



SOLID STATE DEVICES, INC.

14830 Valley View Blvd * La Mirada, Ca 90638

Phone: (562) 404-7855 * Fax: (562) 404-1773

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SFF15N80/3

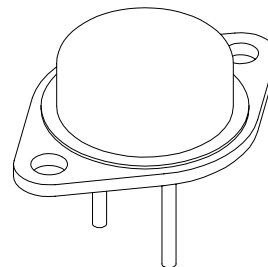
**15 AMPS
800 VOLTS
0.60 Ω
N-CHANNEL
POWER MOSFET**

DESIGNER'S DATA SHEET

FEATURES:

- Low RDS (on) and High Transconductance
- Excellent High Temperature Stability
- Fast Switching Speed
- Intrinsic Rectifier
- Hermetically Sealed Package
- TX, TXV, and Space Level Screening Available

TO-3



MAXIMUM RATINGS

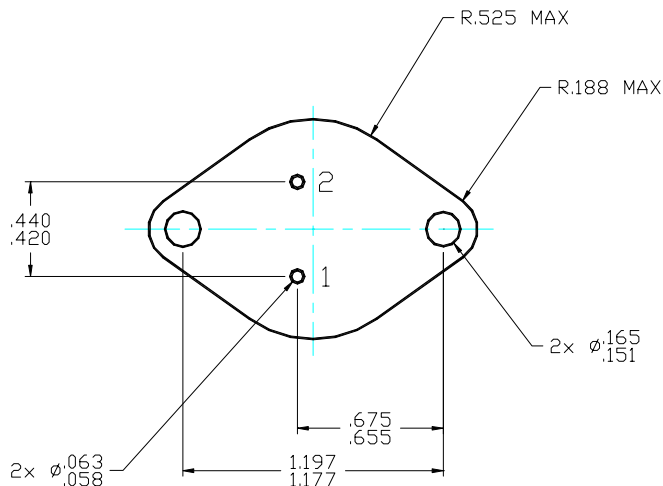
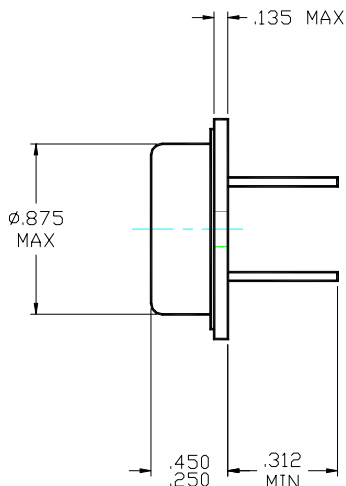
CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V _{DSS}	800	Volts
Gate to Source Voltage	V _{GS}	±20	Volts
Continuous Drain Current	I _D	15	Amps
Operating and Storage Temperature	T _{op} & T _{stg}	-55 to +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	0.42	°C/W
Total Device Dissipation	P _D	300	Watts

@ TC = 25°C

PACKAGE OUTLINE: TO-3

PIN OUT:

DRAIN: CASE
SOURCE: PIN 2
GATE: PIN 1



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

DATA SHEET #: FT0006C

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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 = 3mA)		BV_{DSS}	800	-	-	V
Drain to Source ON State Resistance (V _{GS} = 10 V, I _D = 7.5A)		R_{DS(on)}	-	-	0.65	Ω
Gate Threshold Voltage (V _{DS} = V _{GS} , I _D = 4mA)		V_{GS(th)}	2.0	-	4.5	V
Zero Gate Voltage Drain Current (V _{DS} = 640V, V _{GS} = 0V)	T _A = 25°C T _A = 125°C	I_{DSS}	- -	- -	250 1000	μA
Gate to Source Leakage Forward (V _{GS} = ±20V, V _{DS} = 0V)		I_{GSS}	-	-	±100	nA
Input Capacitance	V _{GS} = 0 Volts	C_{iss}	3965	-	4870	pF
Output Capacitance	V _{DS} = 25 Volts	C_{oss}	315	-	395	
Reverse Transfer Capacitance	f = 1 MHz	C_{rss}	73	-	120	
Total Gate Charge	V _{GS} = 10 V	Q_g	-	128	155	nC
Gate to Source Charge	V _{DS} = 400V	Q_{gs}	-	30	45	
Gate to Drain Charge	I _D = 7.5A	Q_{gd}	-	55	80	
Turn on Delay Time	V _{GS} = 10V	t_{d (on)}	-	20	50	nsec
Rise Time	V _{DD} = 400V	t_r	-	33	50	
Turn off Delay Time	I _D = 7.5A	t_{d (off)}	-	63	100	
Fall Time	R _G = 2 Ω	t_f	-	32	50	
Diode Forward Voltage (I _S = 15A, V _{GS} = 0V, T _J = 25°C)		V_{SD}	-	-	1.50	V
Diode Reverse Recovery Time	I _F = 15A, V _R = 100V di/dt = 100A/μsec	t_{rr}	-	-	800	nsec

NOTES: