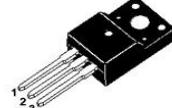
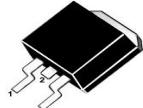


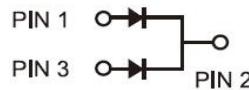
TO-220AB/CT



TO-220F/FCT



TO-263/DC



### 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

### 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*8A
$V_{RRM}$	600V
$I_{FSM}$	110A
$V_F$	1.1V
$T_{Jmax}$	150°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 $T_a=25^\circ C$ unless otherwise specified

Characteristics	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	600	V
Working Peak Reverse Voltage	$V_{RWM}$	600	V
Maximum DC Blocking Voltage	$V_{DC}$	600	V
Maximum Average Forward Rectified Current	Per Leg	8	A
	Total	16	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave	$I_{FSM}$	110	A
Operating Temperature Range	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-40 to +150	°C
Typical Thermal Resistance (Note1)	$R_{\theta,JC}$	2	°C/W
TO-220AB, TO-263			
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
		1.10	-	
		0.91	-	
		1.20		
		1.00		
		1.27	1.59	
at $I_F=5A$		1.10	-	
		TA=25°C		
		TA=125°C		
		TA=25°C		
at $I_F=8A$		TA=125°C		
		TA=25°C		
		TA=125°C		
		TA=25°C		
Maximum Reverse Current at $V_R=600V$	$I_R$	0.05	1	$\mu A$
		TA=125°C	15	
Maximum Reverse Recovery Time at $I_F=0.5A$ , $I_R=1A$ , $I_{RR}=0.25A$	$Tr_{rr}$	-	35.00	ns

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

## RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

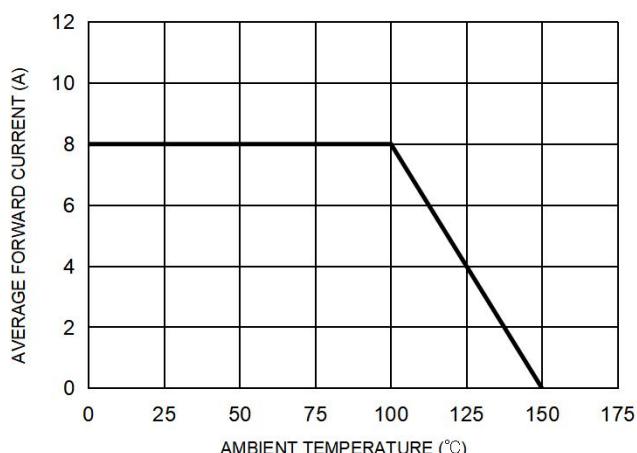


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

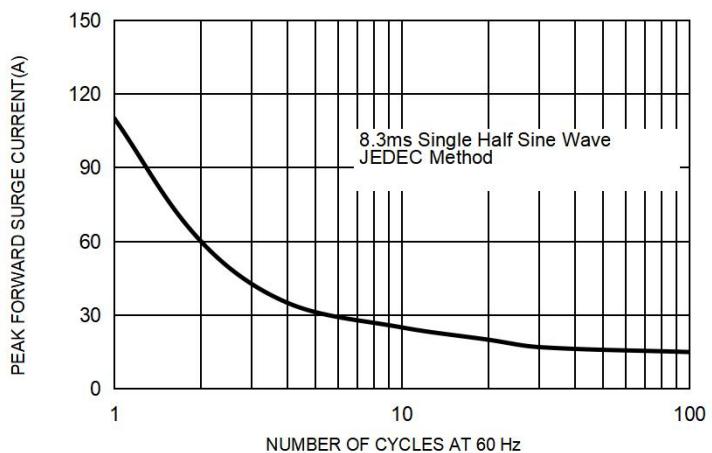


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

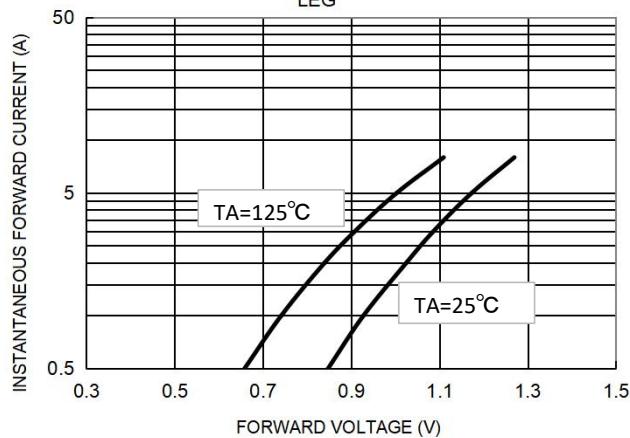
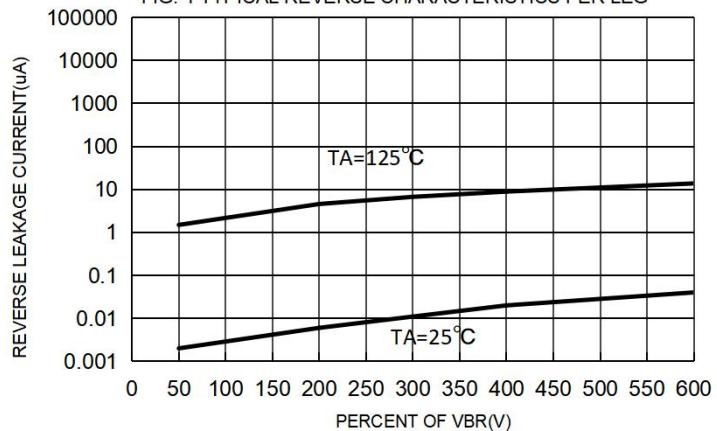
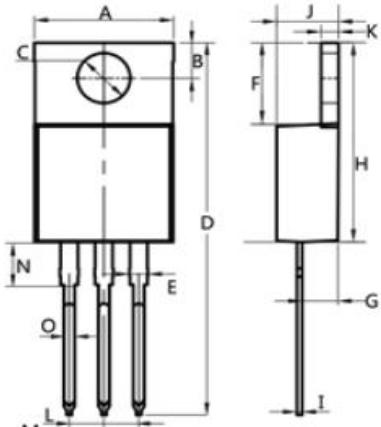


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Package Outline Dimensions millimeters

TO-220AB

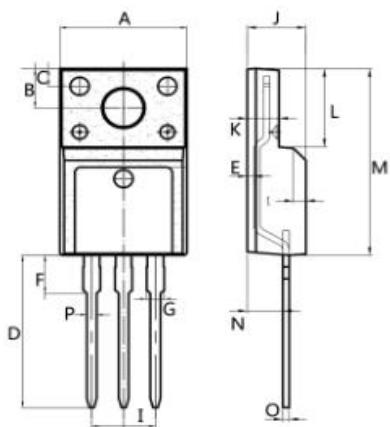


Technical drawing of the TO-220AB package showing top and side views with dimension labels A through O.

Dim.	Min.	Max.
A	10.15	10.35
B	2.65	2.95
C	3.70	3.90
D	28.5	29.5
E	1.30	1.45
F	6.35	6.55
G	2.9	3.3
H	15.0	16.0
I	0.38	0.42
J	4.45	4.55
K	1.25	1.35
L	Typ 5.08	
M	Typ 2.54	
N	3.1	3.3
O	0.76	0.84

All Dimensions in millimeter

TO-220F

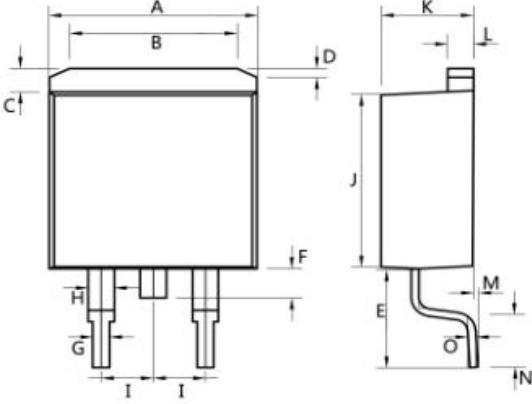


Technical drawing of the TO-220F package showing top and side views with dimension labels A through Q.

Dim.	Min.	Max.
A	9.95	10.25
B	2.95	3.25
C	1.25	1.45
D	12.95	13.25
E	0.50	0.65
F	3.1	3.3
G	1.30	1.45
H	Typ 2.54	
I	Typ 5.08	
J	4.60	4.75
K	2.50	2.65
L	6.35	6.55
M	15.4	16.0
N	2.75	3.05
O	0.48	0.52
P	0.76	0.84

All Dimensions in millimeter

TO-263



Technical drawing of the TO-263 package showing top and side views with dimension labels A through O.

Dim.	Min.	Max.
A	10.1	10.2
B	7.4	7.6
C	1.3	1.5
D	0.55	0.75
E	5.0	6.0
F	1.4	1.6
G	0.78	0.86
H	1.2	1.3
I	Typ 2.54	
J	8.4	8.6
K	4.45	4.55
L	1.25	1.35
M	0.02	0.1
N	2.4	2.8
O	0.36	0.40

All Dimensions in millimeter