

Ultra fast Rectifier

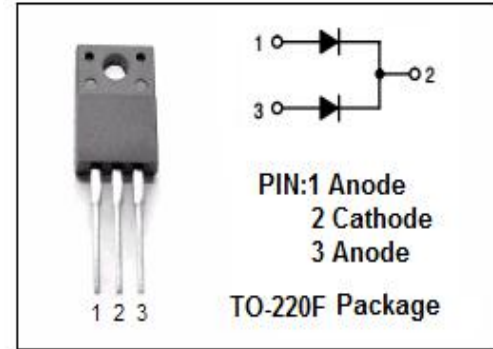
DPG20C300PN

FEATURES

- With TO-220F 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

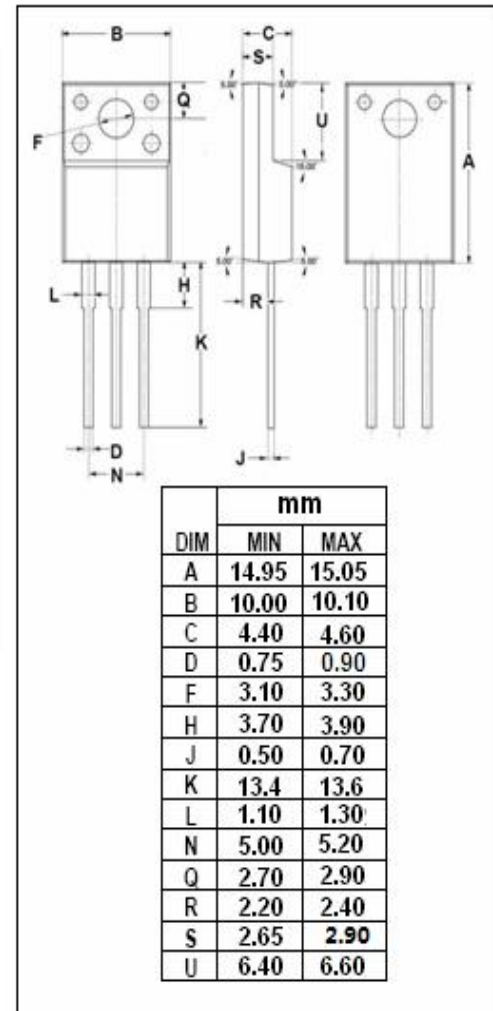
APPLICATIONS

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



ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub> V <sub>RMS</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	300	V
I <sub>F(AV)</sub>	Average Rectified Forward Current @T <sub>c</sub> =110°C	10	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current (10ms single half sine-wave superimposed on rated load conditions)	140	A
T <sub>J</sub>	Junction Temperature	-55~150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~175	°C



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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	4.40	$^{\circ}C/W$

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F=10A; T_c=25^{\circ}C$ $I_F=10A; T_c=125^{\circ}C$ $I_F=20A; T_c=25^{\circ}C$ $I_F=20A; T_c=125^{\circ}C$	1.27 0.98 1.45 1.17	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=$ rated $V_{RRM}; T_c=25^{\circ}C$ $V_R=$ rated $V_{RRM}; T_c=100^{\circ}C$	1 60	$\mu A$
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=010A; V_R=500V; -di_F/dt=200A/\mu s$	35	ns