

# Fast Recovery Rectifier

# DPG15I400PM

## FEATURES

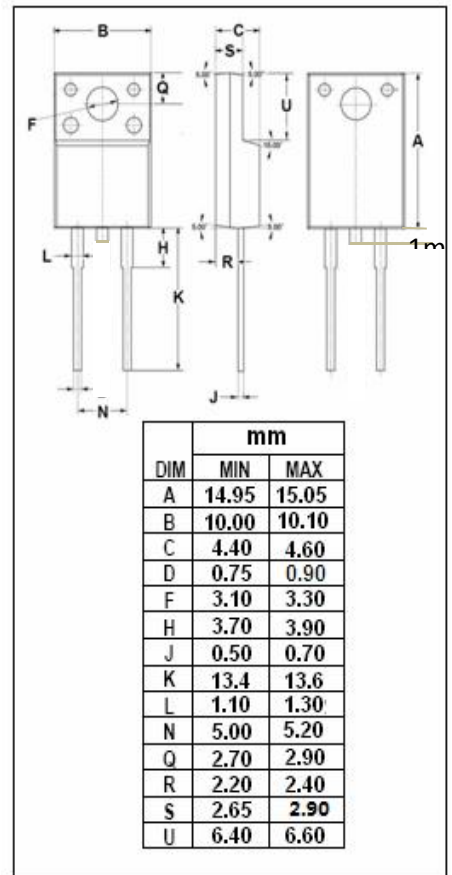
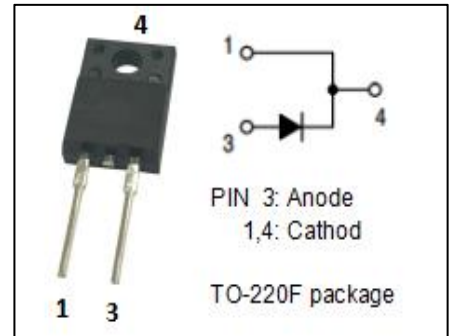
- High Performance Fast Recovery Diode
- Low Loss and Soft Recovery
- Single Diode
- Very low leakage current
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Antiparallel diode for high frequency switching devices
- Anti-saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits

## 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	15	A
$I_{FSM}$	Non-repetitive Peak Surge Current@45°C (Surge applied at rated load conditions half-wave, single phase, 60Hz)	190	A
$T_J$	Junction Temperature	-40~150	°C
$T_{stg}$	Storage Temperature Range	-40~150	°C



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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	4.2	°C/W

ELECTRICAL CHARACTERISTICS(T<sub>a</sub>=25°C) (Pulse Test: Pulse Width=300 μs, Duty Cycle≤2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V <sub>F*</sub>	Maximum Instantaneous Forward Voltage	I <sub>F</sub> =15A ; T <sub>J</sub> =25°C	1.39	V
		I <sub>F</sub> =15A ; T <sub>J</sub> =150°C	1.14	V
		I <sub>F</sub> =30A ; T <sub>J</sub> =25°C	1.63	V
		I <sub>F</sub> =30A ; T <sub>J</sub> =125°C	1.4	V
I <sub>R*</sub>	Maximum Instantaneous Reverse Current	V <sub>R</sub> = 400V ; T <sub>J</sub> =25°C	1	μA
		V <sub>R</sub> = 400V ; T <sub>J</sub> =150°C	180	μA
t <sub>rr</sub>	Maximum Reverse Recovery Time	IF =15A; di/dt = 200A/μs	45	ns

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