

Ultrafast Recovery Rectifier
DPG10I300PA
FEATURES

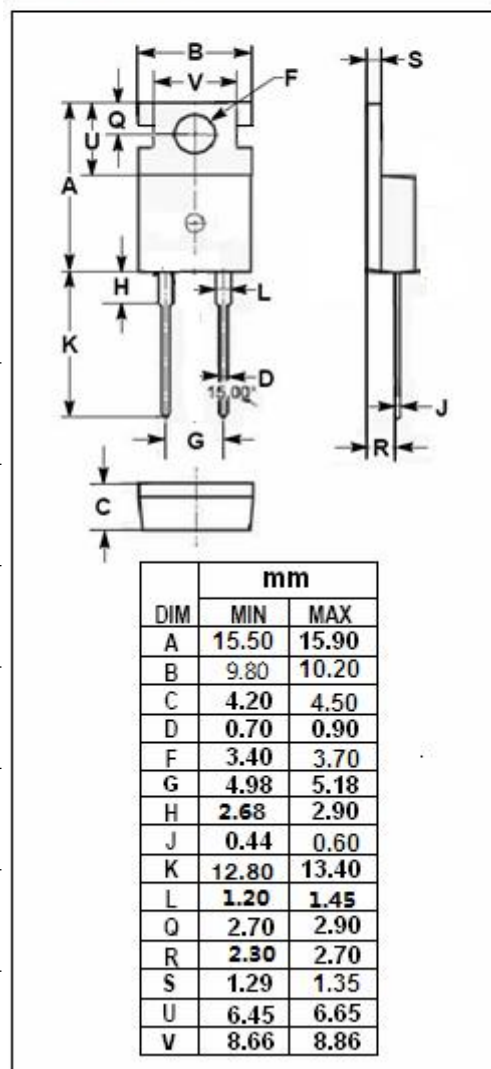
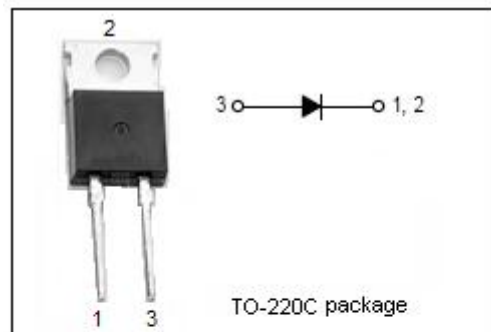
- Ultrafast recovery time
- Low forward voltage
- Low loss and soft recovery
- Single diode
- High temperature glass passivated junction
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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

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

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 @ $T_c=100^{\circ}\text{C}$	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	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~175	$^{\circ}\text{C}$



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\text{-}j\text{-}c}$	Thermal Resistance, Junction to Case	2.3	°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	$I_F=10\text{A}$	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	μ A
		$V_{RRM}=300\text{V}; T_C=150^\circ\text{C}$	60	μ A
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

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