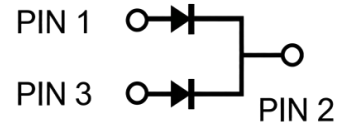


**Ultrafast Recovery Rectifiers**

Parameter	Value	Unit
$V_{RRM}$	400	V
$I_{F(AV)}$	10(2*5)	A

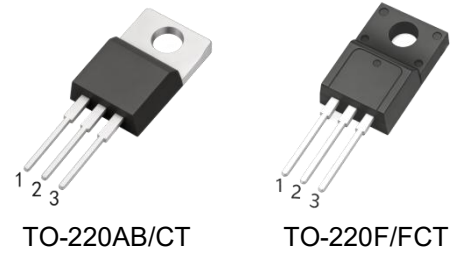


**Features**

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

**Applications**

- Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.



**Absolute Maximum Ratings**( $T_a=25^{\circ}C$ , unless otherwise noted)

Parameter		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	$I_{F(AV)}$	5	A
	Total		10	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)		$I_{FSM}$	120	A
Operating Temperature Range		$T_J$	175	$^{\circ}C$
Storage Temperature Range		$T_{STG}$	-55 to +175	$^{\circ}C$
Typical Thermal Resistance (Note1) TO-220AB, TO-263, TO-252, TO-251 TO-220F		$R_{\theta JC}$	2 4	$^{\circ}C/W$

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

## Electrical Characteristics(Per Leg) unless otherwise specified

Parameter		Symbol	Value		Unit
Forward Voltage Drop(Note2)		$V_F$	Typ.	Max.	V
at $I_F=5A$	$T_A=25^{\circ}C$		1.13	1.3	
	$T_A=125^{\circ}C$		1.03	-	
Maximum Reverse Current at $V_R=400V$	$T_A=25^{\circ}C$	$I_R$	0.01	5	$\mu A$
	$T_A=125^{\circ}C$		3	-	$\mu A$
Maximum Reverse Recovery Time at $I_F=0.5A, I_R=1A$		$T_{rr}$	29	30	ns

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

## Typical Characteristics

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

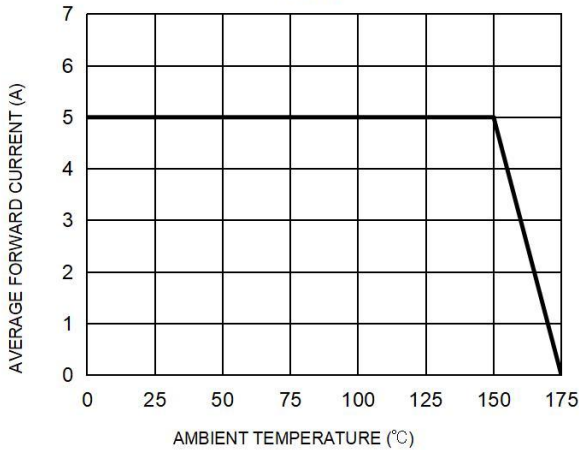


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

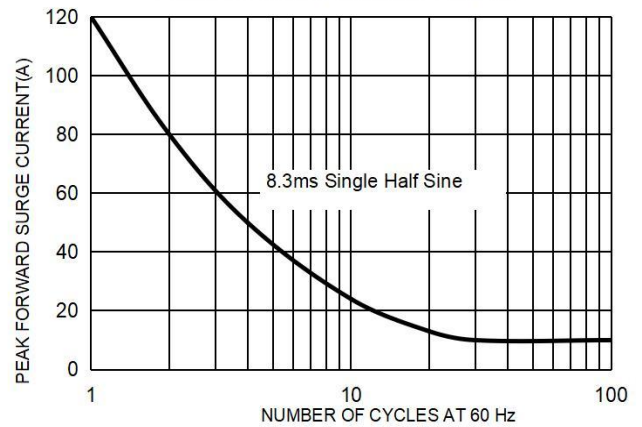


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

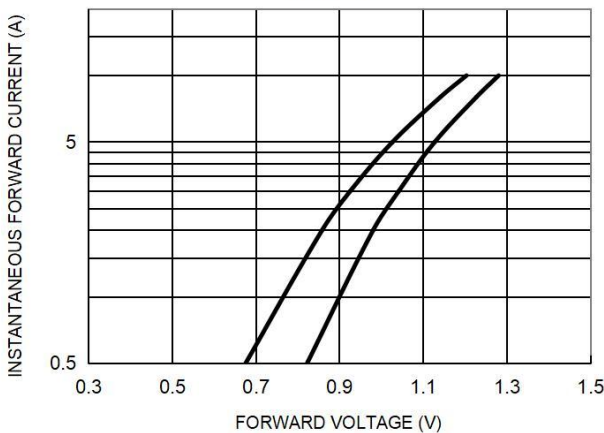
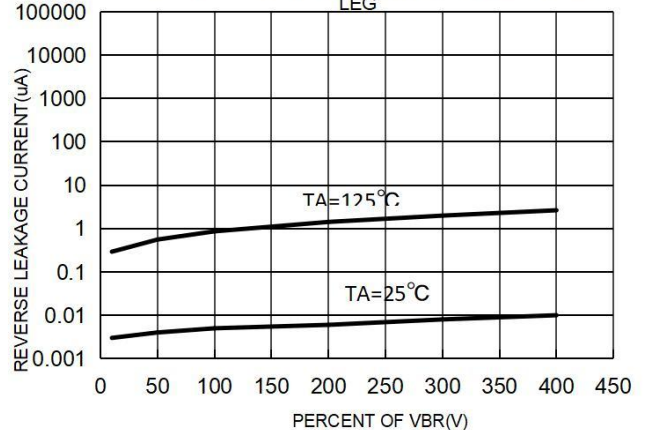
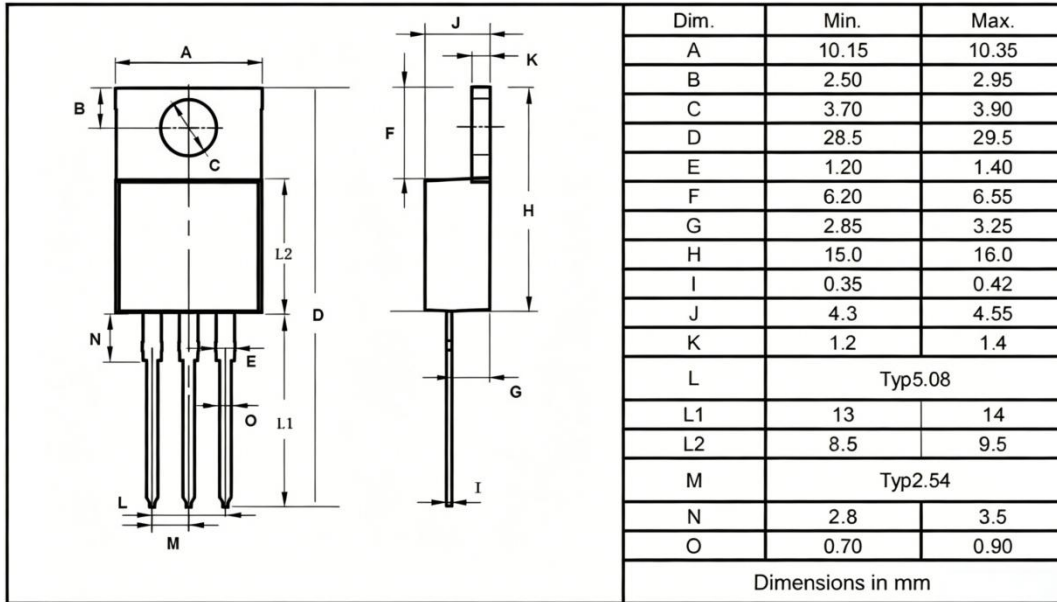


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

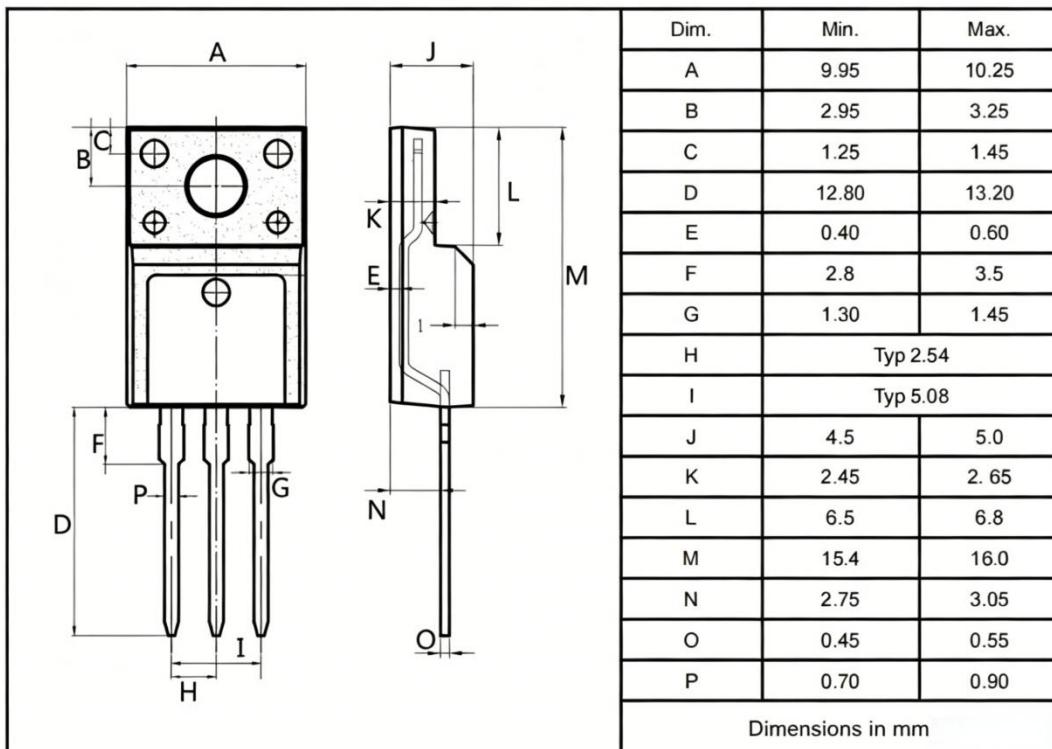


**Package Outlines**

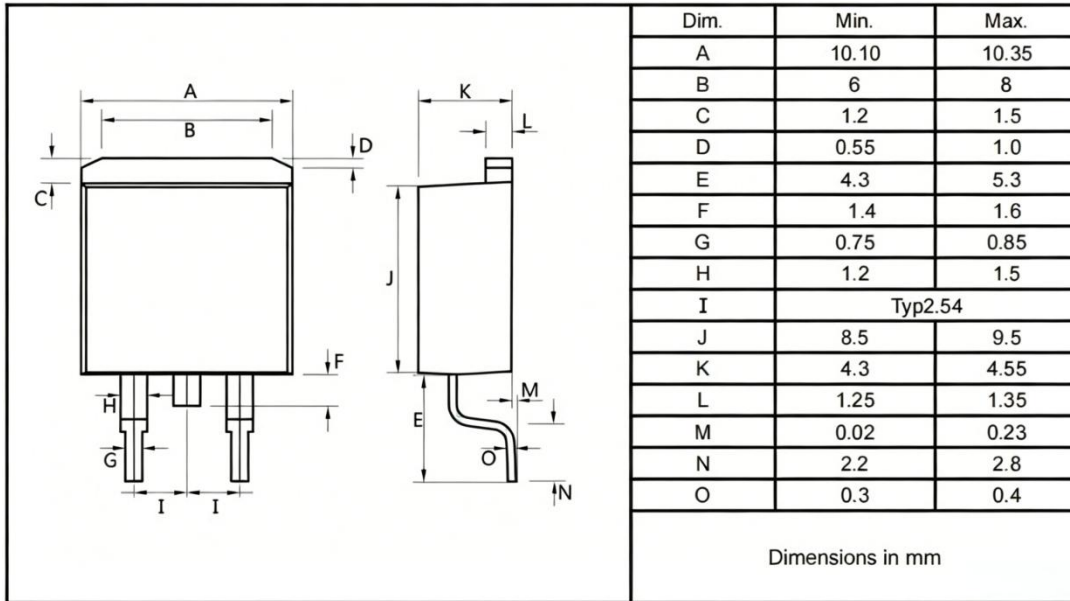
**TO-220AB**



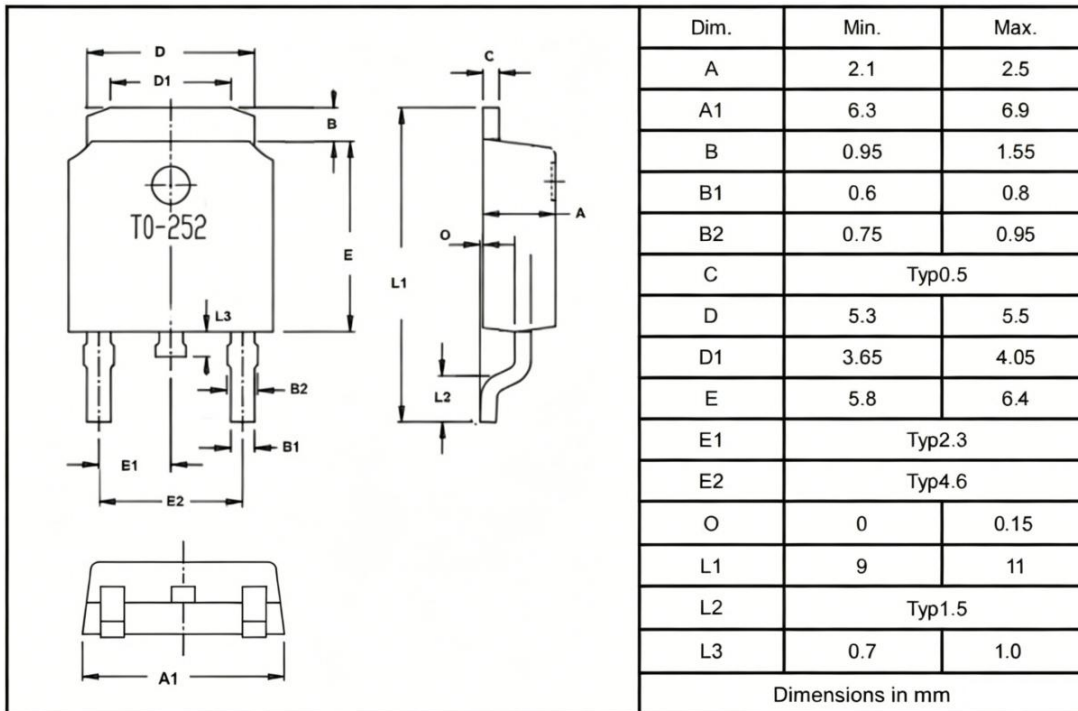
**TO-220F**



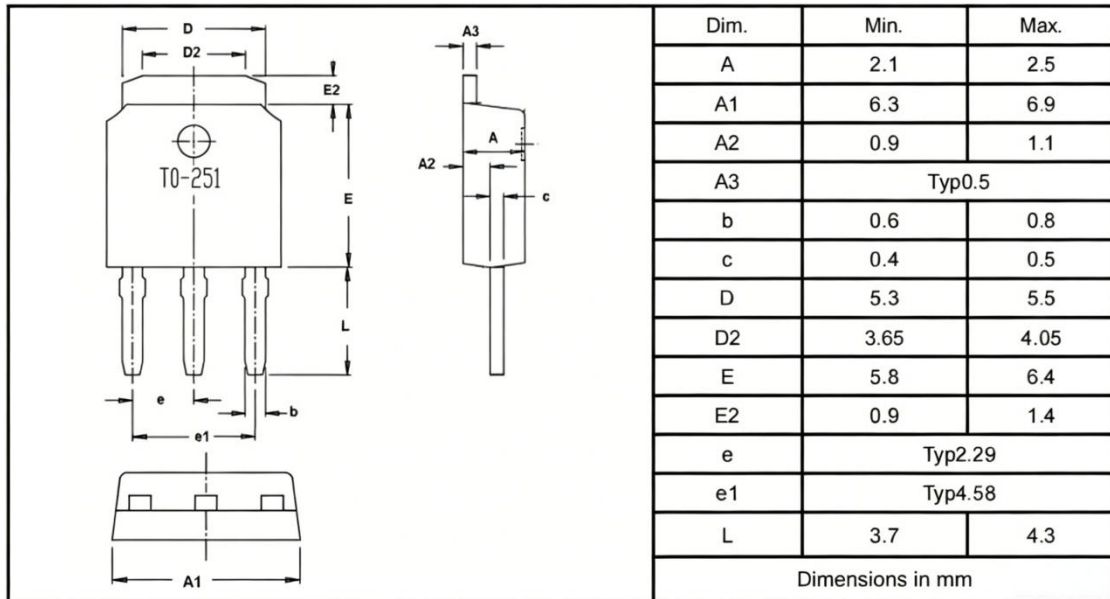
**TO-263**



**TO-252**



**TO-251**



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