



SOLID STATE DEVICES, INC

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

SFF16N60NC

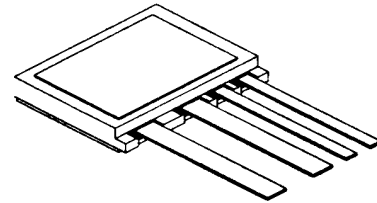
**16.5 AMP
 600 VOLT
 0.40 Ω
 N-CHANNEL
 POWER MOSFET**

Designer's Data Sheet

FEATURES:

- Rugged construction with poly silicon gate
- Ultra 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
- TX, TXV and Space Level screening available
- Replaces: APT6040N Types

TO-258 CERAMIC



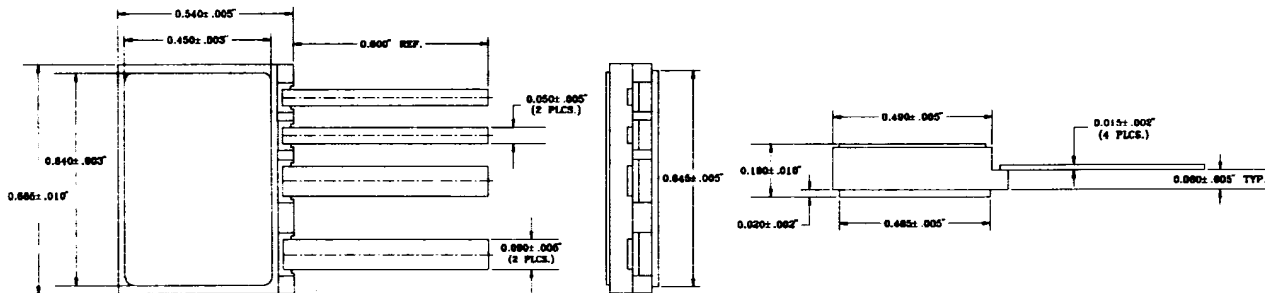
MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V _{DS}	600	Volts
Gate to Source Voltage	V _{GS}	±30	Volts
Continuous Drain Current	I _D	16.5	Amps
Operating and Storage Temperature	T _{OP} & T _{STG}	-65 to +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	0.5	°C/W
Total Device Dissipation @ TC=25°C	P _D	190	Watts
Total Device Dissipation @ TC=55°C		250	

PACKAGE OUTLINE: TO-258 CERAMIC

PIN OUT:

- PIN 1: DRAIN
- PIN 2: SOURCE
- PIN 3: SOURCE-SENSE
- PIN 4: 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 #: F00243 A

MED

HIGH FREQUENCY

SFF16N60NC**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)	BV_{DSS}	600	---	---	V
Drain to Source on State Resistance (VGS=10 V, ID= 0.5 A)	R_{DS(on)}	---	---	0.40	Ω
On State Drain Current (VGS=10V, VDS=10V)	I_{D(on)}	16.5	---	---	A
Gate Threshold Voltage (VDS=VGS, ID= 1mA)	VGS(th)	2	---	4	V
Forward Transconductance (VDS > I _{D(on)} X R _{DS(on)} Max, ID= 30 A)	g_{fs}	---	---	---	S(Ω)
Zero Gate Voltage Drain Current (VDS= 600 V, VGS=0 V, TA=25°C) (VDS= 600 V, VGS=0 V, TA=125°C)	I_{DSS}	---	---	250 1000	μA
Gate to Source Leakage Forward Gate to Source Leakage Reverse	VDS=0V VGS=±30V I_{GSS}	---	---	+100 -100	nA
Total Gate Charge Gate to Source Charge Gate to Drain Charge	VGS=10 Volts 50% rated VDS Rated ID Q_g Q_{gs} Q_{gd}	---	87 11 46	130 16 69	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	VDD= 30 V Rated ID RG= 1.8 Ω VGEN= 10 V t_{d(on)} t_r t_{d(off)} t_f	---	14 23 63 23	28 46 95 46	nsec
Diode Forward Voltage (I _S =rated ID, VGS=0 V, T _J =25°C)	VSD	---	---	1.3	V
Diode Reverse Recovery Time Reverse Recovery Charge	T _J =25°C I _F =rated ID di/dt=100 A/μsec t_{rr} QRR	152 2.5	334 5	668 10	nsec μC
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS=25 Volts f= 1 MHz C_{iss} C_{oss} C_{rss}	---	2400 436 154	2950 610 230	pF

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