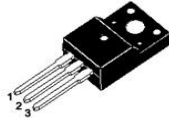
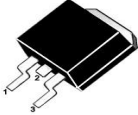


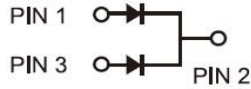
TO-220AB/CT



TO-220F/FCT



TO-263/DC



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-power equipment, The express and ultrafast recovery diodes are suitable for high frequency and ultra high frequency circuits, respectively

Primary Characteristic

I_O	2*5A
V_{RRM}	400V
I_{FSM}	120A
V_F	1.1V
$T_{j,max}$	150°C
Assembly code	BD

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 (Per Leg) at $T_a=25^\circ\text{C}$ 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	Per Leg	5	A
	Total	10	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave	I_{FSM}	120	A
Operating Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-40 to +150	°C
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	2	°C/W
TO-220AB, TO-263			
TO-220F		4	

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

Electrical Characteristics (Per Leg) unless otherwise specified

Characteristics	Symbol	Value		Unit	
		Typ.	Max.		
Forward Voltage Drop (Note 2)	V_F	1.01	-	V	
at $I_F=3A$		TA=25°C	0.87		-
		TA=125°C	1.10		1.25
at $I_F=5A$		TA=25°C	0.96		-
		TA=125°C	1.20		1.39
at $I_F=8A$		TA=25°C	1.10		-
	TA=125°C	0.10	1.00		
Maximum Reverse Current at $V_R=400V$	I_R	10.00	-	μA	
				μA	
Maximum Reverse Recovery Time at $I_F=0.5A, I_R=1A, I_{RR}=0.25A$	T_{rr}	-	35.00	ns	

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

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

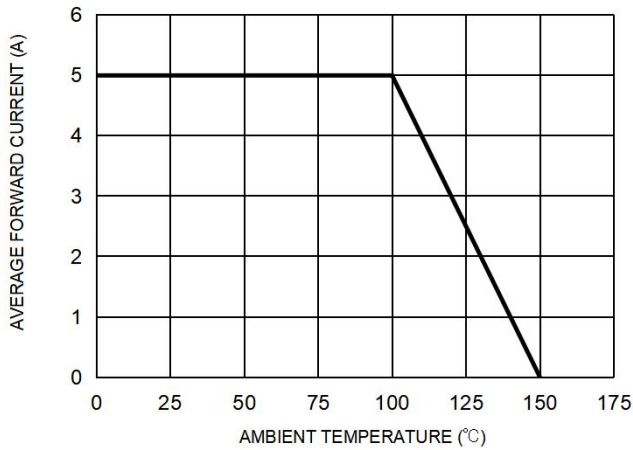


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

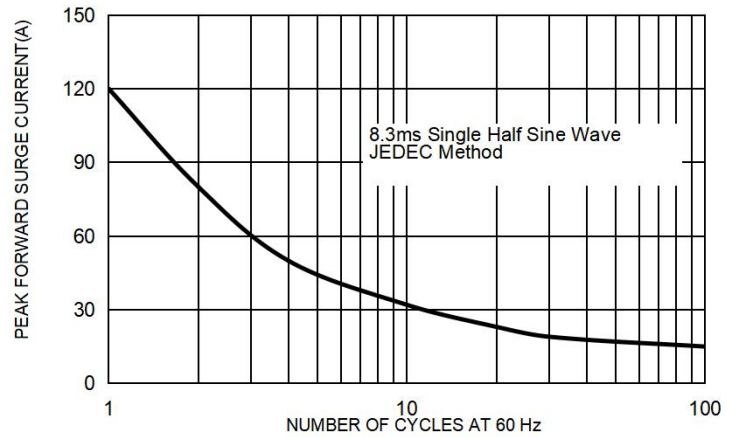


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

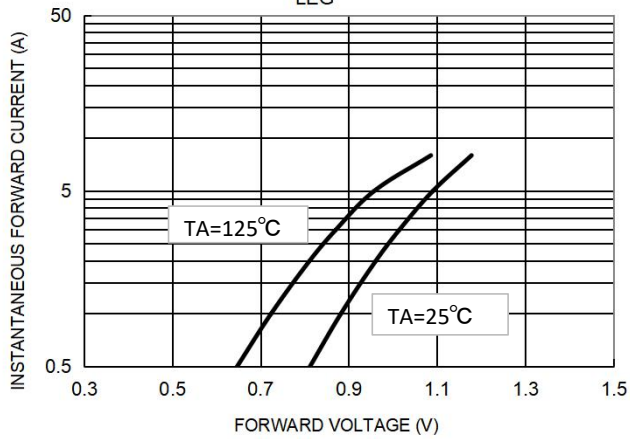
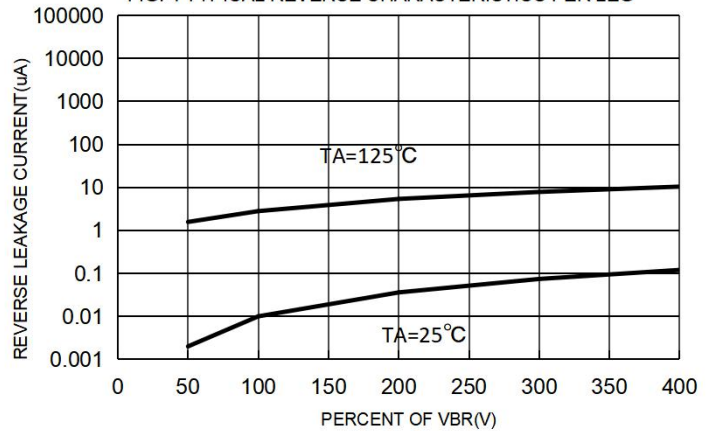
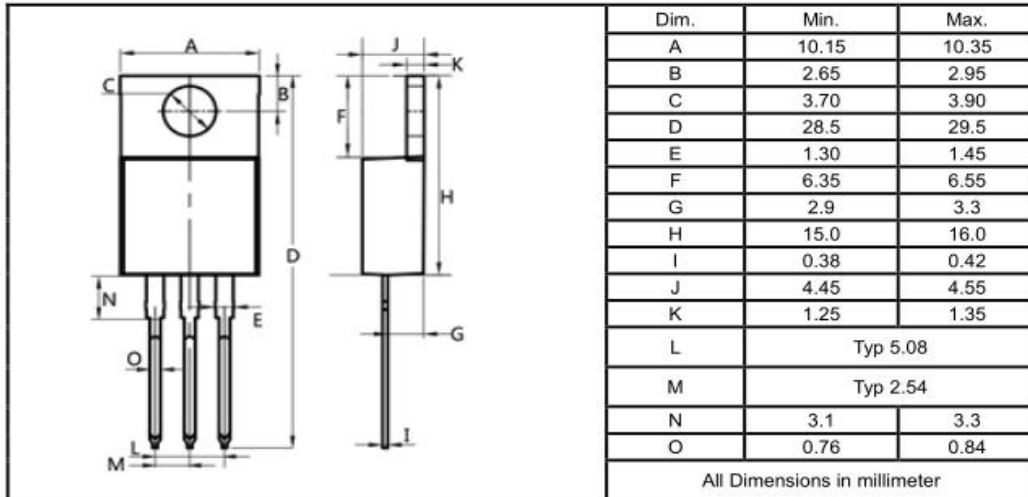


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

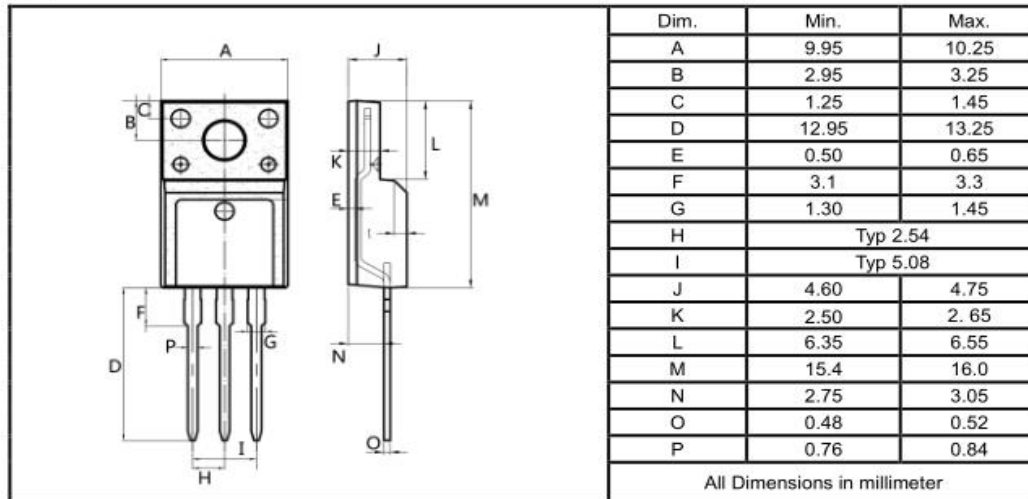


Package Outline Dimensions millimeters

TO-220AB



TO-220F



TO-263

