

## 20A, 45V Standard Schottky Rectifiers

### FEATURES

- Low leakage current
- Low forward voltage drop
- Low power losses, high efficiency
- High temperature soldering guaranteed:  
270°C/10 seconds for TO-220AB and ITO-220AB  
260°C/10 seconds for TO-263AB
- RoHS compliant

### MECHANICAL DATA

- Case: TO-220AB, ITO-220AB, TO-263AB
- Case material: molding compound meets UL 94V-0 flammability rating
- Polarity: as marked on case body

### TYPICAL APPLICATION

General purpose use in AC/DC bridge full wave rectification for SMPS, lighting, adapter, charger, home appliance, office equipment and telecommunication.

### MAXIMUM RATINGS

$T_A=25^\circ\text{C}$  unless otherwise noted

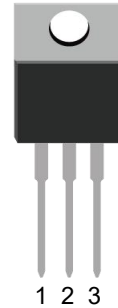
Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	45	V
Maximum RMS Voltage	$V_{RMS}$	32	
Maximum DC Blocking Voltage	$V_{DC}$	45	
Average Forward Rectified Current	$I_{F(AV)}$	20	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	$I_{FSM}$	150	A
Operating Junction Temperature Range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS

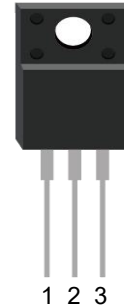
$T_A=25^\circ\text{C}$  unless otherwise noted

Parameter	Test Conditions	Symbol	Value		Unit
			Typ.	Max.	
Forward Voltage@ $I_F=10\text{A}$	$T_A=25^\circ\text{C}$	$V_F$	0.56	0.6	V
	$T_A=125^\circ\text{C}$		0.49	0.52	
Reverse Current @ $V_{RRM}$	$T_A=25^\circ\text{C}$	$I_R$	40	100	$\mu\text{A}$
	$T_A=125^\circ\text{C}$		5	30	$\text{mA}$
Typical Thermal Resistance		$R_{\theta JC}$			$^\circ\text{C/W}$
TO-220AB			2		
ITO-220AB			4		
TO-263AB			2		

TO-220AB



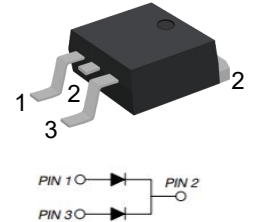
ITO-220AB



RoHS  
COMPLIANT

HALOGEN  
FREE  
AVAILABLE

TO-263AB



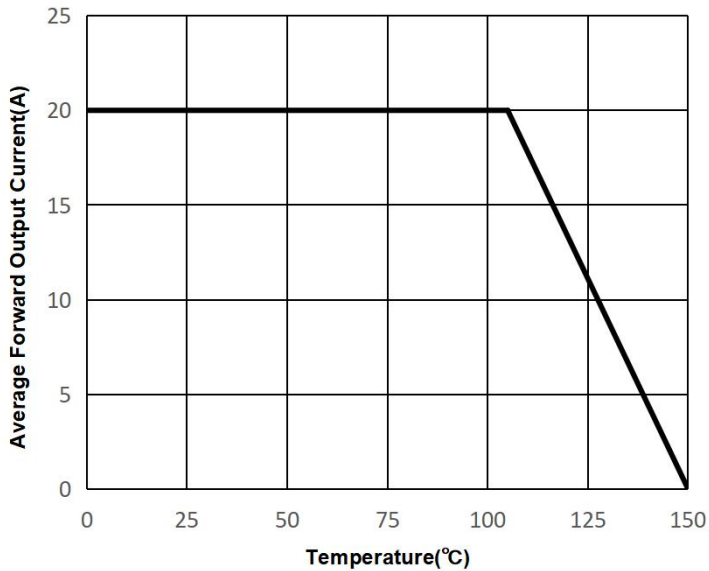
P/N	Package
MBR2045CT	TO-220AB
MBR2045FCT	ITO-220AB
MBR2045TA	TO-263AB

# 20A, 45V Standard Schottky Rectifiers

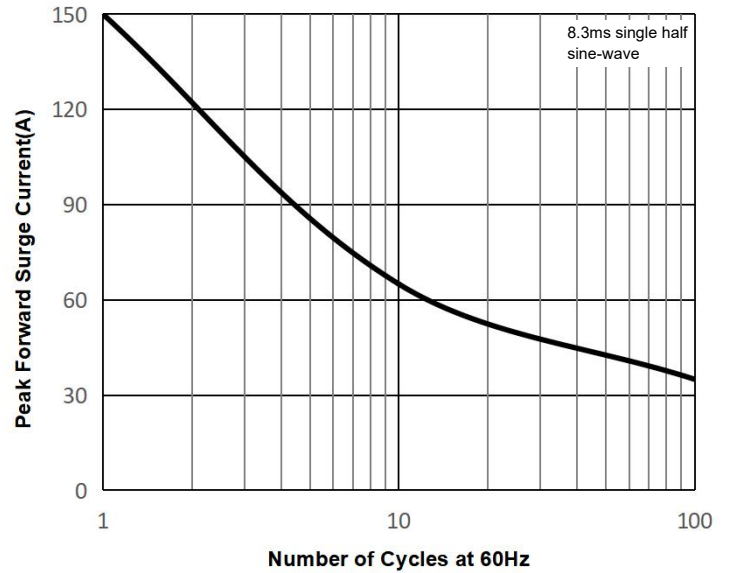
## RATINGS AND CHARACTERISTIC CURVES

$T_A=25^\circ\text{C}$  unless otherwise noted

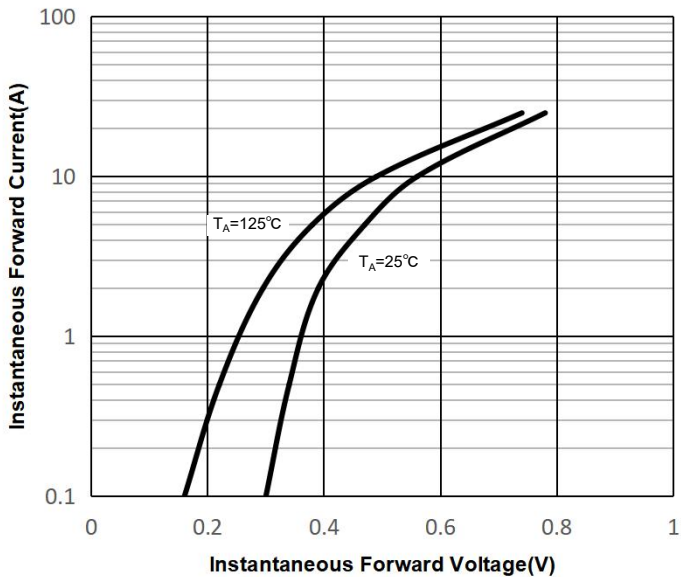
**FIG.1: Forward Output Current Derating Curve**



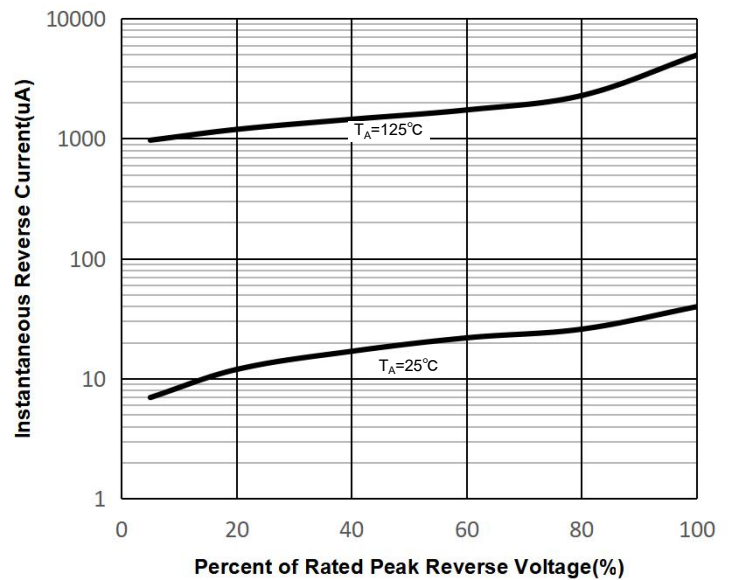
**FIG.2: Maximum Non-Repetitive Peak Forward Surge Current**



**FIG.3: Typical Forward Characteristics**



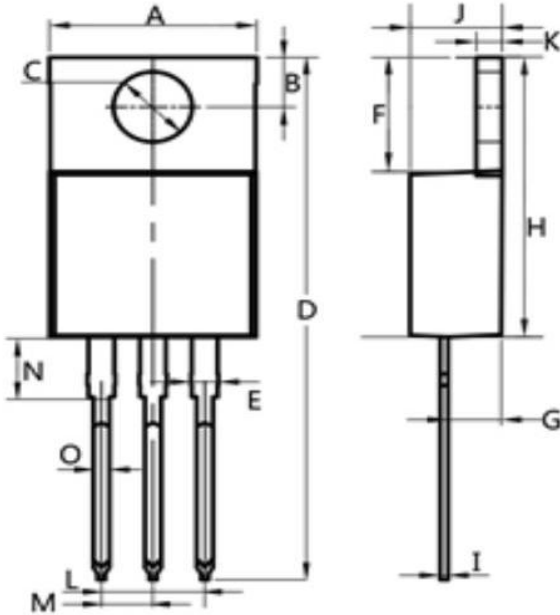
**FIG.4: Typical Reverse Characteristics**



**20A, 45V Standard Schottky Rectifiers**

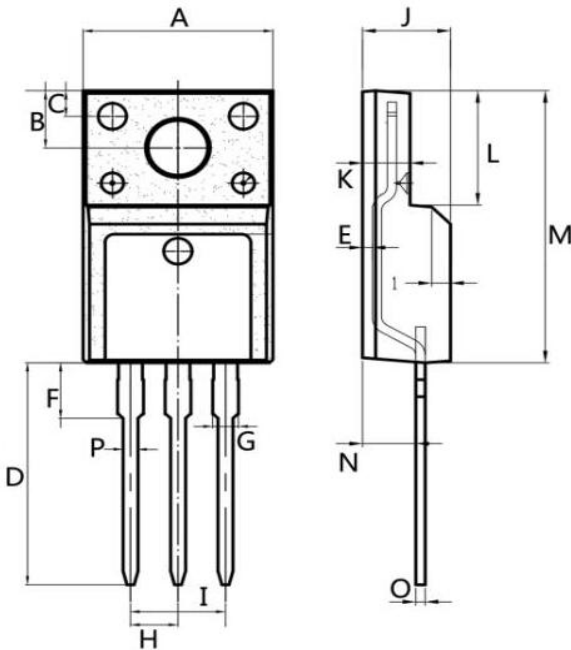
**PACKAGE OUTLINE DIMENSIONS**

**TO-220AB**



Dim.	Min.	Max.
A	10.0	10.4
B	2.5	3.0
C	3.5	4.0
D	28.0	30.0
E	1.1	1.5
F	6.2	6.6
G	2.9	3.3
H	15.0	16.0
I	0.35	0.45
J	4.3	4.7
K	1.2	1.4
L	Typ 5.08	
M	Typ 2.54	
N	3.1	3.5
O	0.7	0.9
All Dimensions in millimeter		

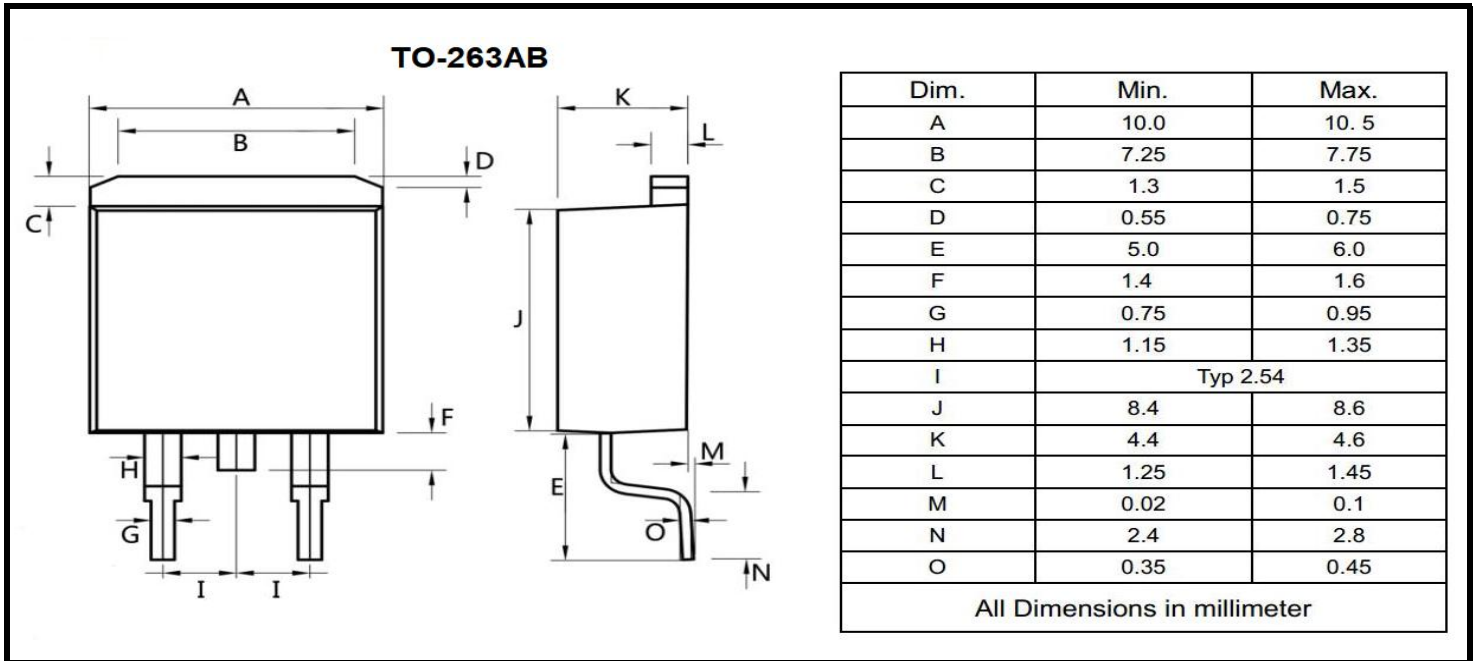
**ITO-220AB**



Dim.	Min.	Max.
A	9.9	10.3
B	2.9	3.5
C	1.15	1.45
D	12.75	13.25
E	0.55	0.75
F	3.1	3.5
G	1.25	1.45
H	Typ 2.54	
I	Typ 5.08	
J	4.55	4.75
K	2.4	2.7
L	6.35	6.75
M	15.0	16.0
N	2.75	3.15
O	0.45	0.60
P	0.7	0.9
All Dimensions in millimeter		

**20A, 45V Standard Schottky Rectifiers**

**PACKAGE OUTLINE DIMENSIONS**



**PACKING INFORMATION**

Package	Tube(PCS)	Inner Box(PCS)	Carton(PCS)
TO-220AB	50	1,000	5,000
ITO-220AB	50	1,000	5,000
TO-263AB	50	1,000	5,000