 90638
 Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

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 package
- Low inductance leads
- TX, TXV and Space Level screening available
- Replaces: IRF440 Types

SFF440C

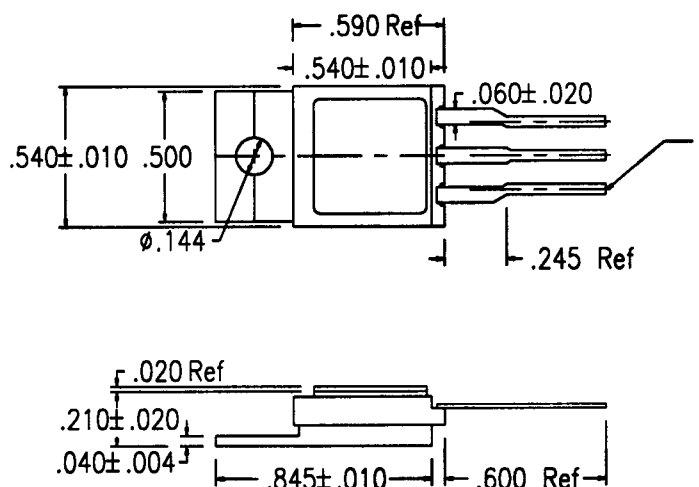
**8 AMP
 500 VOLTS
 0.85Ω
 N-CHANNEL
 POWER MOSFET**

TO-254C**MAXIMUM RATINGS**

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V _{DS}	500	Volts
Gate to Source Voltage	V _{GS}	±20	Volts
Continuous Drain Current	I _D	8	Amps
Operating and Storage Temperature	T _{op} & T _{stg}	-55 to +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	1.7	°C/W
Total Device Dissipation @ TC=25°C Total Device Dissipation @ TC=55°C	P _D	74 56	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 #: F00093 A**MED**

SFF440C

SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada, CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424ELECTRICAL 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}	500	---	---	V
Drain to Source on State Resistance (V _{GS} =10 V, I _D =60% Rated ID)		R _{DS(on)}	---	0.70	0.85	Ω
On State Drain Current (V _{DS} > I _{D(on)} X R _{DS(on)} Max, V _{GS} =10 V)		I _{D(on)}	8	---	---	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}	4.9	7.4	---	S(Ω)
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 =8 A	Q _g Q _{gs} Q _{gd}	---	42 6 22	63 10 32	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	V _{DD} =50% rated V _{DS} I _D = 8 A R _G =9.1Ω R _D =30Ω	t _{d(on)} t _r t _{d(off)} t _f	---	14 23 50 20	21 35 74 30	nsec
Diode Forward Voltage (I _S =rated ID, 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 ID di/dt=100 A/μsec	t _{rr} Q _{RR}	210 2	460 4,2	970 8.9	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 180 45	---	pF

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