

Ultra fast Rectifier

DPG30C400HB

FEATURES

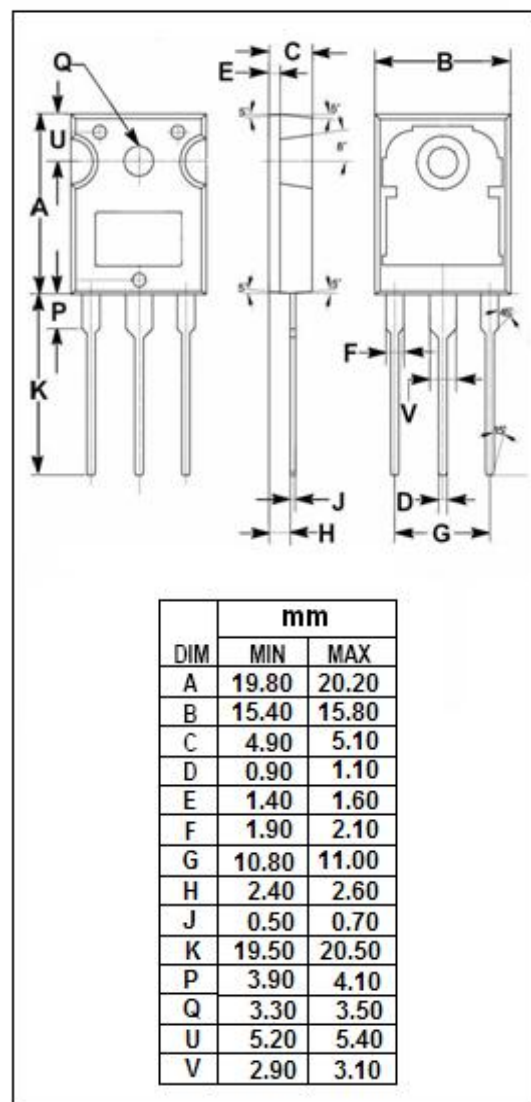
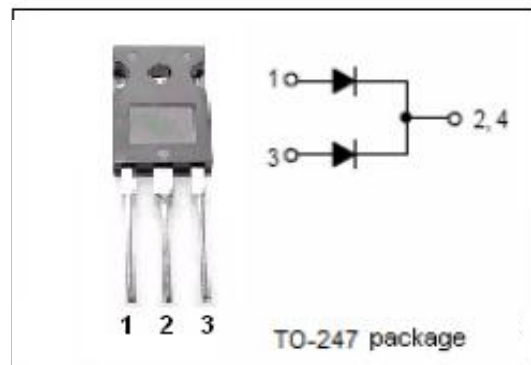
- With TO-247 packaging
- High performance fast recovery diode
- Low loss and soft recovery
- Common cathode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supply
- Power switching circuits
- General purpose

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RWM} V_R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	400	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_c=140^{\circ}\text{C}$	15	A
I_{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 50Hz)	190	A
P_D	Total Power Dissipation	90	W
T_J	Junction Temperature	-55~175	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~175	$^{\circ}\text{C}$



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case	1.67	°C/W

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$) (Pulse Test: Pulse Width=300 μ s, Duty Cycle $\leq 2\%$)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F=15\text{A}; T_j=25^{\circ}\text{C}$ $I_F=15\text{A}; T_j=150^{\circ}\text{C}$ $I_F=30\text{A}; T_j=25^{\circ}\text{C}$ $I_F=30\text{A}; T_j=150^{\circ}\text{C}$	1.38 1.13 1.61 1.39	V
I_R	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=25^{\circ}\text{C}$ $V_R=V_{RWM}; T_j=25^{\circ}\text{C}$	1 180	μ A
t_{rr}	Maximum Reverse Recovery Time	$I_F=15\text{A}; V_R=270\text{V}; diF/dt=200\text{A}/\mu\text{s}$	45	ns

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