

Fast Recovery Rectifier

DPG15I400PM

FEATURES

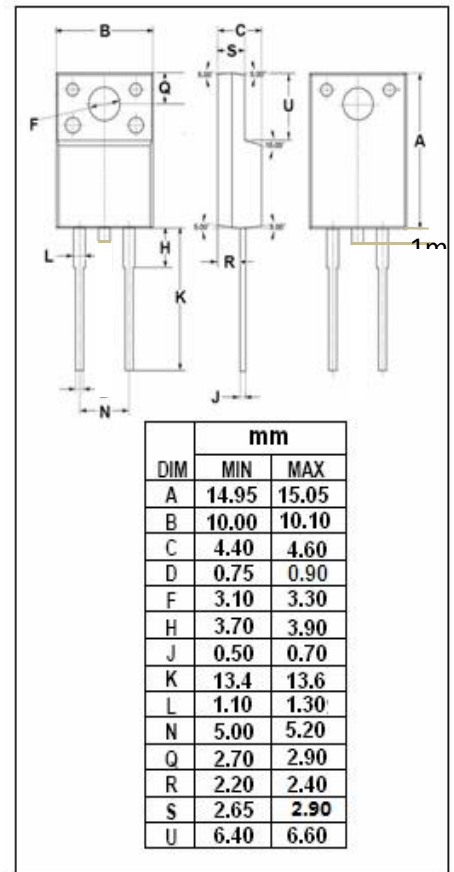
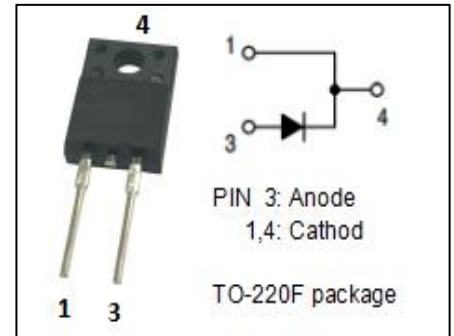
- High Performance Fast Recovery Diode
- Low Loss and Soft Recovery
- Single Diode
- Very low leakage current
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-40~150	$^{\circ}\text{C}$



Fast Recovery Rectifier

DPG15I400PM

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	4.2	°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	$I_F=15\text{A}; T_J=25^{\circ}\text{C}$	1.39	V
		$I_F=15\text{A}; T_J=150^{\circ}\text{C}$	1.14	V
		$I_F=30\text{A}; T_J=25^{\circ}\text{C}$	1.63	V
		$I_F=30\text{A}; T_J=125^{\circ}\text{C}$	1.4	V
I_R^*	Maximum Instantaneous Reverse Current	$V_R=400\text{V}; T_J=25^{\circ}\text{C}$	1	μA
		$V_R=400\text{V}; T_J=150^{\circ}\text{C}$	180	μA
t_{rr}	Maximum Reverse Recovery Time	$I_F=15\text{A}; di/dt=200\text{A}/\mu\text{s}$	45	ns

NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.