



# STR30100CB

## Surface Mount Low $V_F$ Schottky Barrier Rectifier

**Voltage** 100 V **Current** 30 A

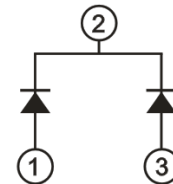
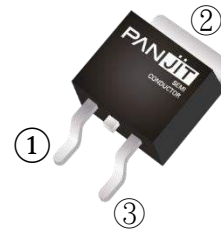
### Features

- 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	$I_{F(AV)}$	per device	30
		per diode	15
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load Per Diode	$I_{FSM}$	200	A
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4$ V	$C_J$	800	pF
Typical Thermal Resistance	(Note 1) $R_{\theta JA}$	52	$^\circ\text{C/W}$
	(Note 2) $R_{\theta JC}$	9	
	(Note 2) $R_{\theta JL}$	6.5	
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	$V_F$	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.39	-	V
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.51	-	
		$I_F = 15\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.78	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.27	-	
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.47	-	
		$I_F = 15\text{ A}, T_J = 125^\circ\text{C}$	-	0.67	-	
Reverse Current Per Diode <sup>(Note 3)</sup>	$I_R$	$V_R = 80\text{ V}, T_J = 25^\circ\text{C}$	-	5	-	$\mu\text{A}$
		$V_R = 100\text{ V}, T_J = 25^\circ\text{C}$	-	-	50	
		$V_R = 100\text{ V}, T_J = 125^\circ\text{C}$	-	6.5	-	mA

NOTES :

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



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## TYPICAL CHARACTERISTIC CURVES

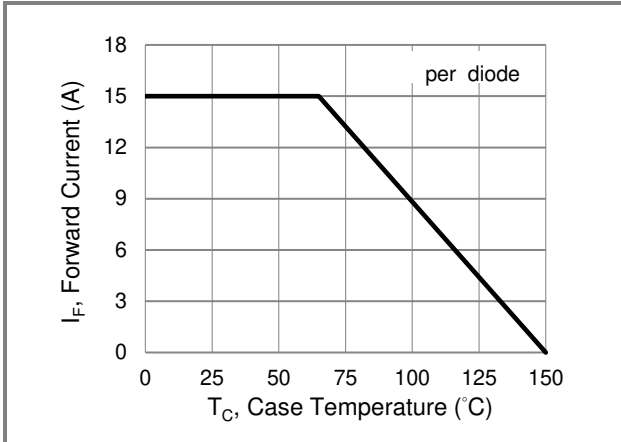


Fig.1 Forward Current Derating Curve

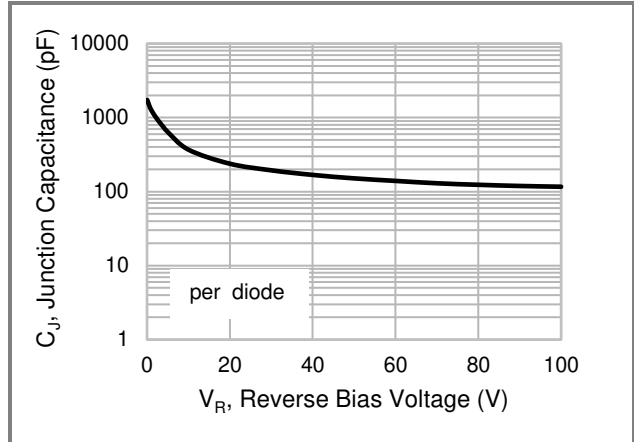


Fig.2 Typical Junction Capacitance

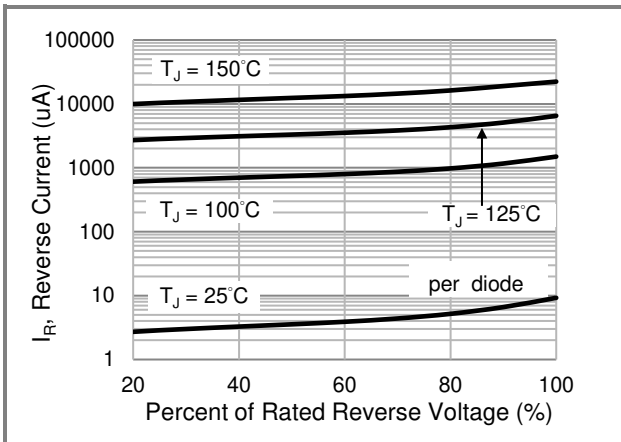


Fig.3 Typical Reverse Characteristics

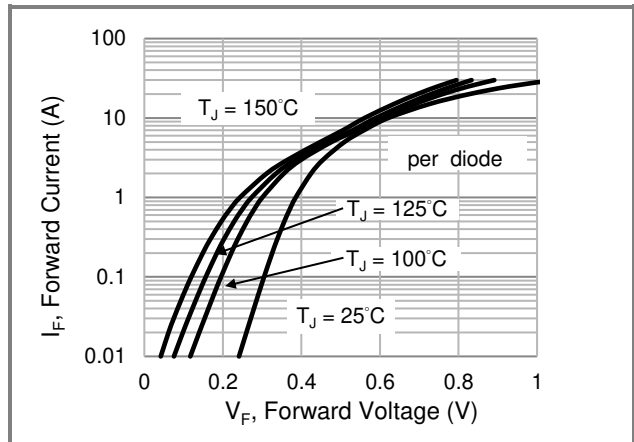


Fig.4 Typical Forward Characteristics

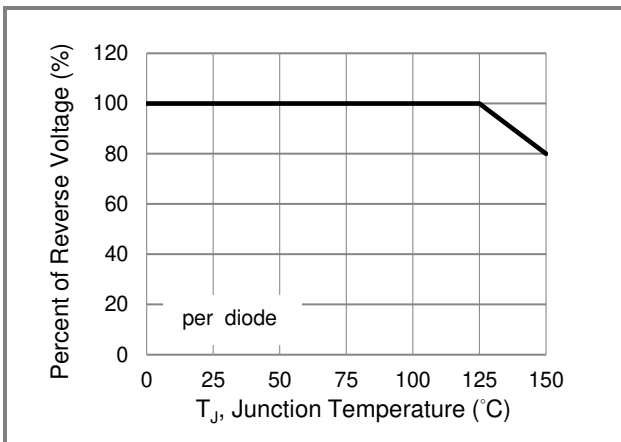


Fig.5 Operating Temperature Derating Curve





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