

Ultrafast Recovery Rectifier

DPG10I300PA

FEATURES

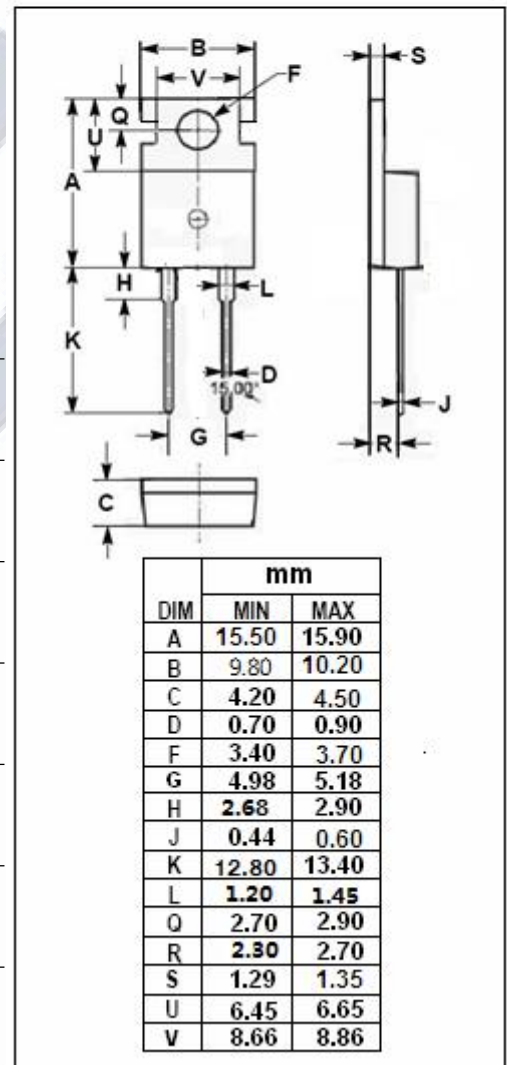
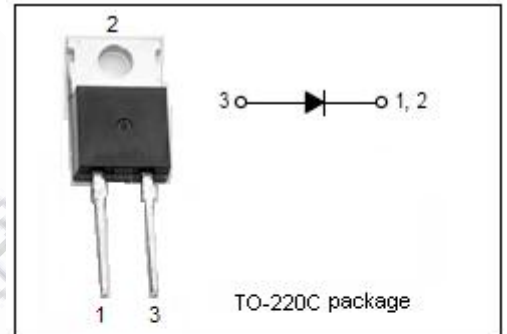
- Ultrafast recovery time
- Low forward voltage
- Low loss and soft recovery
- Single diode
- High temperature glass passivated junction
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in switching power supplies and other power Switching applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{RRM} V _{RWM} V _R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	300	V
I _{F(AV)}	Average Rectified Forward Current @T _c =100°C	10	A
I _{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 50Hz)	140	A
P _D	Total Power Dissipation	0.5	W
T _J	Junction Temperature	-55~175	°C
T _{stg}	Storage Temperature Range	-55~175	°C



Ultrafast Recovery Rectifier

DPG10I300PA

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case	2.3	°C/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F=10\text{A}$	1.27	V
		$I_F=10\text{A}; T_C=150^\circ\text{C}$	0.98	
		$I_F=20$	1.45	
		$I_F=20\text{A}; T_C=150^\circ\text{C}$	1.17	
I_R	Maximum Instantaneous Reverse Current	$V_{RRM}=300\text{V}$	1	μA
		$V_{RRM}=300\text{V}; T_C=150^\circ\text{C}$	60	μA
t_{rr}	Maximum Reverse Recovery Time	$I_F=10\text{A}; V_R=200\text{V}; di_F/dt=200\text{A}/\mu\text{s}$	35	ns