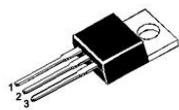
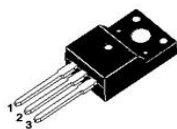


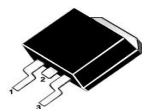
## ULTRAFAST RECOVERY RECTIFIERS



TO-220AB/MUR1040CT



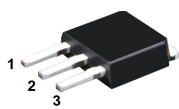
TO-220F/MURF1040CT



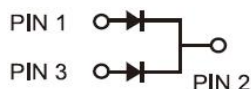
TO-263/MURB1040CT



TO-252/MURD1040CT



TO-251/MURI1040CT



## 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 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	$I_O$	Per Leg	5
		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
		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 $I_F=3A$		1.05	-	
	TA=25°C	0.94	-	
	TA=125°C	1.13	1.43	
at $I_F=5A$		1.03	-	
Maximum Reverse Current at $V_R=400V$	$I_R$	TA=25°C	0.01	10
		TA=125°C	1	-
Maximum Reverse Recovery Time at $I_F=0.5A, I_R=1A,$	$T_{rr}$	13	30	ns

Note2: Pulse test: 300  $\mu$ s pulse width, 1 % duty cycle

## RATINGS AND CHARACTERISTIC CURVES

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

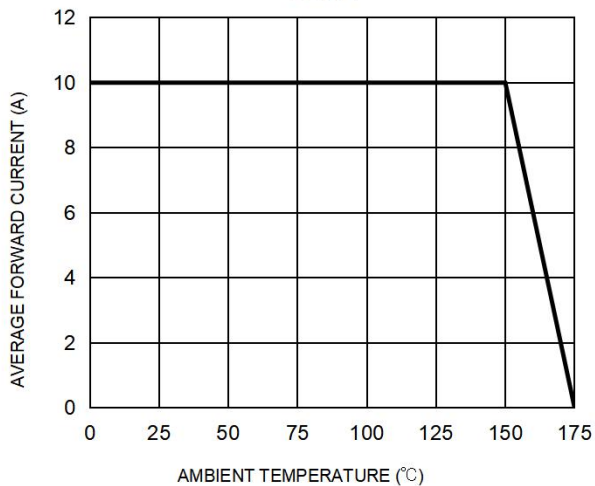


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

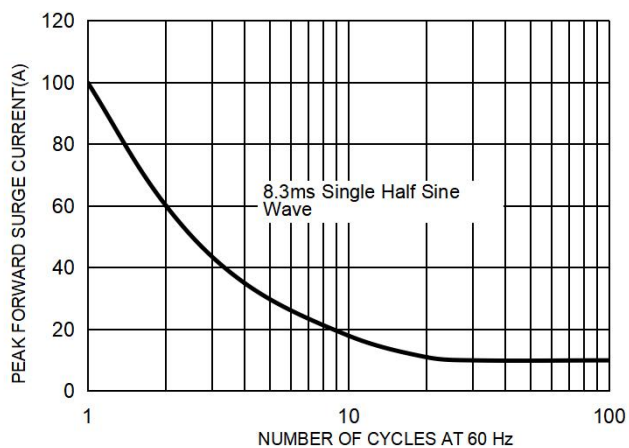


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

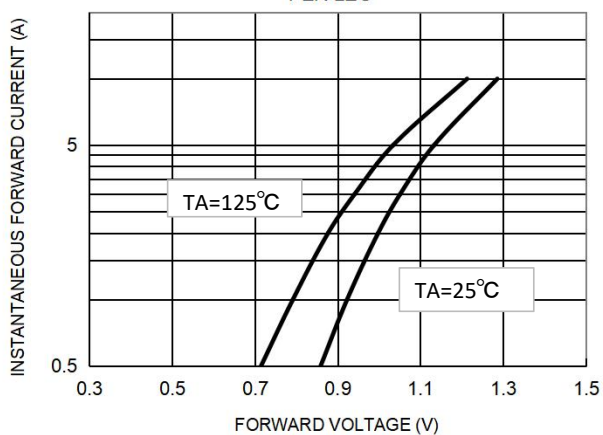
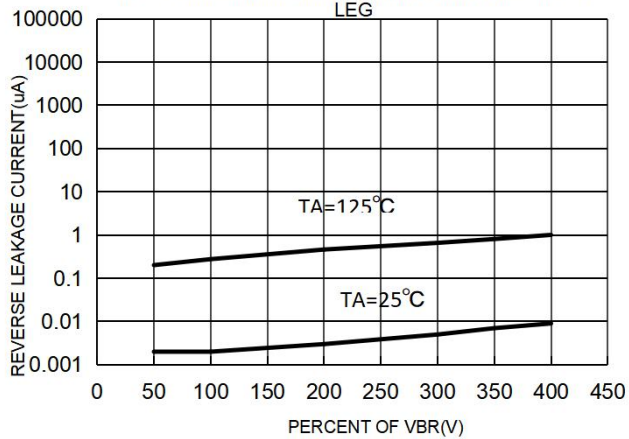
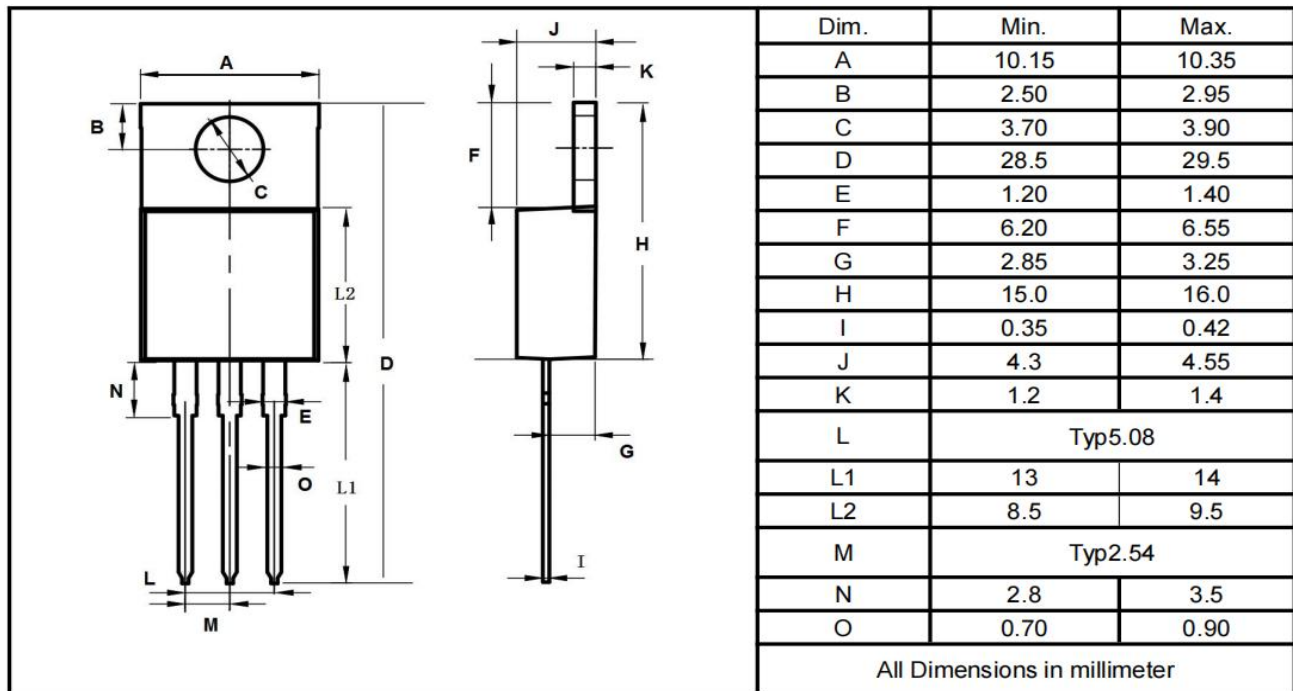


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

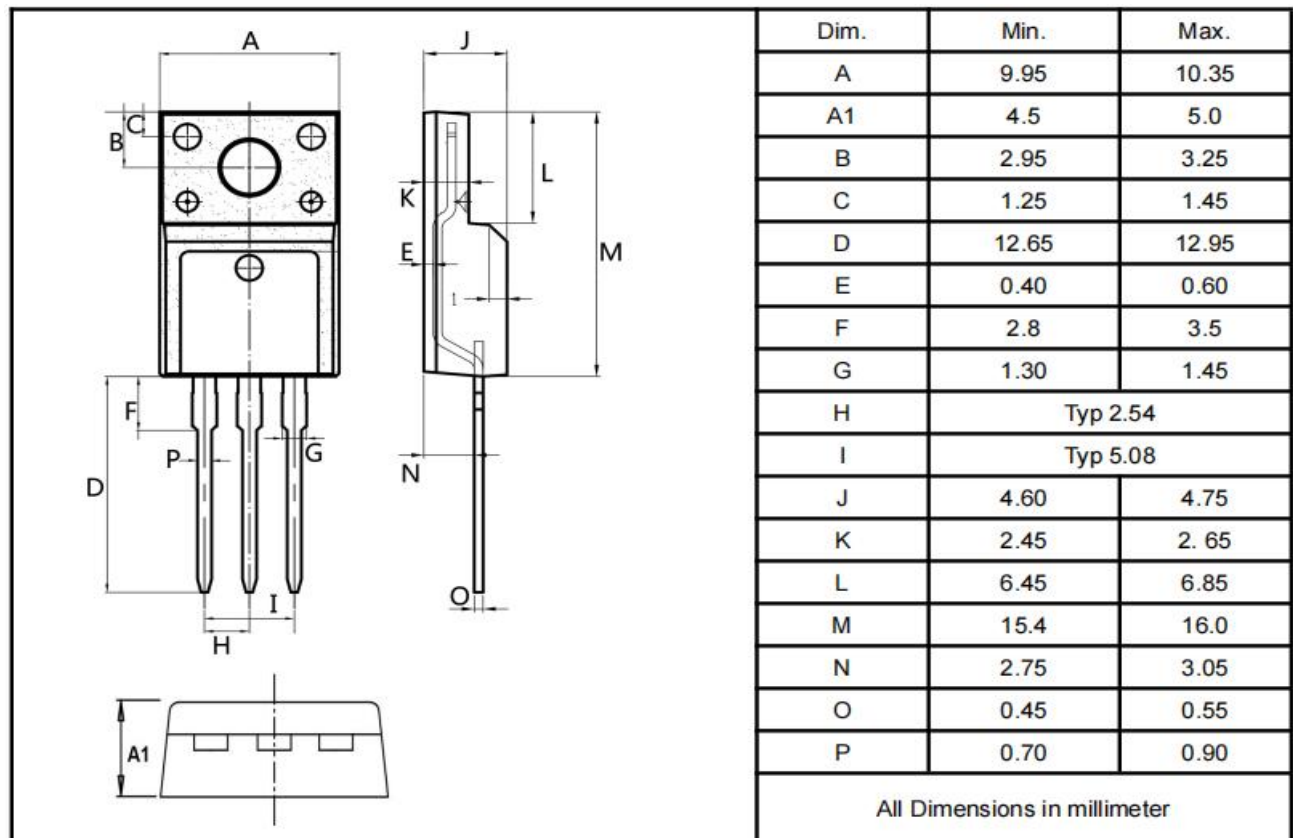


## Package Outline Dimensions millimeters

### TO-220AB

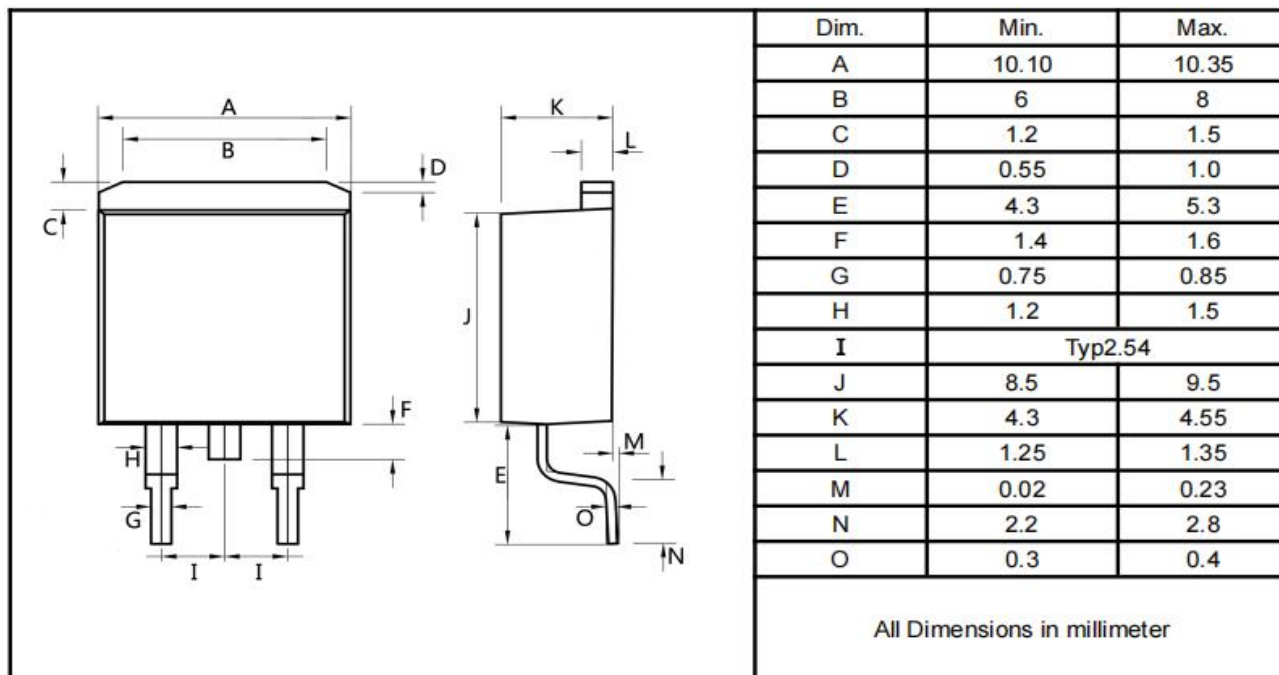


### TO-220F

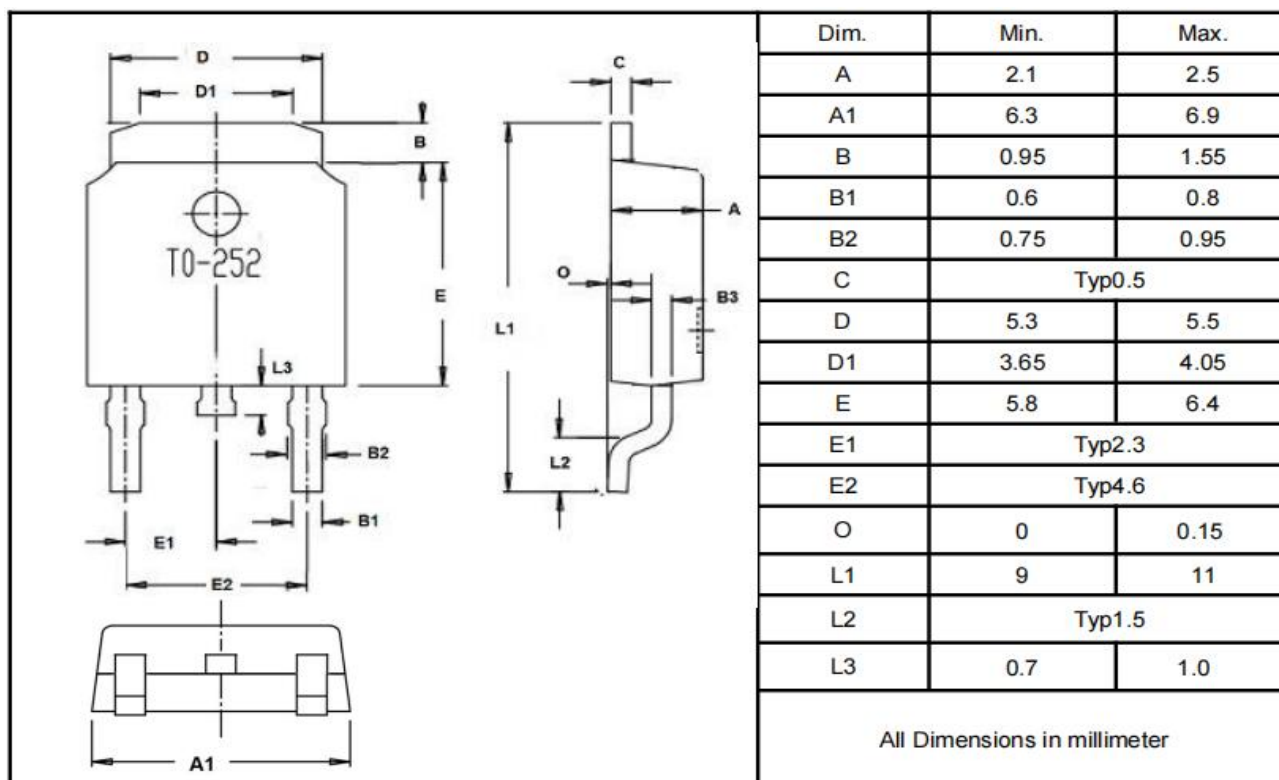


## Package Outline Dimensions millimeters

T0-263



T0-252



## Package Outline Dimensions millimeters

T0-251

