



STR60100CB

Surface Mount Low V_F Schottky Barrier Rectifier

Voltage

100 V

Current

60 A

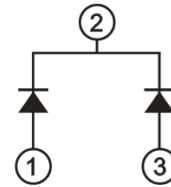
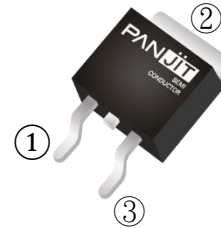
Features

- Low power loss, high efficiency
- High surge current capability
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : TO-263 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 1.38 grams

TO-263



Maximum Ratings and Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| PARAMETER | | SYMBOL | LIMIT | UNITS |
|--|------------|-----------------|---------|--------------------|
| Maximum Repetitive Peak Reverse Voltage | | V_{RRM} | 100 | V |
| Maximum RMS Voltage | | V_{RMS} | 70 | V |
| Maximum DC Blocking Voltage | | V_{DC} | 100 | V |
| Maximum Average Forward Current | per device | $I_{F(AV)}$ | 60 | A |
| | per diode | | 30 | |
| Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load Per Diode | | I_{FSM} | 210 | A |
| Typical Junction Capacitance Measured at 1 MHZ And Applied $V_R = 4\text{ V}$ | | C_J | 1400 | pF |
| Typical Thermal Resistance | (Note 1) | $R_{\theta JA}$ | 52 | $^\circ\text{C/W}$ |
| | (Note 2) | $R_{\theta JC}$ | 7.5 | |
| | (Note 2) | $R_{\theta JL}$ | 5.5 | |
| Operating Junction Temperature Range | | T_J | -55~150 | $^\circ\text{C}$ |
| Storage Temperature Range | | T_{STG} | -55~150 | $^\circ\text{C}$ |



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Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNITS |
|---|--------|---|------|------|------|---------------|
| Forward Voltage Per Diode | V_F | $I_F = 1\text{ A}, T_J = 25^\circ\text{C}$ | - | 0.37 | - | V |
| | | $I_F = 15\text{ A}, T_J = 25^\circ\text{C}$ | - | 0.6 | - | |
| | | $I_F = 30\text{ A}, T_J = 25^\circ\text{C}$ | - | - | 0.83 | |
| | | $I_F = 1\text{ A}, T_J = 125^\circ\text{C}$ | - | 0.24 | - | |
| | | $I_F = 15\text{ A}, T_J = 125^\circ\text{C}$ | - | 0.58 | - | |
| | | $I_F = 30\text{ A}, T_J = 125^\circ\text{C}$ | - | 0.73 | - | |
| Reverse Current Per Diode ^(Note 3) | I_R | $V_R = 80\text{ V}, T_J = 25^\circ\text{C}$ | - | 7 | - | μA |
| | | $V_R = 100\text{ V}, T_J = 25^\circ\text{C}$ | - | - | 100 | |
| | | $V_R = 100\text{ V}, T_J = 125^\circ\text{C}$ | - | 11 | - | mA |

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
2. Mounted on a FR4 PCB, single-sided copper, with 100 cm² copper pad area.
3. Short duration pulse test used to minimize self-heating effect.



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TYPICAL CHARACTERISTIC CURVES

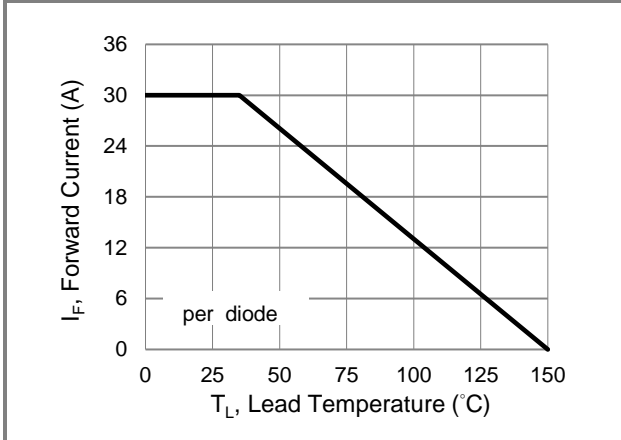


Fig.1 Forward Current Derating Curve

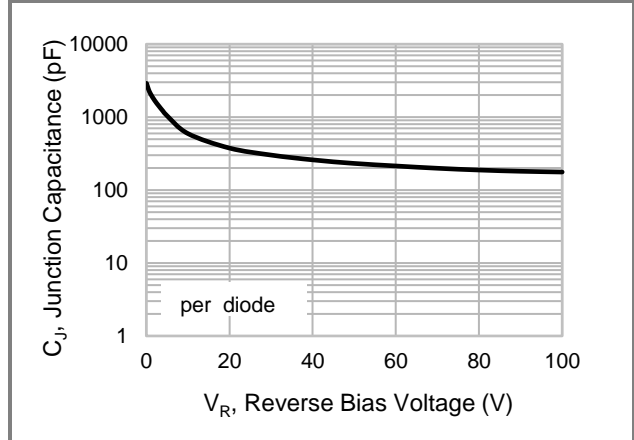


Fig.2 Typical Junction Capacitance

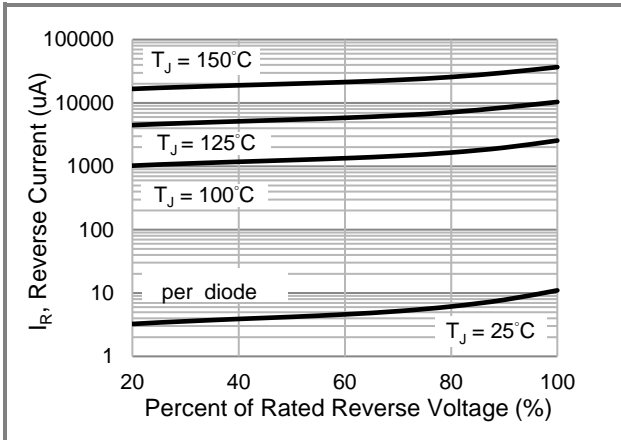


Fig.3 Typical Reverse Characteristics

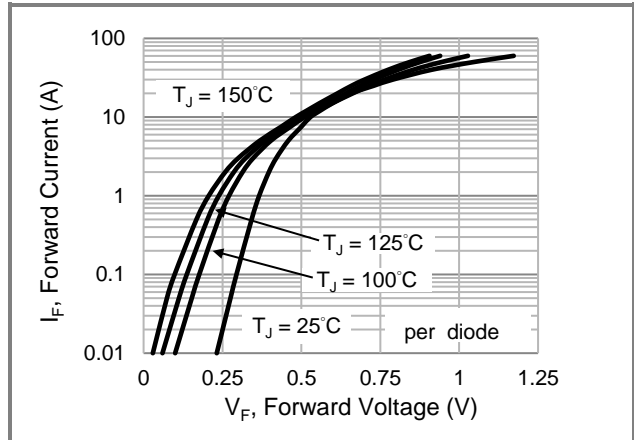


Fig.4 Typical Forward Characteristics

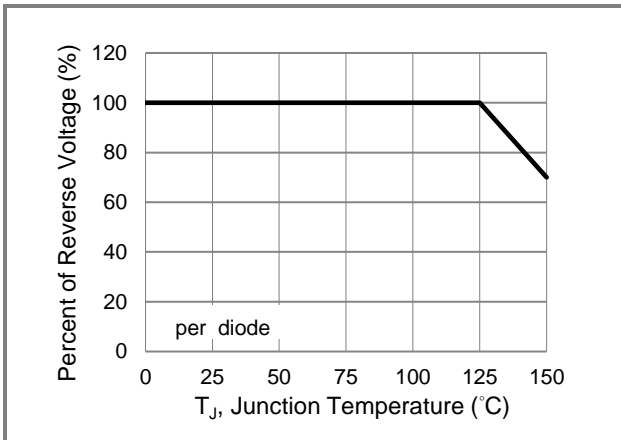


Fig.5 Operating Temperature Derating Curve

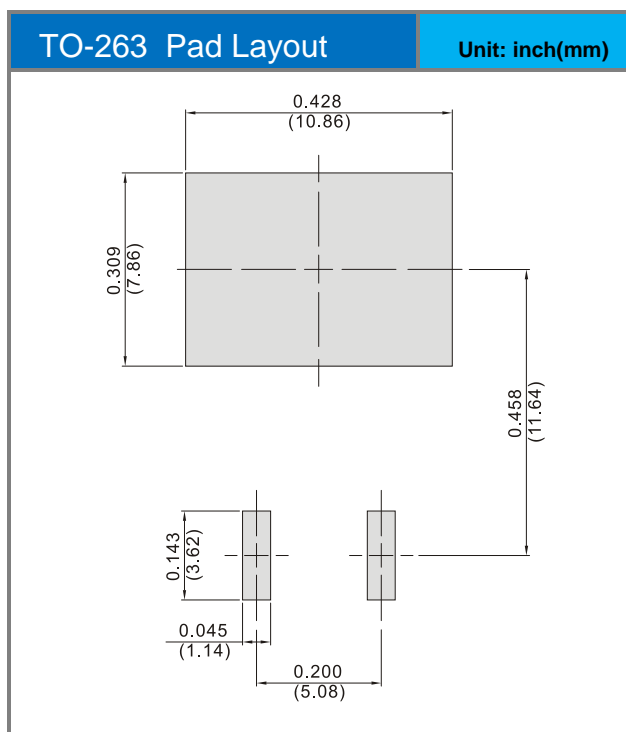
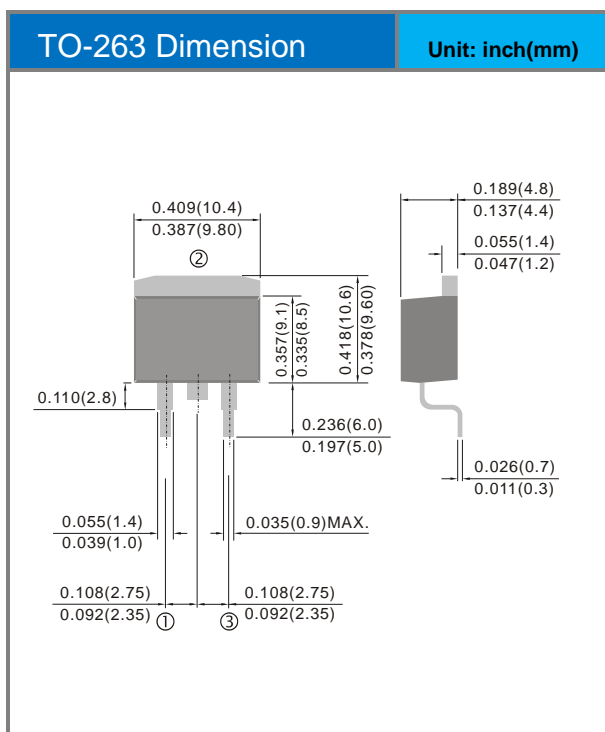


STR60100CB

Part No. Packing Code Version

| Part No. Packing Code | Package Type | Packing Type | Marking | Version |
|-----------------------|--------------|--------------------|------------|--------------------------------|
| STR60100CB_R2_00001 | TO-263 | 800 pcs / 13" reel | STR60100CB | Halogen free RoHS compliant |

Packaging Information & Mounting Pad Layout





STR60100CB

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