



**SBP10L45D**

**SBP10L45P**

**10A LOW VF SCHOTTKY RECTIFIER**

## Features

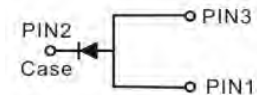
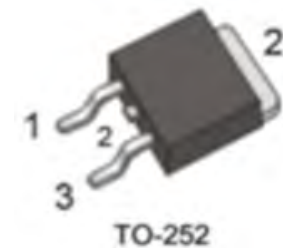
- Ultra Low Forward Voltage Drop
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability

## Mechanical Data

- Case: TO252AA, TO251AA
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208

## Ordering Information

| Part No.  | Package   | Packing        |
|-----------|-----------|----------------|
| SBP10L45D | TO-252AA  | 2500pcs / Reel |
| SBP10L45D | ITO-252AA | 75pcs / Tube   |
| SBP10L45P | TO-251AA  | 75pcs / Tube   |



## MAXIMUM RATINGS(T<sub>A</sub>=25°C unless otherwise noted)

| PARAMETER   | SYMBOL             | VALUE        | UNIT |
|---|--------------------|--------------|------|
| Maximum repetitive peak reverse voltage   | V <sub>RRM</sub>   | 45           | V    |
| Maximum rms voltage   | V <sub>RMS</sub>   | 31.5         | V    |
| Maximum average forward rectified current   | I <sub>F(AV)</sub> | 10           | A    |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load | I <sub>FSM</sub>   | 120          | A    |
| Typical junction capacitance (V <sub>R</sub> =4V, f=1MHz)                         | C <sub>J</sub>     | 500          | pF   |
| Typical thermal resistance per diode  | R <sub>θJC</sub>   | 6            | °C/W |
| Operating junction temperature range  | T <sub>J</sub>     | -55 to + 150 | °C   |
| Storage temperature range   | T <sub>STG</sub>   | -55 to + 150 | °C   |

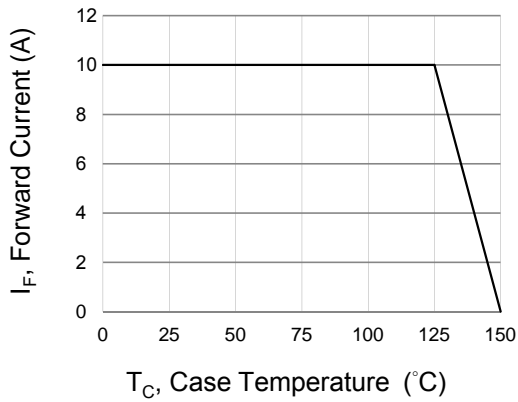
Note : 1. Mounted on infinite heatsink.



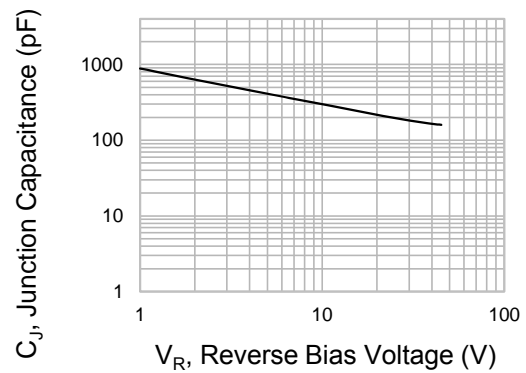
**ELECTRICAL CHARACTERISTICS**( $T_A=25^\circ\text{C}$  unless otherwise noted)

| PARAMETER                               | SYMBOL   | TEST CONDITIONS         | MIN. | TYP. | MAX. | UNIT          |
|---|----------|-------------------------|------|------|------|---------------|
| Breakdown voltage per diode             | $V_{BR}$ | $I_R=0.5\text{mA}$      | 45   | -    | -    | V             |
| Instantaneous forward voltage per diode | $V_F$    | $I_F=5\text{A}$         | -    | 0.42 | -    | V             |
|   |          | $I_F=8\text{A}$         | -    | 0.46 | -    | V             |
|   |          | $I_F=10\text{A}$        | -    | 0.50 | 0.55 | V             |
|   |          | $T_J=25^\circ\text{C}$  | -    | -    | -    | -             |
| Reverse current per diode               | $I_R$    | $V_R=36\text{V}$        | -    | -    | 100  | $\mu\text{A}$ |
|   |          | $V_R=45\text{V}$        | -    | -    | 250  | $\mu\text{A}$ |
|   |          | $T_J=25^\circ\text{C}$  | -    | -    | -    | $\mu\text{A}$ |
|   |          | $T_J=125^\circ\text{C}$ | -    | 20   | -    | $\text{mA}$   |

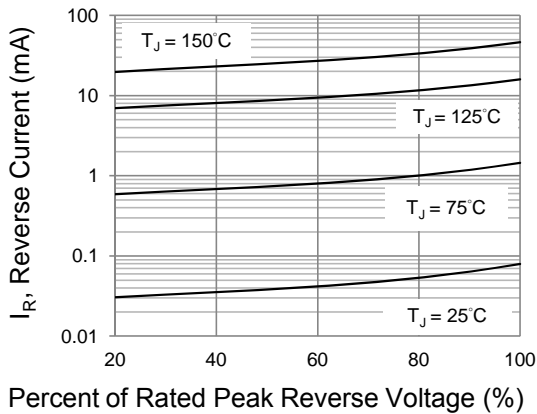
**RATING AND CHARACTERISTIC CURVES**



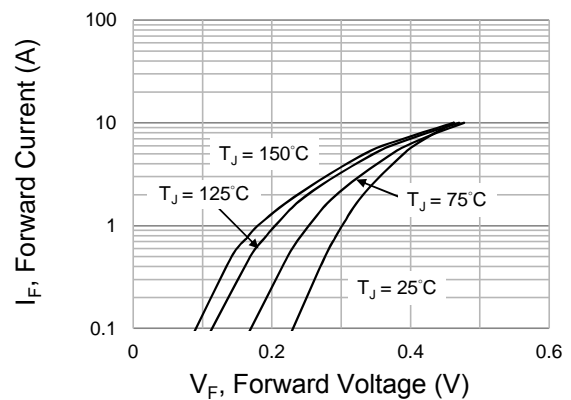
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**

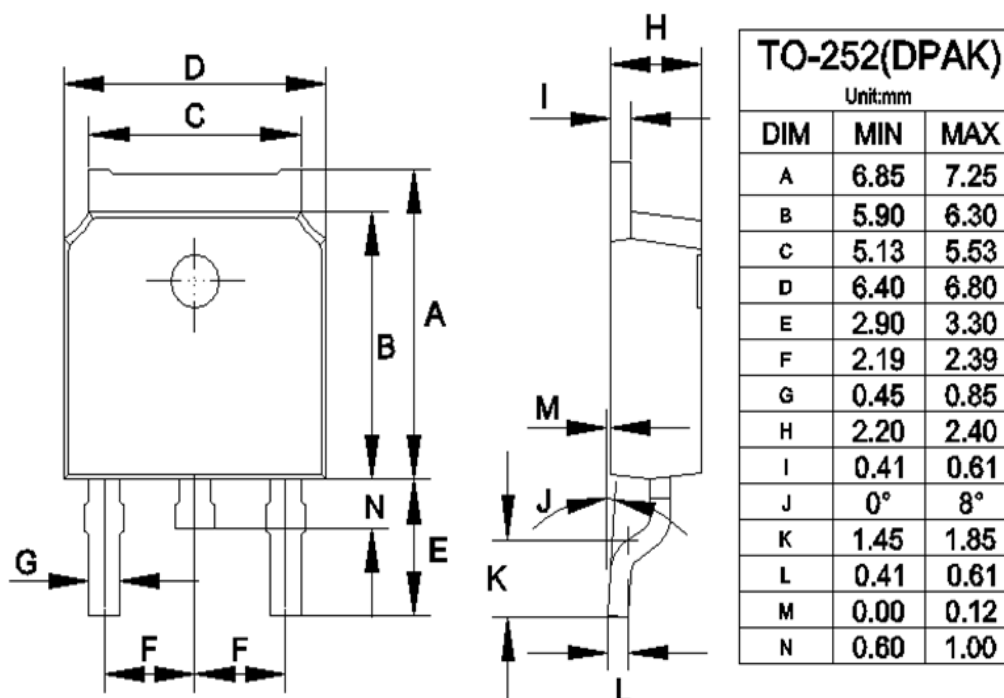


**Fig.4 Typical Forward Characteristics**



Package Outline Dimensions

### TO-252(DPAK) Package Outline



### TO-251(IPAK) Package Outline

