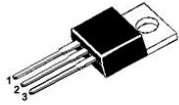
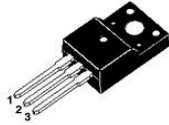




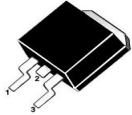
## SBM20U45CT/FCT/DC ULTRA LOW VF SCHOTTKY RECTIFIER



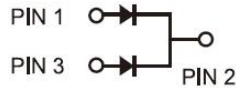
TO-220AB/CT



TO-220F/FCT



TO-263/DC



### FEATURES

- Ultra 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*10A
$V_{RRM}$	45V
$I_{FSM}$	250A
$V_F$	0.39V
$T_{jmax}$	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-

### 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	Per Leg	$I_O$	10
		Total	20
Peak Forward Surge Current,8.3 ms Single Half Sine-wave	$I_{FSM}$	250	A
Operating Temperature Range	$T_J$	-50 to +150	°C
Storage Temperature Range	$T_{STG}$	-50 to +150	°C
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	2	°C/W
TO-220AB,TO-263			
TO-220F			

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)		Typ.	Max.	V	
		at $I_F=3A$	TA=25°C		0.35
	TA=125°C	0.26	-		
at $I_F=5A$	TA=25°C	0.38	0.42		
	TA=125°C	0.31	-		
at $I_F=10A$	TA=25°C	0.44	0.48		
	TA=125°C	0.39	-		
Maximum Reverse Current at $V_R=45V$	$I_R$	TA=25°C	35		µA
		TA=125°C	12		mA

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



# SBM20U45CT/FCT/DC

## RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

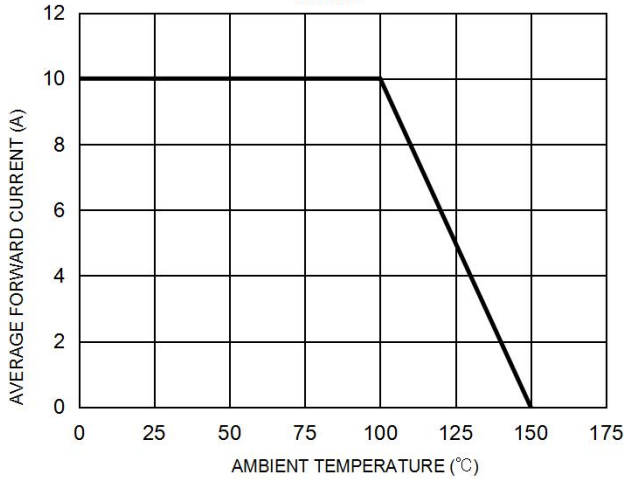


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

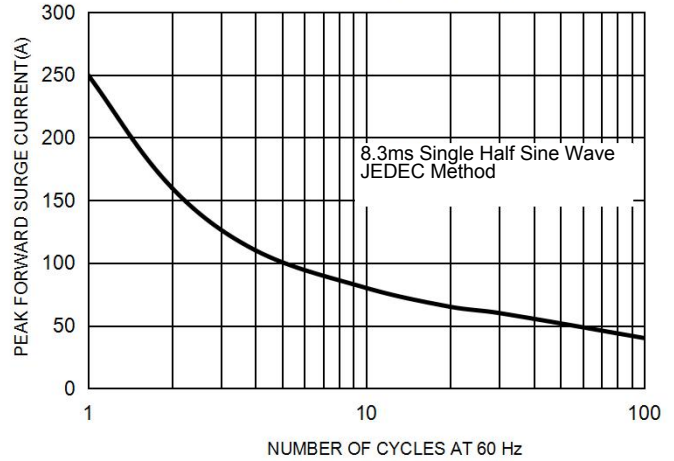


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

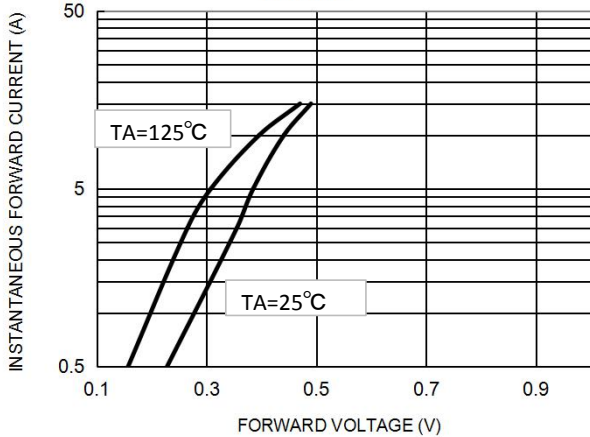
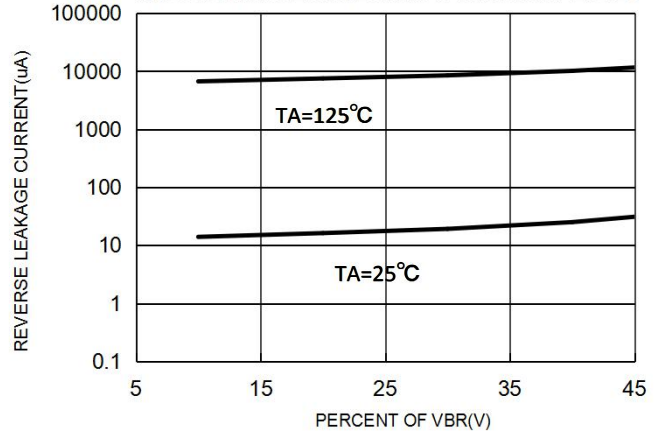
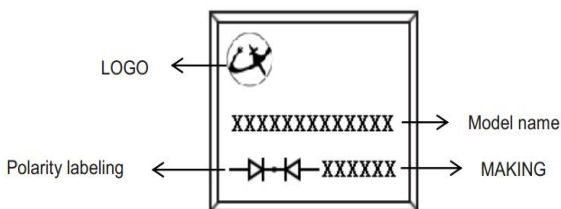


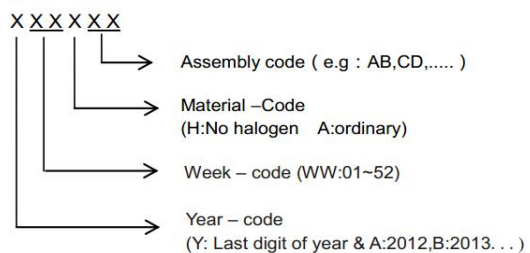
FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



## Marking on the body



### MAKING:



## Ordering information

Part Number	Package	Unit Weight	Base Quantity	Delivery mode
SBM20U45CT	TO-220AB	0.07oz(1.96g)	50 pcs / tube	1000pcs/box 5000pcs/carton
SBM20U45FCT	TO-220F	0.06oz(1.74g)	50 pcs / tube	1000pcs/box 5000pcs/carton
SBM20U45DC	TO-263	0.04oz(1.16g)	50 pcs / tube	1000pcs/box 5000pcs/carton
SBM20U45DC-R	TO-263	0.04oz(1.16g)	800 pcs / reel	800pcs/box 4000pcs/carton

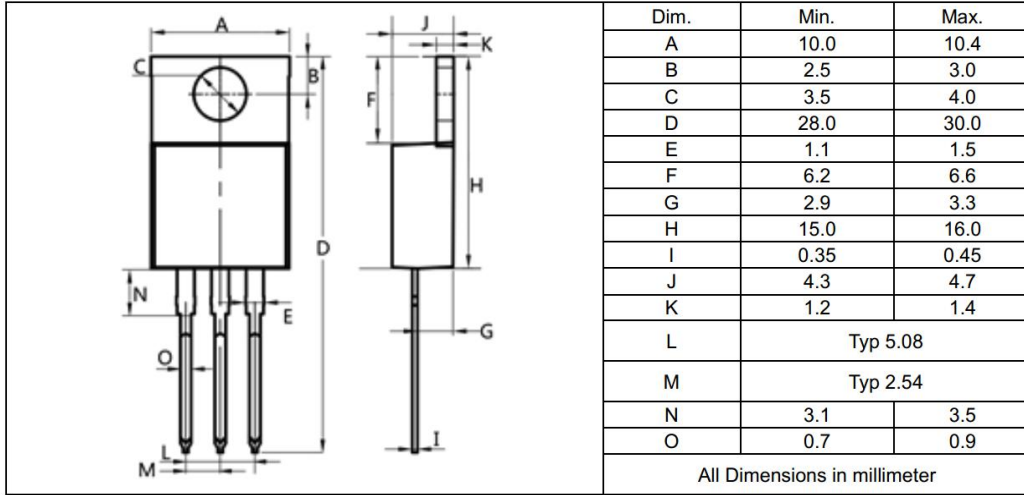
Note: For Halogen Free molding compound, add "H" suffix to part number above.



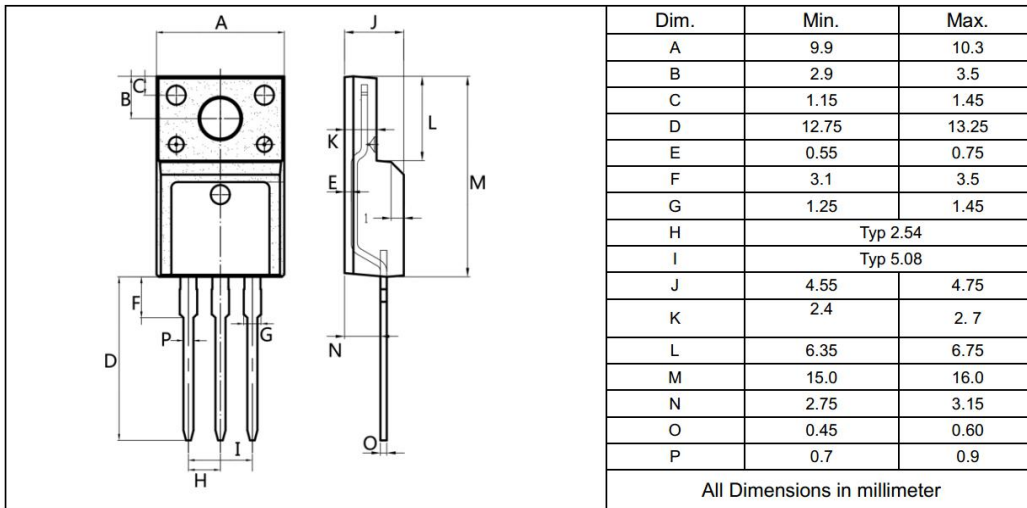
# SBM20U45CT/FCT/DC

## Package Outline Dimensions millimeters

TO-220AB



TO-220F



TO-263

