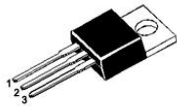
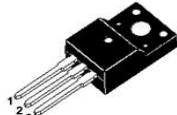


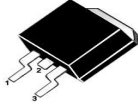
ULTRAFAST RECOVERY RECTIFIERS



TO-220AB/CT



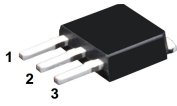
TO-220F/FCT



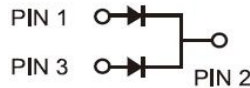
TO-263/DC



TO-252/CS



TO-251/D



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



RoHS
COMPLIANT

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}	100A
V_F	1.03V
T_{Jmax}	175°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 (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 Superimposed on Rated Load (JEDEC method)	I_{FSM}	100	A
Operating Temperature Range	T_J	175	°C
Storage Temperature Range	T_{STG}	-40 to +175	°C
Typical Thermal Resistance (Note1)	$R_{\theta JC}$		
TO-220AB, TO-263		2	°C/W
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
Forward Voltage Drop(Note2)		V _F	Typ.	Max.	V
at I _F =1A	TA=25°C		0.92	-	
	TA=125°C		0.79	-	
at I _F =3A	TA=25°C		1.05	-	
	TA=125°C		0.94	-	
at I _F =5A	TA=25°C		1.13	1.43	
	TA=125°C		1.03	-	
Maximum Reverse Current at V _R =400V	TA=25°C		I _R	0.01	
	TA=125°C	1		-	μA
Maximum Reverse Recovery Time at I _F =0.5A, I _R =1A,		T _{rr}	13	30	ns

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

RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

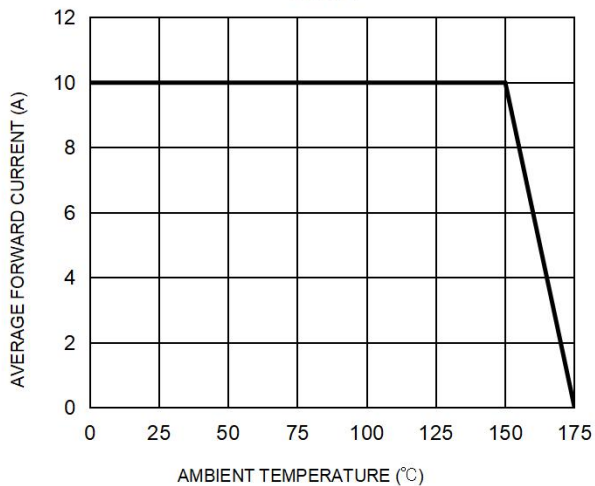


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

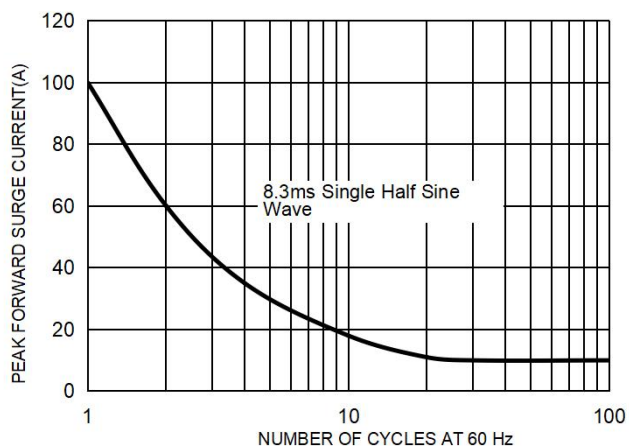


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

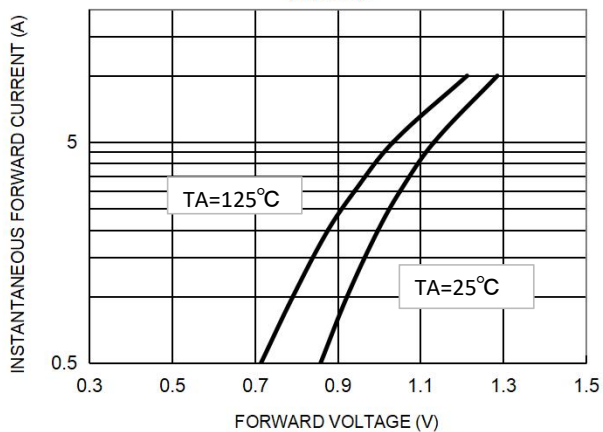
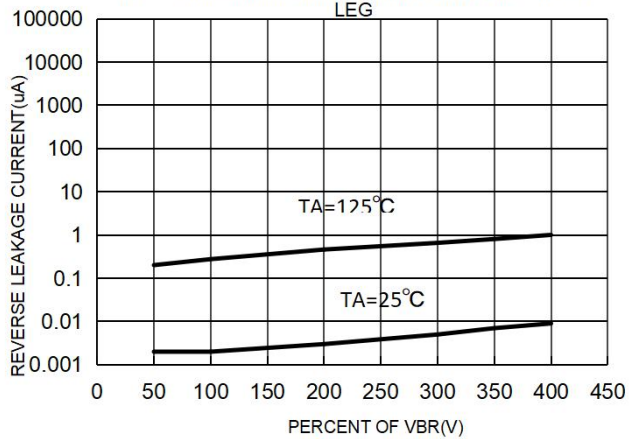
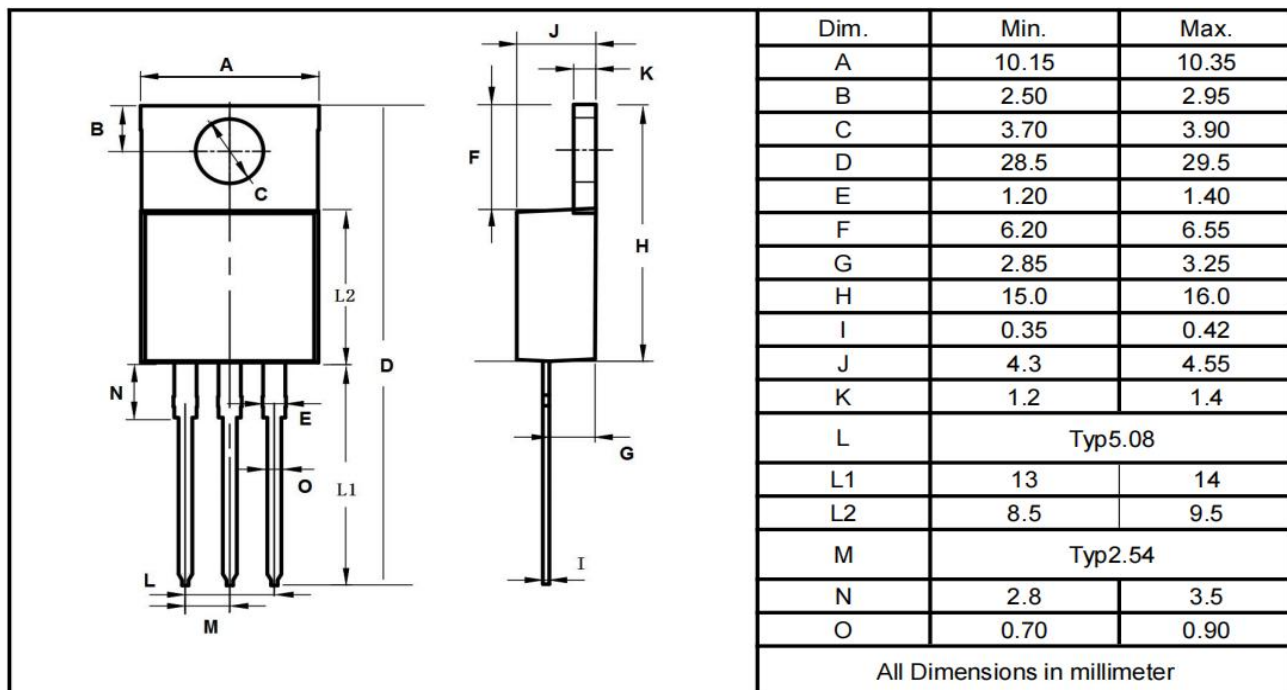


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

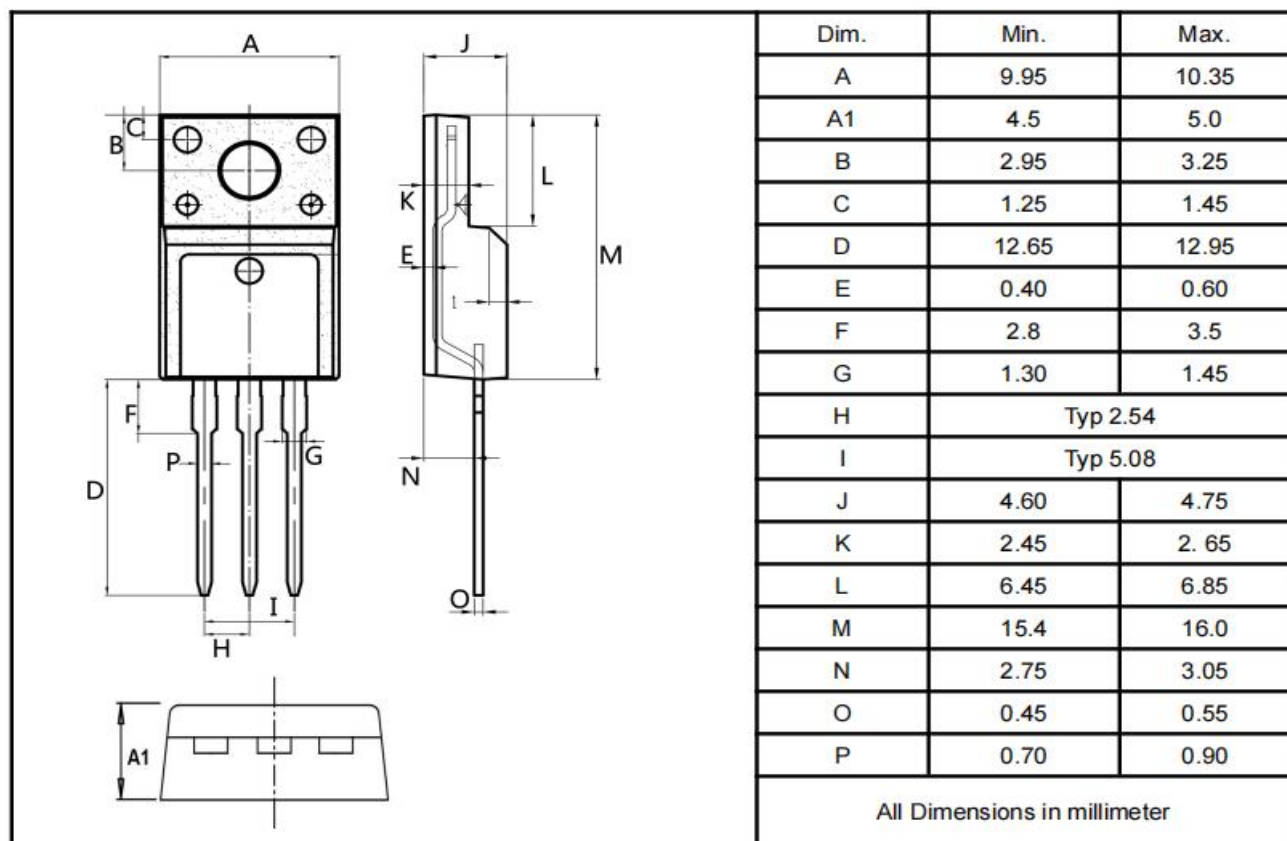


Package Outline Dimensions millimeters

TO-220AB

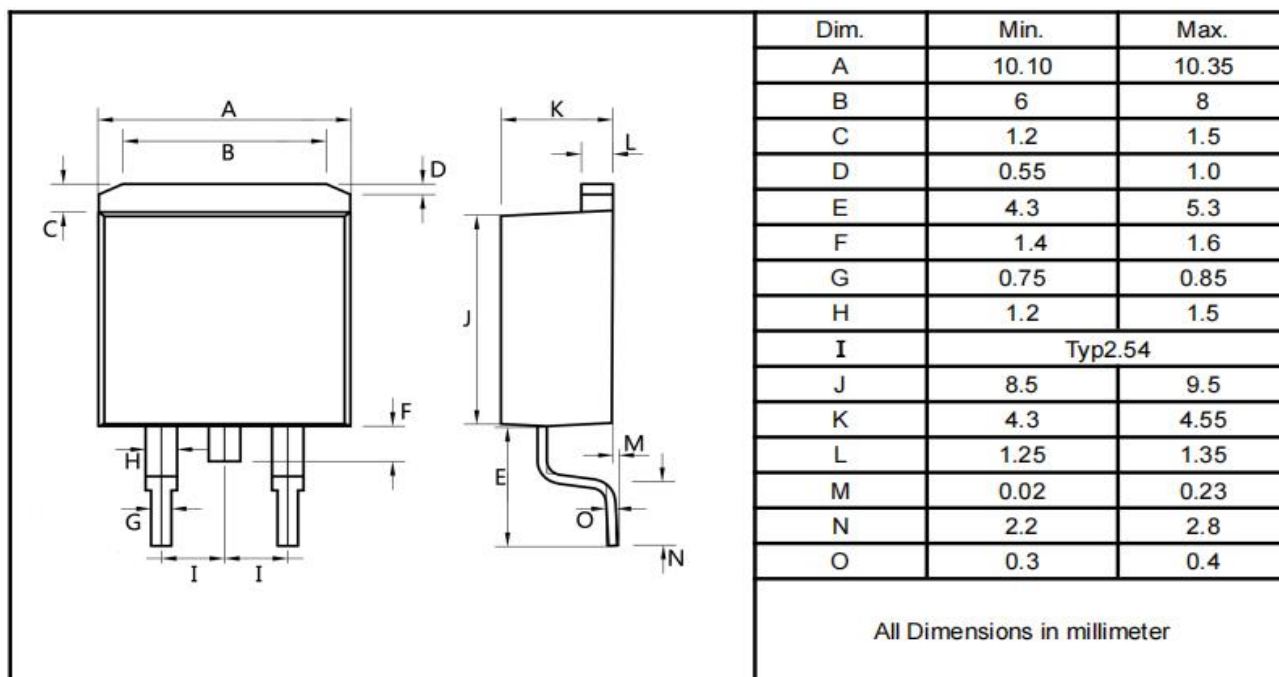


TO-220F

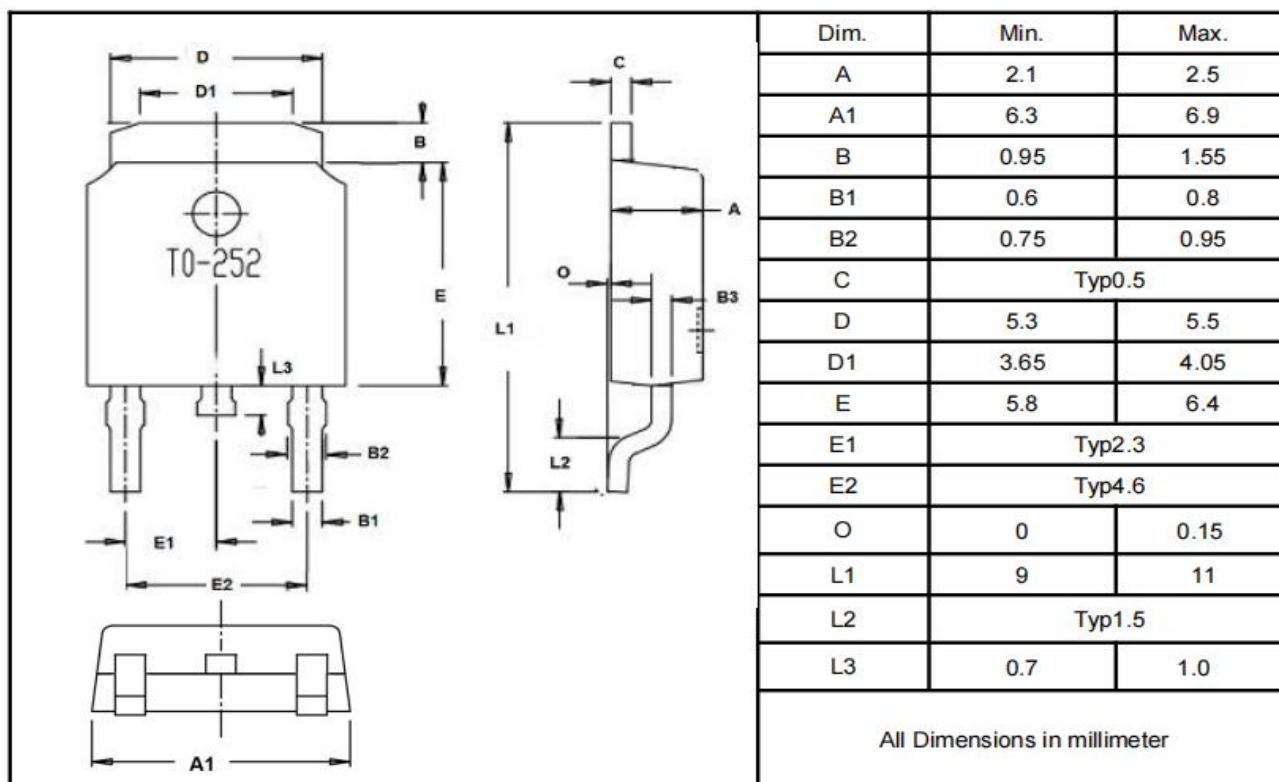


Package Outline Dimensions millimeters

T0-263



T0-252



Package Outline Dimensions millimeters

T0-251

