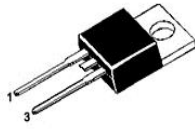
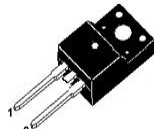


ULTRAFAST RECOVERY RECTIFIERS

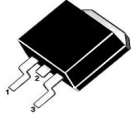
 Lead Free Package and Finish



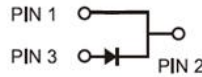
TO-220AC/T



TO-220FAC/F



TO-263/S



FEATURES

- High speed switching capability
- High current capability
- High forward surge capability
- Low power losses, High efficiency
- High reliability
- For use in low voltage, high frequency inverters

APPLICATIONS

Fast recovery diode, mainly used for rectification, used in high-equipment, The express and ultrafast recovery diodes are suitable high frequency and ultra high frequency circuits, respectively

Primary Characteristic

I_O	8A
V_{RRM}	400V
I_{FSM}	120A
V_F	1.1V
T_{jmax}	150°C

MECHANICAL DATA

- **Case:** Molded plastic
- **Polarity:** As marked
- **Mounting Position:** Any
- **Molded Plastic:** UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Solder bath temperature 275°C maximum, 10s per JESD 22-B106

Maximum Ratings at Ta=25°C unless otherwise specified

Characteristics	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	400	V
Working Peak Reverse Voltage	V_{RWM}	400	V
Maximum DC Blocking Voltage	V_{DC}	400	V
Maximum Average Forward Rectified Current	I_O	8	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave	I_{FSM}	120	A
Operating Temperature Range	T_J	-40 to +150	°C
Storage Temperature Range	T_{STG}	-40 to +150	°C
Typical Thermal Resistance (Note1)	$R_{\theta JC}$	2 4	°C/W
TO-220AC, TO-263			
TO-220FAC			

Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

Electrical Characteristics unless otherwise specified

Characteristics		Symbol	Value		Unit
Forward Voltage Drop(Note2)		V _F	Typ.	Max.	V
at I _F =3A	TA=25°C		1.01	-	
	TA=125°C		0.87	-	
at I _F =5A	TA=25°C		1.10	-	
	TA=125°C		0.96	-	
at I _F =8A	TA=25°C		1.20	1.59	
	TA=125°C		1.10	-	
Maximum Reverse Current at V _R =400V	TA=25°C	I _R	0.1	1	μA
	TA=125°C		10	-	μA
Maximum Reverse Recovery Time at I _F =0.5A, I _o =1A, I _{oR} =0.25A		T _{rr}	-	35	ns

Note2: Pulse test: 300 μs pulse width, 1 % duty cycle

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

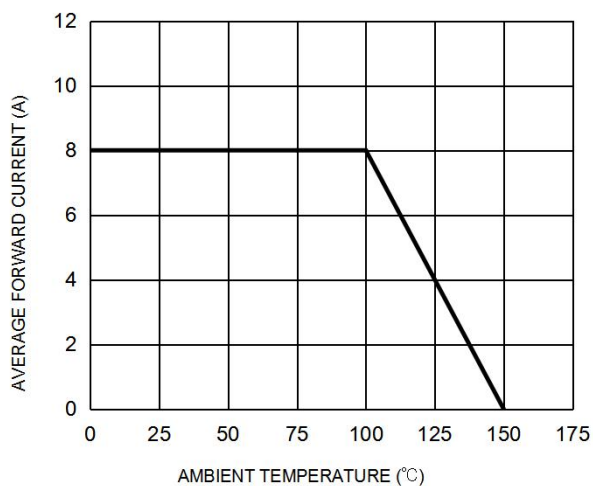


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

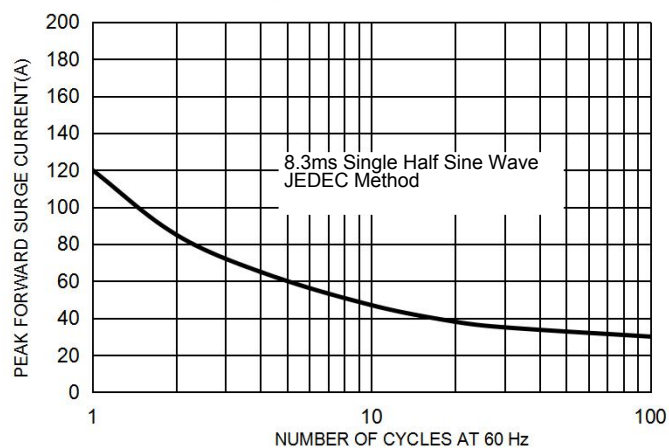


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

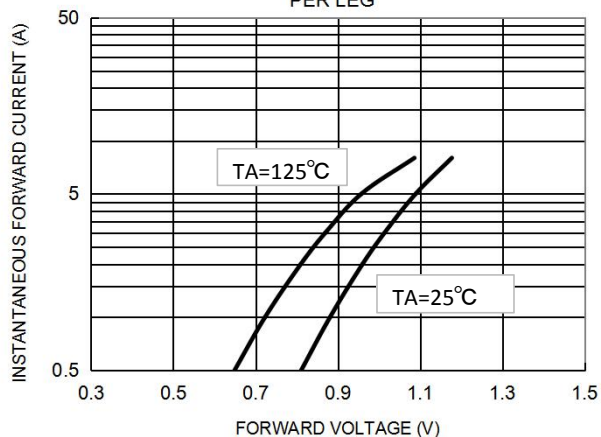
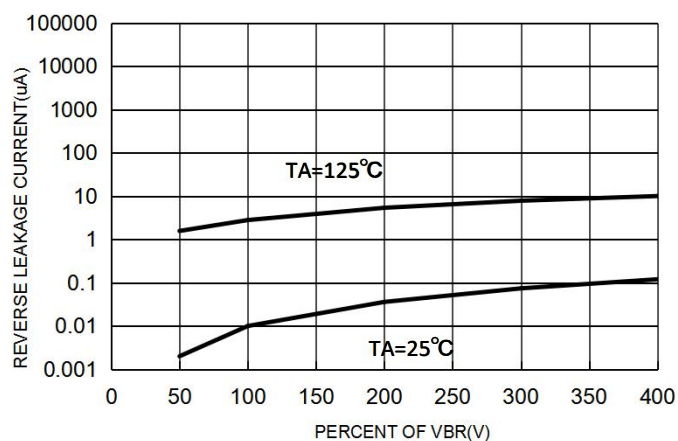
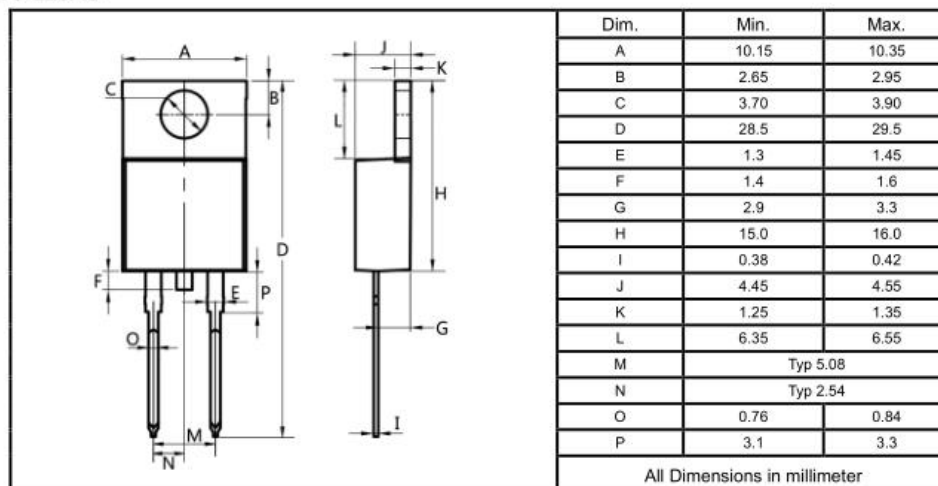


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

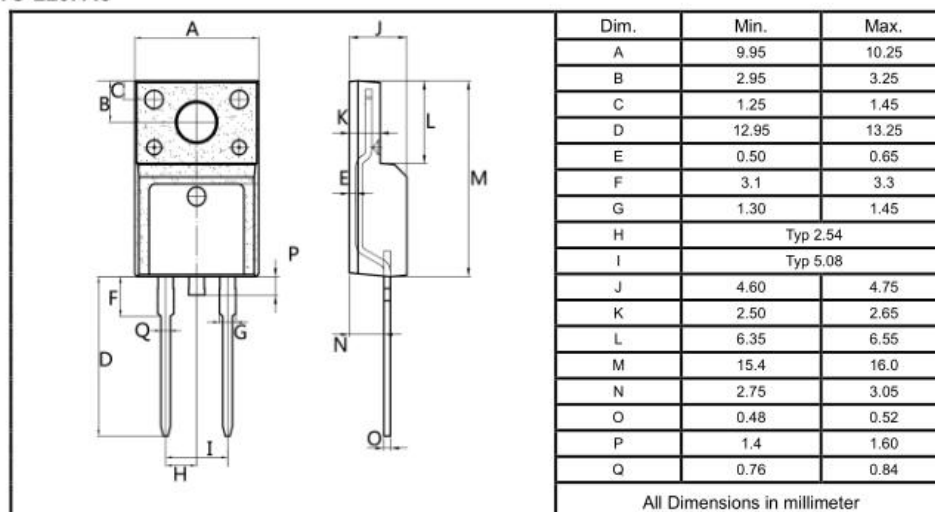


Package Outline Dimensions millimeters

TO-220AC



TO-220FAC



TO-263

