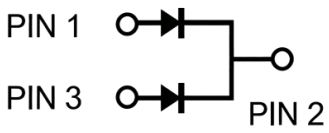
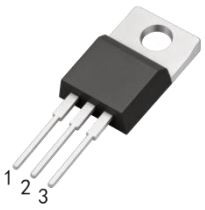
Ultrafast Recovery Rectifiers

Parameter	Value	Unit
V_{RRM}	800	V
$I_{F(AV)}$	16(2*8)	A

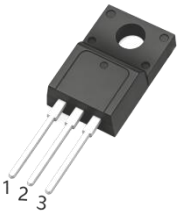


Features

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



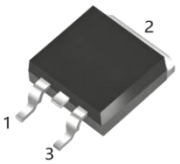
TO-220AB/CT



TO-220F/FCT

Applications

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



TO-263/DC

Absolute Maximum Ratings(Ta=25℃,unless otherwise noted)

Parameter		Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	800	V
Working Peak Reverse Voltage		V_{RWM}	800	V
Maximum DC Blocking Voltage		V_{DC}	800	V
Maximum Average Forward Rectified Current	Per Leg	$I_{F(AV)}$	8	A
	Total		16	
Peak Forward Surge Current,8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)		I_{FSM}	80	A
Operating Temperature Range		T_J	175	℃
Storage Temperature Range		T_{STG}	-55 to +175	℃
Typical Thermal Resistance (Note1) TO-220AB,TO-263 TO-220F		$R_{\theta JC}$	 2 4	℃/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=8A	T_A=25℃		1.42	2.40	
	T_A=125℃		1.30	-	
Maximum Reverse Current at V_R=800V	T_A=25℃	I_R	0.05	10	μA
	T_A=125℃		1	-	μA
Maximum Reverse Recovery Time at I_F=0.5A, I_R=1A		T_{rr}	-	35	ns

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

Typical Characteristics

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

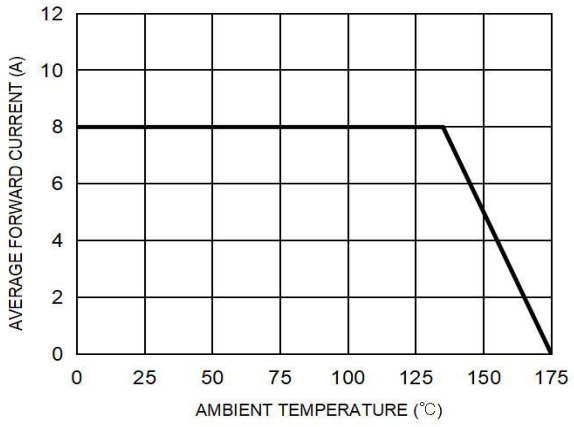


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

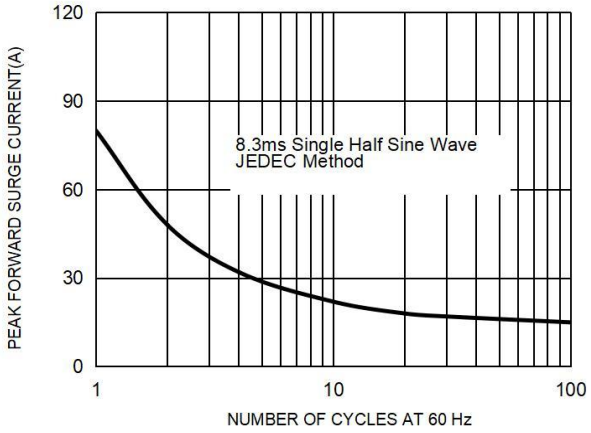


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

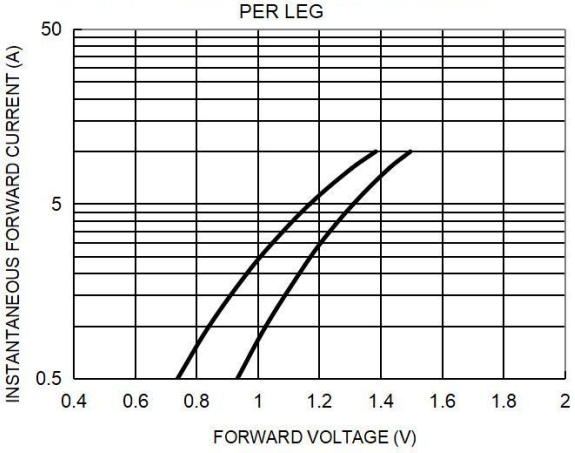
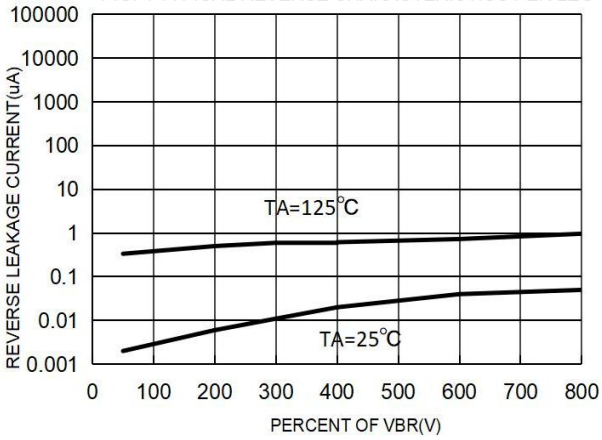
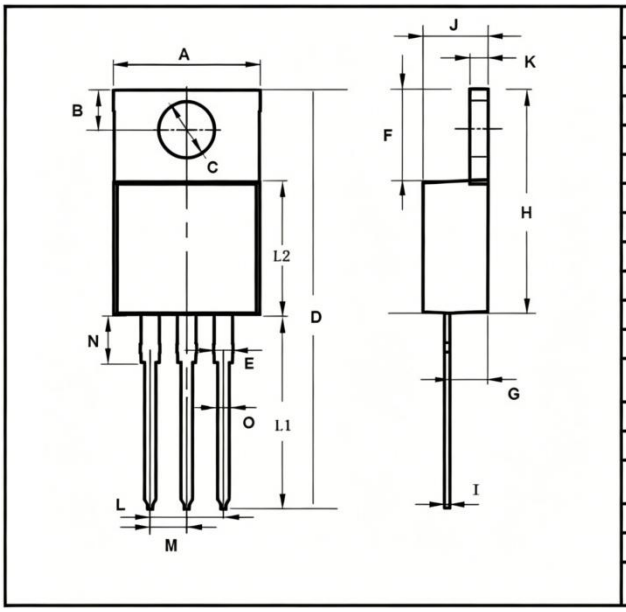


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



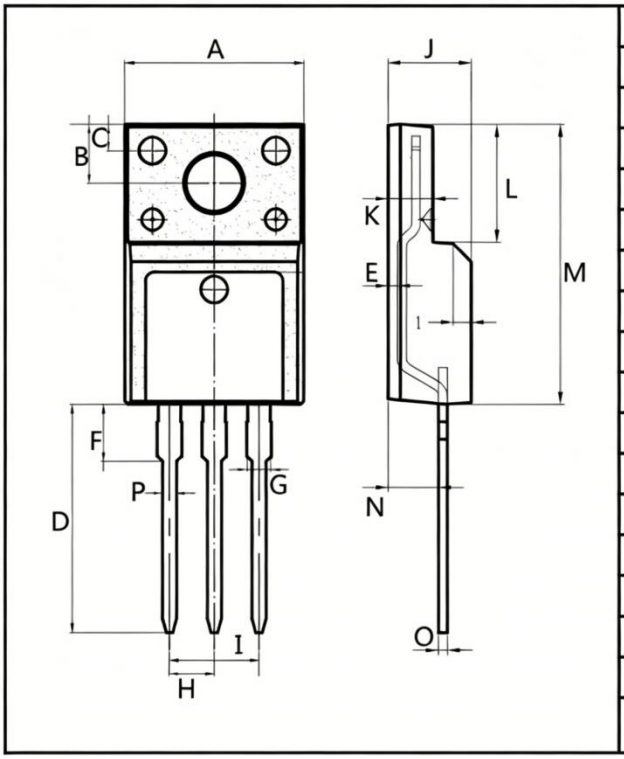
Package Outlines

TO-220AB



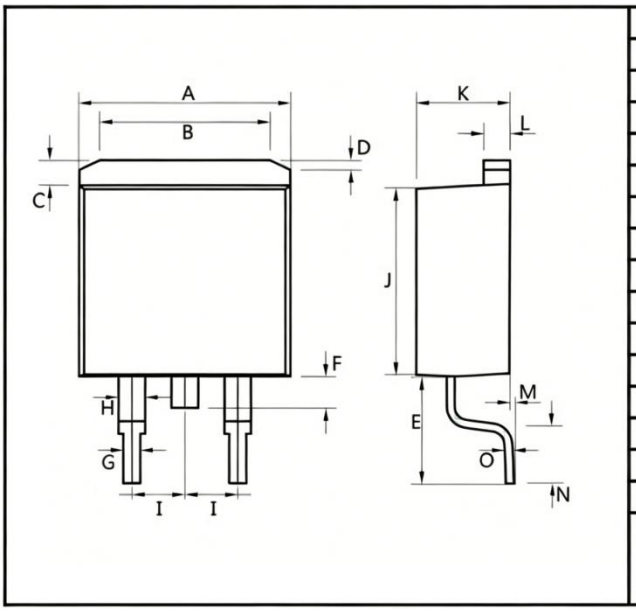
Dim.	Min.	Max.
A	10.15	10.35
B	2.50	2.95
C	3.70	3.90
D	28.5	29.5
E	1.20	1.40
F	6.20	6.55
G	2.85	3.25
H	15.0	16.0
I	0.35	0.42
J	4.3	4.55
K	1.2	1.4
L	Typ5.08	
L1	13	14
L2	8.5	9.5
M	Typ2.54	
N	2.8	3.5
O	0.70	0.90
Dimensions in mm		

TO-220F



Dim.	Min.	Max.
A	9.95	10.25
B	2.95	3.25
C	1.25	1.45
D	12.80	13.20
E	0.40	0.60
F	2.8	3.5
G	1.30	1.45
H	Typ 2.54	
I	Typ 5.08	
J	4.5	5.0
K	2.45	2. 65
L	6.5	6.8
M	15.4	16.0
N	2.75	3.05
O	0.45	0.55
P	0.70	0.90
Dimensions in mm		

TO-263



Dim.	Min.	Max.
A	10.10	10.35
B	6	8
C	1.2	1.5
D	0.55	1.0
E	4.3	5.3
F	1.4	1.6
G	0.75	0.85
H	1.2	1.5
I	Typ2.54	
J	8.5	9.5
K	4.3	4.55
L	1.25	1.35
M	0.02	0.23
N	2.2	2.8
O	0.3	0.4

Dimensions in mm

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