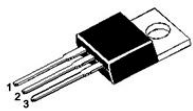
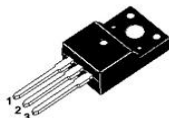


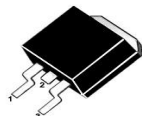
SCHOTTKY BARRIER RECTIFIER



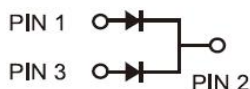
TO-220AB/CT



TO-220F/FCT



TO-263/DC



FEATURES

- Low forward voltage
- High current capability
- High forward surge capability
- Low power losses, High efficiency
- Guarding for over voltage protection

APPLICATIONS

Low VF Schottky barrier rectifier are designed for high frequency, miniature switched mode power supplies such as adapters ,lighting and on-board DC/DC conerters

Primary Characteristic

I_O	2*15A
V_{RRM}	45V
I_{FSM}	300A
V_F	0.58V
T_{jmax}	150°C
Assembly code	AK

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}	45	V
Working Peak Reverse Voltage	V_{RWM}	45	V
Maximum DC Blocking Voltage	V_{DC}	45	V
Maximum Average Forward Rectified Current	I_O	15	A
Per Leg		30	
Total			
Peak Forward Surge Current,8.3 ms Single Half Sine-wave	I_{FSM}	300	A
Operating Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-40 to +150	°C
Typical Thermal Resistance (Note1)	$R_{\theta JC}$		°C/W
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.
at $I_F=5A$		0.48	-
TA=25°C		0.41	-
TA=125°C		0.56	0.60
at $I_F=10A$		0.51	-
TA=25°C		0.63	0.66
TA=125°C		0.58	-
at $I_F=15A$			
Maximum Reverse Current at $V_R=45V$	I_R	8	μA
TA=25°C		5	mA
TA=125°C			

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

RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

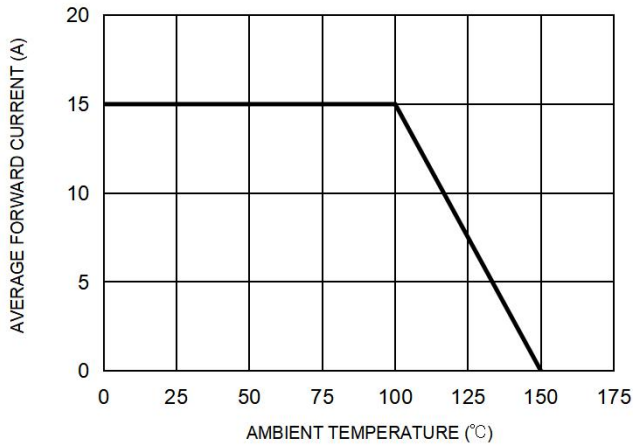


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

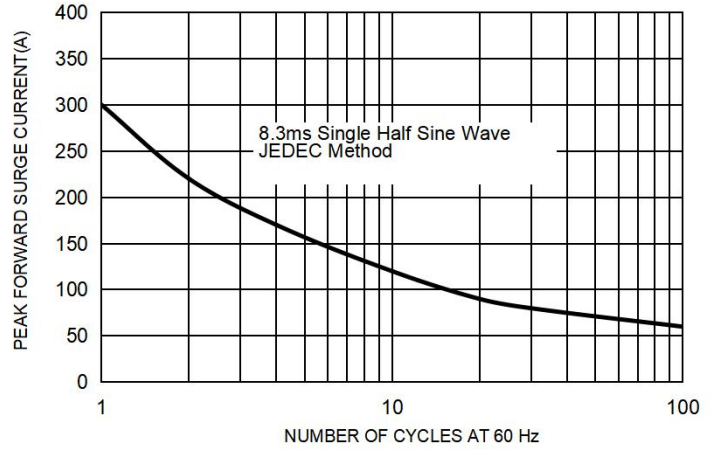


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

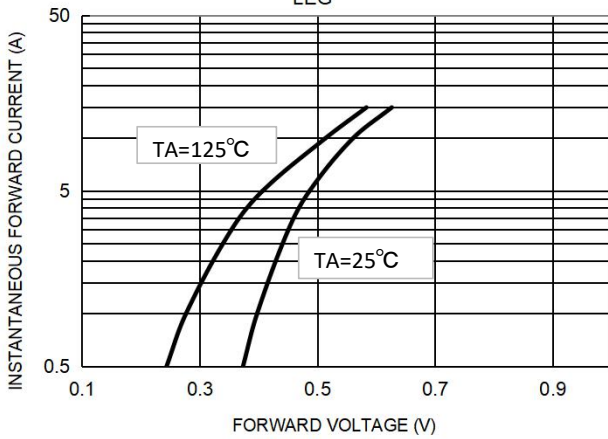
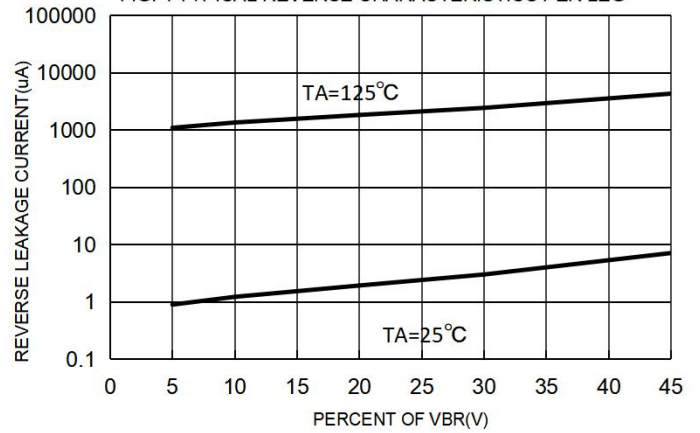


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Ordering information

Part Number	Package	Unit Weight	Base Quantity	Delivery mode
MBR3045CT	TO-220AB	0.07oz(1.96g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MBR3045FCT	TO-220F	0.06oz(1.74g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MBR3045DC	TO-263	0.04oz(1.16g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MBR3045DC-R	TO-263	0.04oz(1.16g)	800 pcs / reel	800pcs/box 4000pcs/carton

Note: For Halogen Free molding compound, add "H" suffix to part number above.

Package Outline Dimensions millimeters

TO-220AB

The image shows a technical drawing of a TO-220AB package. The front view (left) shows a rectangular body with a circular mounting hole. Dimensions labeled include: A (width), B (height of the top flange), C (height of the mounting hole), D (total height), E (height of the lead), L (lead length), M (lead spacing), N (lead thickness), and O (lead width). The side view (right) shows the profile of the package, including the mounting flange and the lead. Dimensions labeled include: F (height of the mounting flange), G (height of the lead), H (height of the body), I (lead thickness), J (lead width), and K (lead spacing).

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

The image shows a technical drawing of a TO-220F package. The front view (left) shows a rectangular body with a central circular feature and four mounting holes. Dimensions A, B, C, D, F, G, H, and I are labeled. The side view (right) shows the package's profile with dimensions J, K, L, M, N, and O. Dimension P is labeled on the front view near the base of the leads.

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

The image shows a technical drawing of a TO-263 package. The top view (left) shows dimensions A (total width), B (width of the main body), C (height of the main body), D (height of the top flange), F (height of the mounting tab), G (height of the lead), H (height of the lead), and I (width of the lead). The side view (right) shows dimensions J (height of the main body), K (width of the main body), L (width of the top flange), M (height of the mounting tab), N (height of the lead), and O (height of the lead). The package is shown in a perspective view with a central mounting tab and two leads.

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