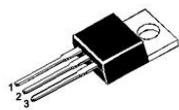
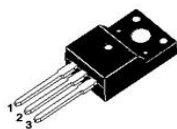


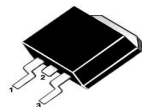
ULTRAFAST RECOVERY RECTIFIERS



TO-220AB/MUR1040CT



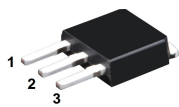
TO-220F/MURF1040CT



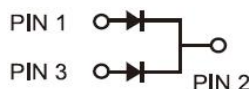
TO-263/MURB1040CT



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 $T_a=25^\circ\text{C}$ 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	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 $I_F=1A$		
	$T_A=25^\circ\text{C}$	0.92	-	
	$T_A=125^\circ\text{C}$	0.79	-	
at $I_F=3A$	$T_A=25^\circ\text{C}$	1.05	-	
	$T_A=125^\circ\text{C}$	0.94	-	
at $I_F=5A$	$T_A=25^\circ\text{C}$	1.13	1.43	
	$T_A=125^\circ\text{C}$	1.03	-	
Maximum Reverse Current at $V_R=400V$	I_R	$T_A=25^\circ\text{C}$	0.01	10
		$T_A=125^\circ\text{C}$	1	-
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

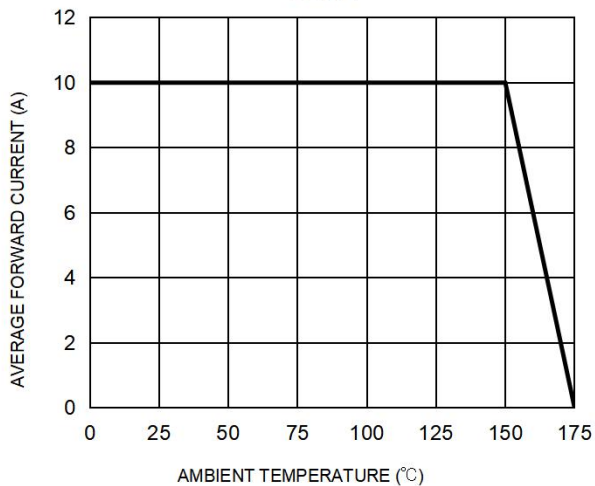


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

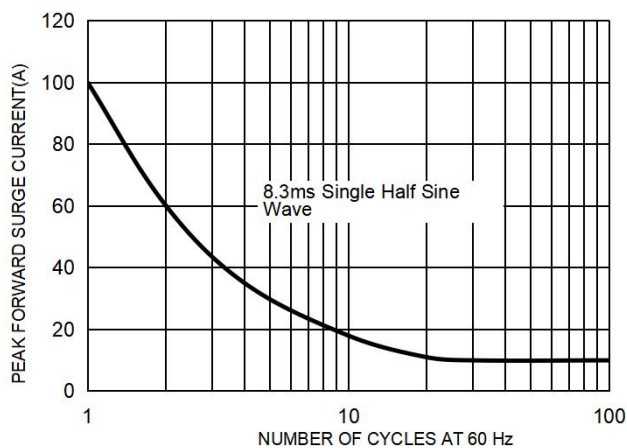


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

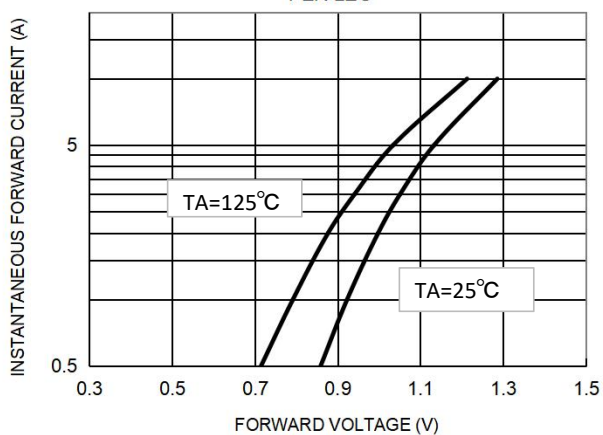
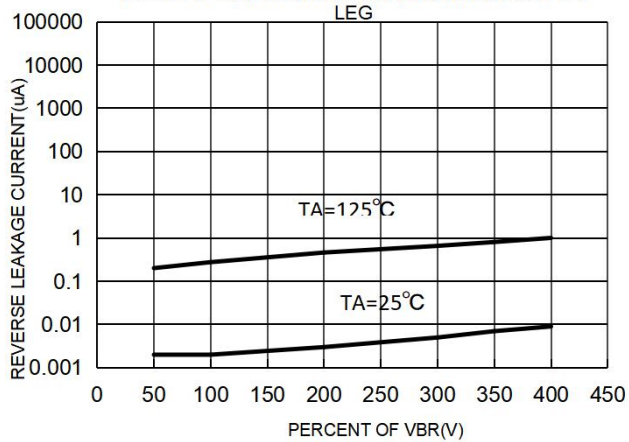
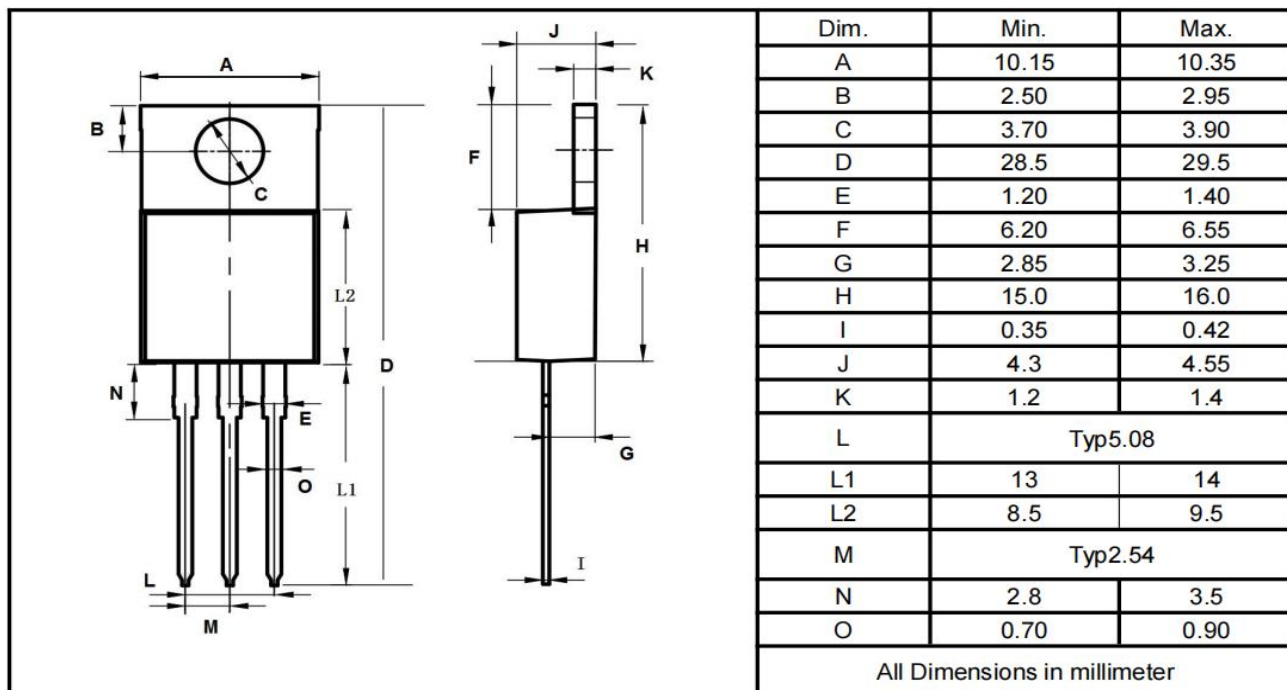


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

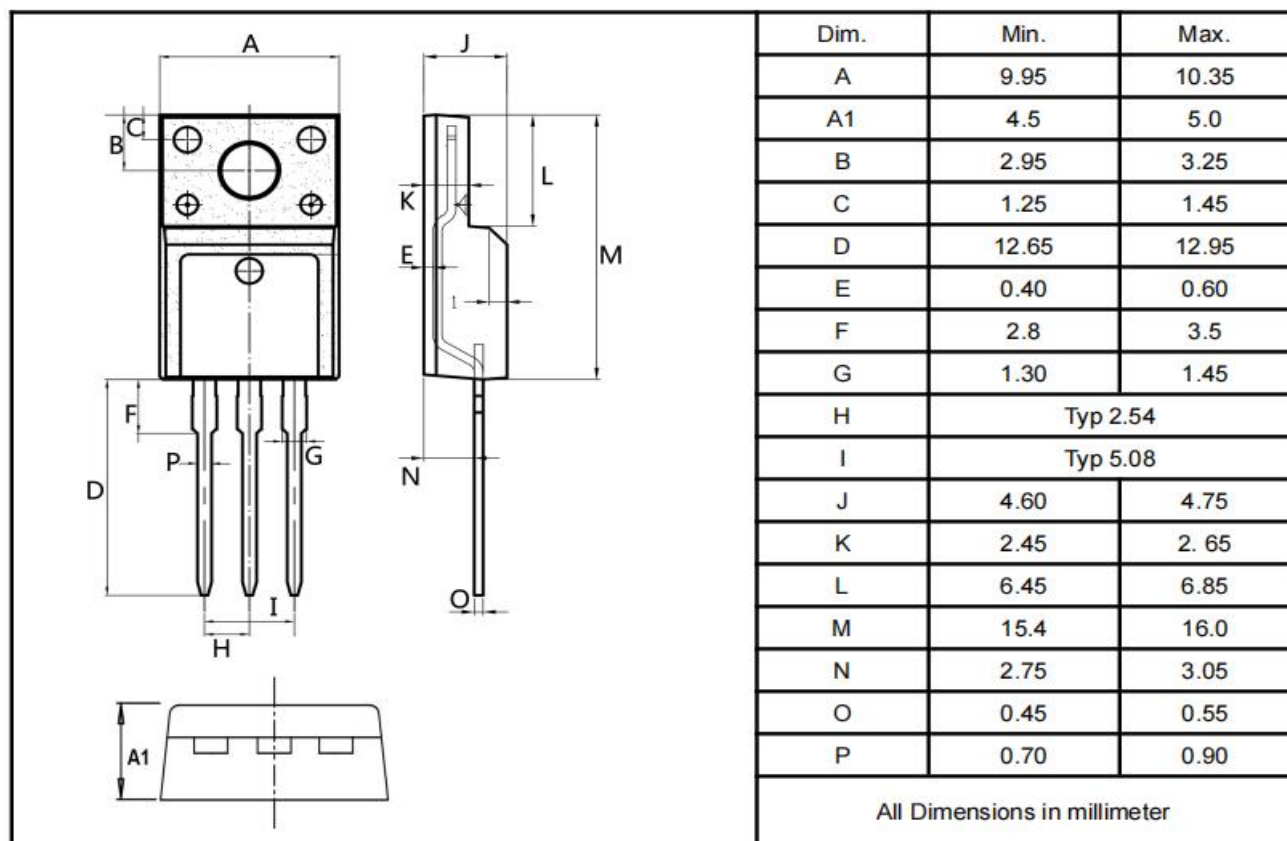


Package Outline Dimensions millimeters

TO-220AB

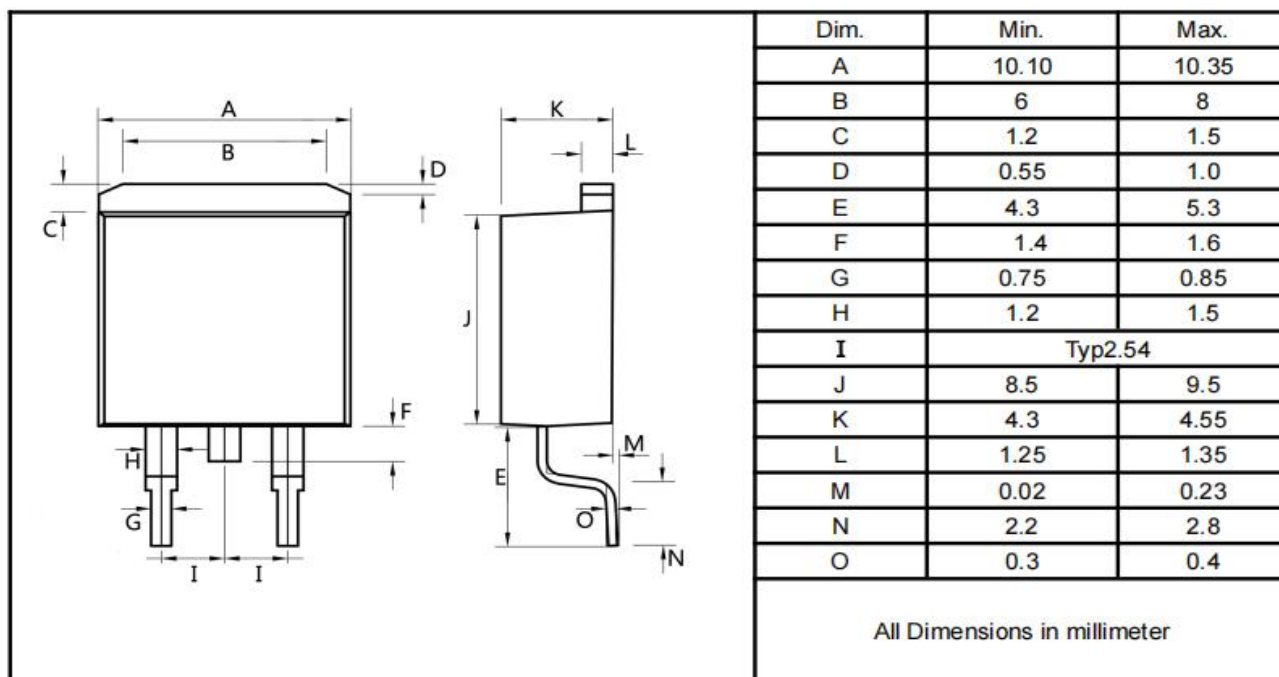


TO-220F

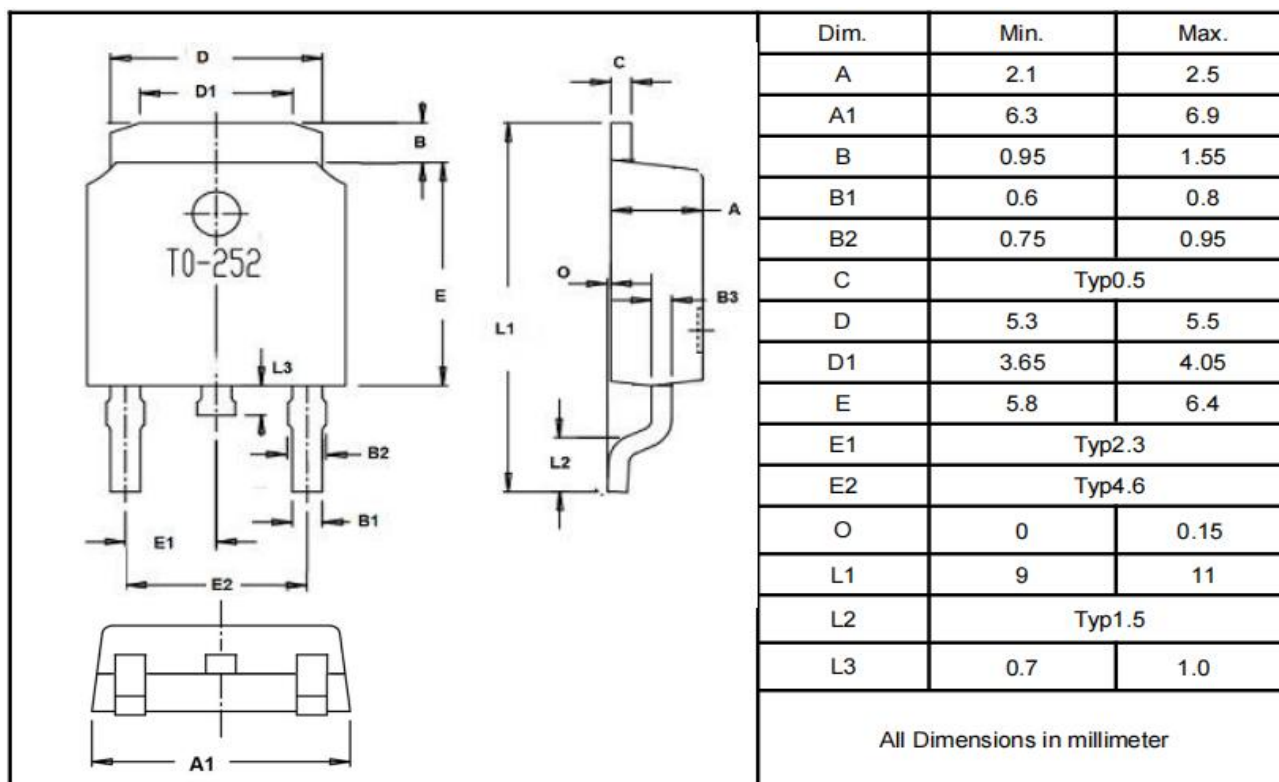


Package Outline Dimensions millimeters

T0-263

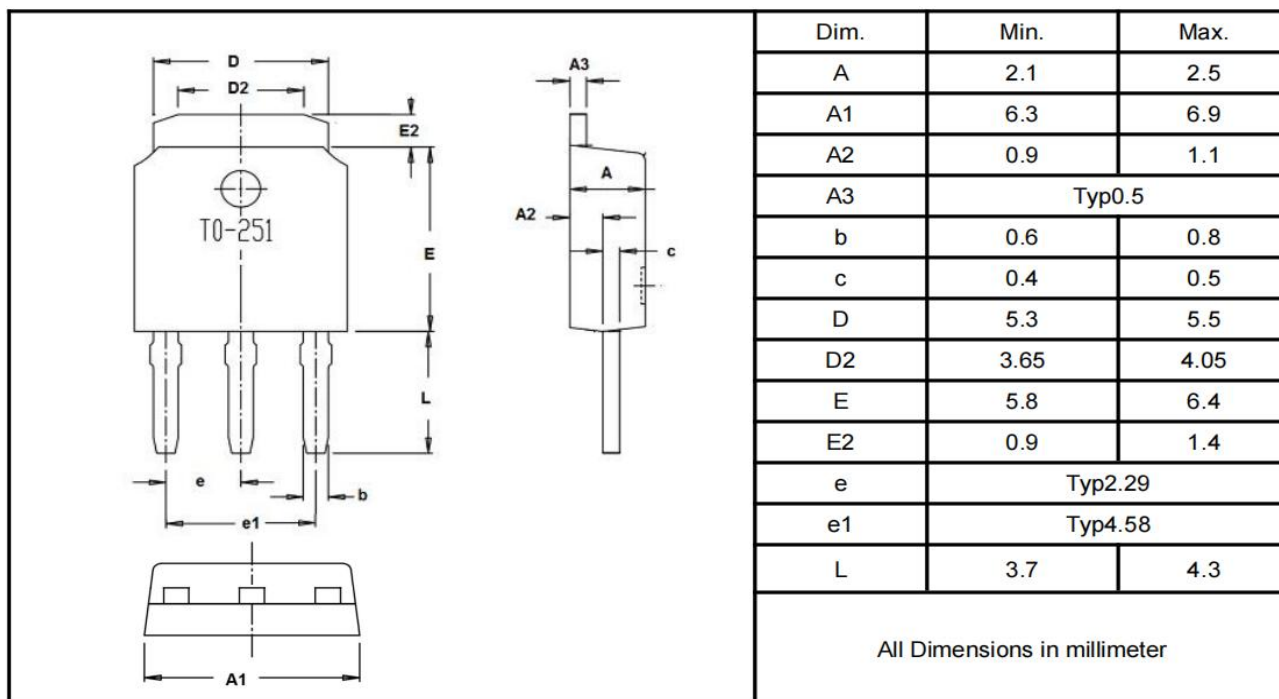


T0-252



Package Outline Dimensions millimeters

T0-251



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