



SBM2045VCT

ULTRA LOW VF SCHOTTKY RECTIFIER

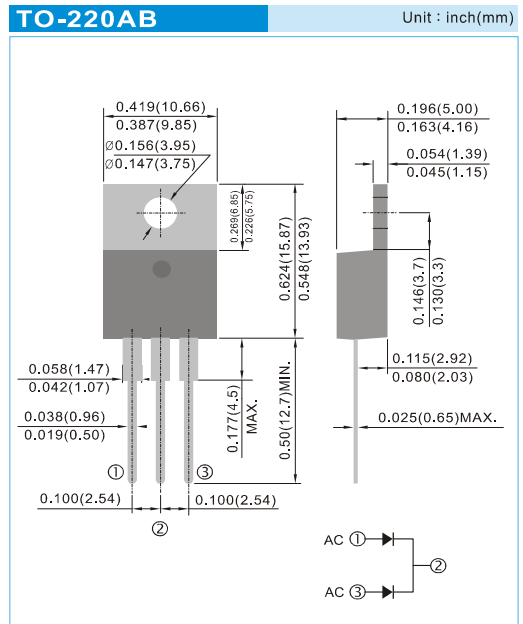
VOLTAGE 45 Volt **CURRENT** 20 Ampere

FEATURES

- Ultra Low forward voltage drop, low power loss
- High efficiency operation
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case : TO-220AB, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Weight: 0.067 ounces, 1.89 grams



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 average forward rectified current | $I_{F(AV)}$ | 20 10 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 280 | A |
| Typical junction capacitance ($V_R=4V$, $f=1\text{MHz}$) | C_J | 860 | pF |
| Typical thermal resistance per diode (Note 1) | $R_{\theta JC}$ | 2 | $^{\circ}\text{C/W}$ |
| Operating junction temperature range | T_J | -55 to + 150 | $^{\circ}\text{C}$ |
| Storage temperature range | T_{STG} | -55 to + 150 | $^{\circ}\text{C}$ |

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 | $I_F=1\text{A}$ $I_F=5\text{A}$ $I_F=10\text{A}$ | - | 0.28 0.36 0.41 | - | V |
| | | $I_F=1\text{A}$ $I_F=5\text{A}$ $I_F=10\text{A}$ | - | 0.18 0.28 0.36 | - | V |
| | | $V_R=36\text{V}$ | - | 100 | - | μA |
| | | $V_R=45\text{V}$ | - | - | 320 | μA |
| Reverse current per diode | I_R | $T_J=25^{\circ}\text{C}$ $T_J=125^{\circ}\text{C}$ | - | - 35 | - | μA mA |



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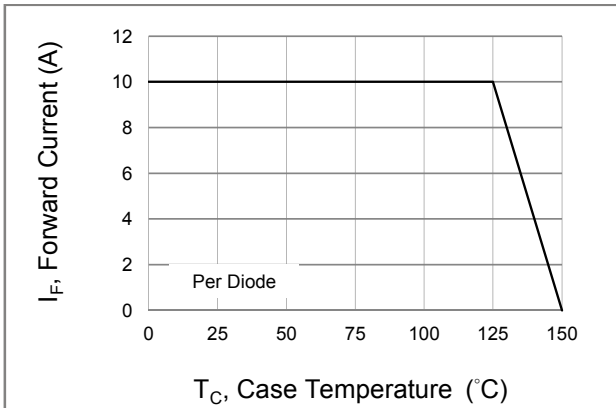


Fig.1 Forward Current Derating Curve

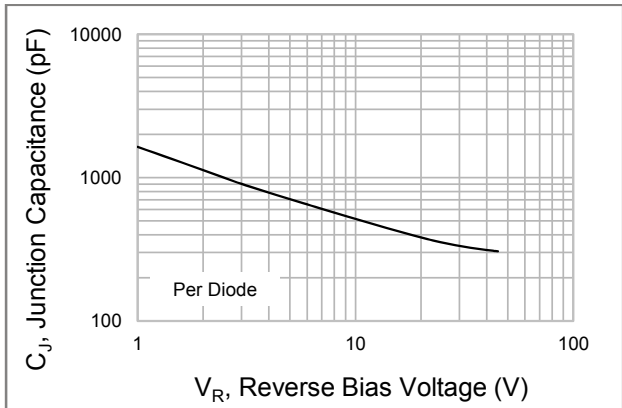


Fig.2 Typical Junction Capacitance

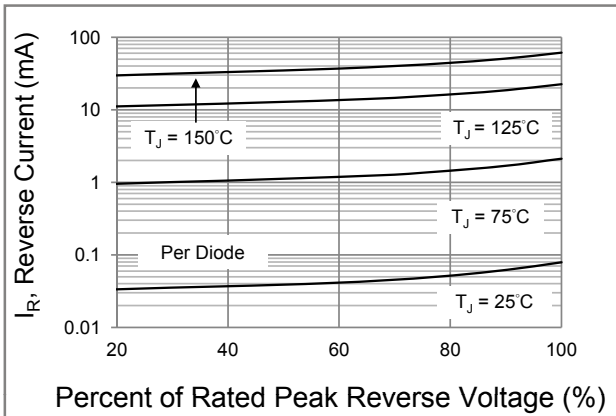


Fig.3 Typical Reverse Characteristics

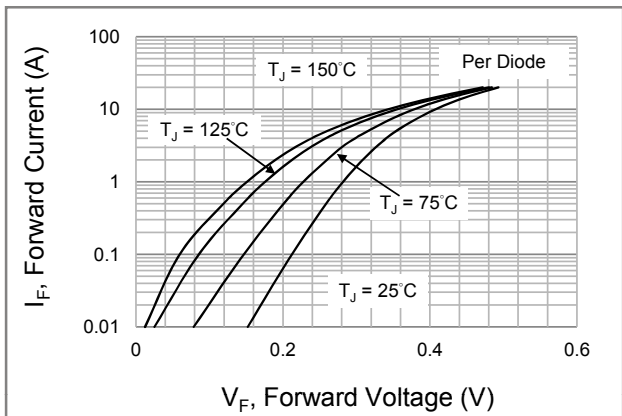


Fig.4 Typical Forward Characteristics

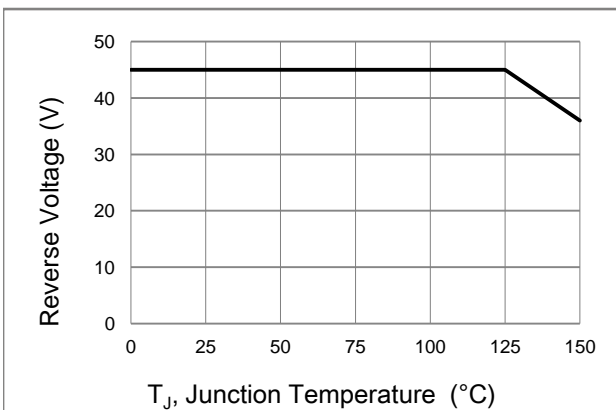


Fig.5 Operating Temperature Derating Curve



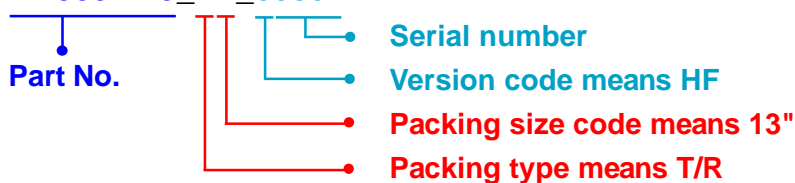
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Part No_packing code_Version

SBM2045VCT_T0_00001

For example :

RB500V-40_R2_00001



| Packing Code XX | | | | Version Code XXXXX | | |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd ~5 th Code |
| Tape and Ammunition Box (T/B) | A | N/A | 0 | HF | 0 | serial number |
| Tape and Reel (T/R) | R | 7" | 1 | RoHS | 1 | serial number |
| Bulk Packing (B/P) | B | 13" | 2 | | | |
| Tube Packing (T/P) | T | 26mm | X | | | |
| Tape and Reel (Right Oriented) (TRR) | S | 52mm | Y | | | |
| Tape and Reel (Left Oriented) (TRL) | L | PANASERT T/B CATHODE UP (PBCU) | U | | | |
| FORMING | F | PANASERT T/B CATHODE DOWN (PBCD) | D | | | |



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