

Ultra fast Rectifier

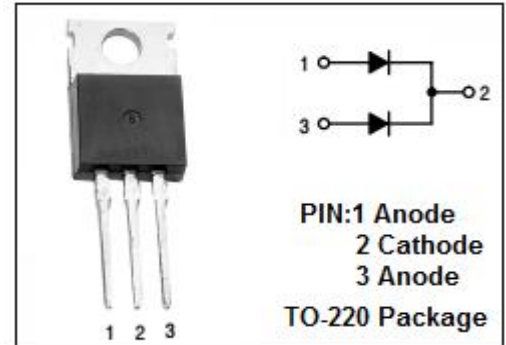
DHG40C600PB

FEATURES

- With TO-220 packaging
- High junction temperature capability
- Low forward voltage, high current capability
- High current capability
- Low power loss, high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

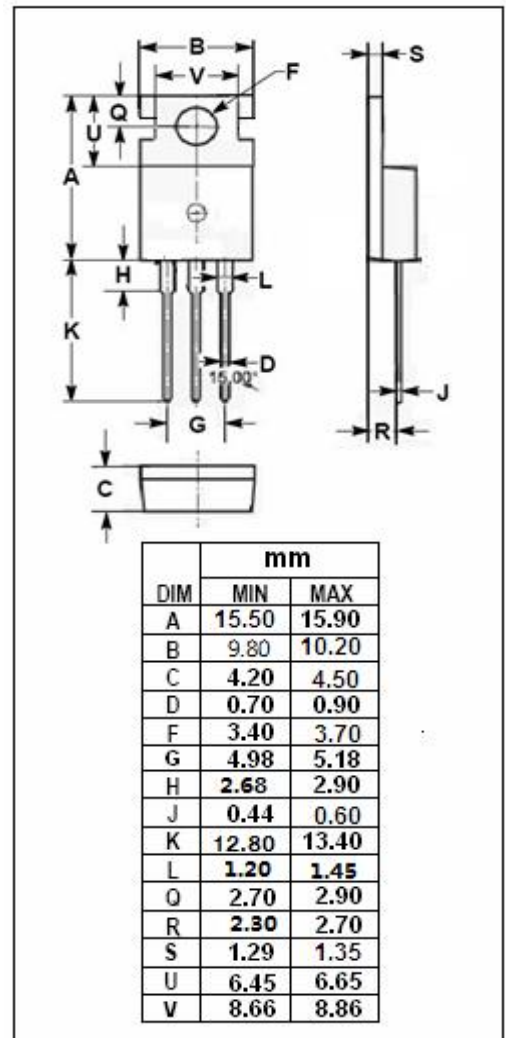
APPLICATIONS

- Switching power supply
- Free-Wheeling diodes
- Reverse battery protection
- Center tap configuration



ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RMS} V_R	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	600	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_c=110^\circ\text{C}$	20	A
I_{FSM}	Nonrepetitive Peak Surge Current (10ms single half sine-wave superimposed on rated load conditions)	150	A
P_{tot}	Total power dissipation	140	W
T_J	Junction Temperature	-55~150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.5	$^{\circ}C/W$

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300 μ s, Duty Cycle \leq 1%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F=20A; T_c=25^{\circ}C$ $I_F=20A; T_c=125^{\circ}C$ $I_F=40A; T_c=25^{\circ}C$ $I_F=40A; T_c=125^{\circ}C$	2.25 2.20 3.17 3.23	V
I_R	Maximum Instantaneous Reverse Current	$V_R=$ rated $V_{RRM}; T_j=25^{\circ}C$ $V_R=$ rated $V_{RRM}; T_j=125^{\circ}C$	25 1500	μA
t_{rr}	Maximum Reverse Recovery Time	$I_F=20A; V_R=300V, -di_F/dt=450A/\mu s$	400	ns

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