

STRN10100XCB

Surface Mount Low V_f Schottky Barrier Rectifier

Voltage

100 V

Current

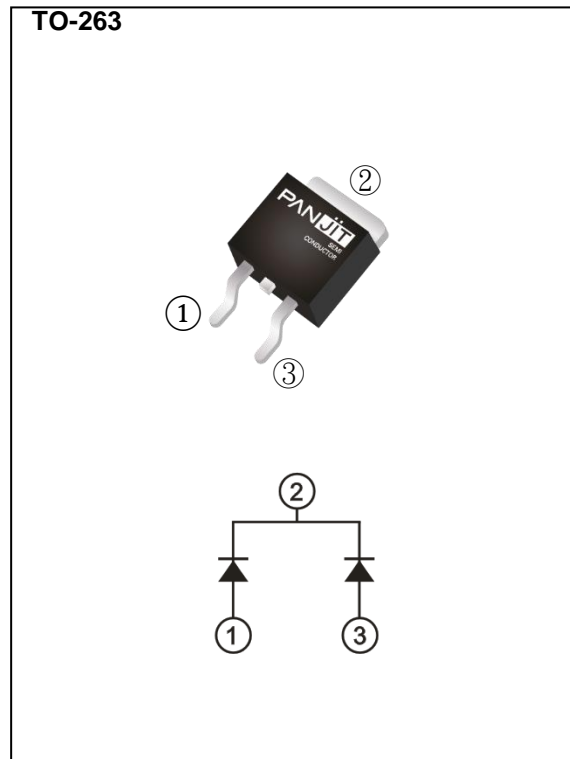
10 A

Features

- Low forward voltage drop
- 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



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	10
		per diode	5
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I_{FSM}	100	A
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4\text{ V}$	C_J	630	pF
Typical Thermal Resistance	(Note 1) $R_{\theta JA}$	40	$^\circ\text{C/W}$
	(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	$^\circ\text{C}$

NOTES : 1. Mounted on a FR4 PCB, single-sided copper, standard footprint.

2. Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area.

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 1\text{ A}, T_J = 25\text{ }^\circ\text{C}$	-	0.42	0.47	V
		$I_F = 3\text{ A}, T_J = 25\text{ }^\circ\text{C}$	-	0.5	0.55	
		$I_F = 5\text{ A}, T_J = 25\text{ }^\circ\text{C}$	-	0.57	0.62	
		$I_F = 1\text{ A}, T_J = 125\text{ }^\circ\text{C}$	-	0.3	0.35	
		$I_F = 3\text{ A}, T_J = 125\text{ }^\circ\text{C}$	-	0.42	0.47	
		$I_F = 5\text{ A}, T_J = 125\text{ }^\circ\text{C}$	-	0.51	0.56	
Reverse Current ^(Note 3)	I_R	$V_R = 80\text{ V}, T_J = 25\text{ }^\circ\text{C}$	-	3	18	μA
		$V_R = 100\text{ V}, T_J = 25\text{ }^\circ\text{C}$	-	4	40	
		$V_R = 100\text{ V}, T_J = 125\text{ }^\circ\text{C}$	-	4	24	mA

NOTES : 3. Short duration pulse test used to minimize self-heating effect.

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TYPICAL CHARACTERISTIC CURVES

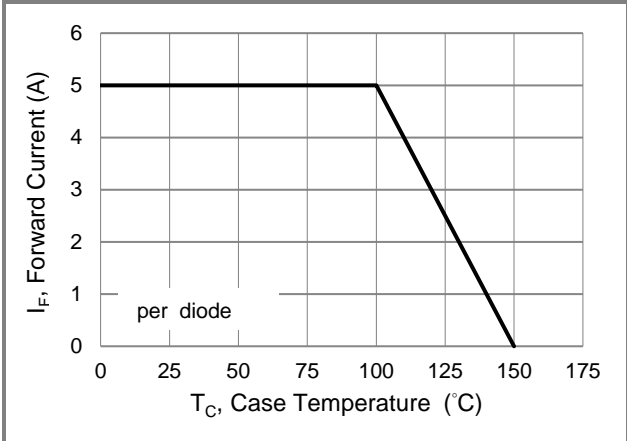


Fig.1 Forward Current Derating Curve

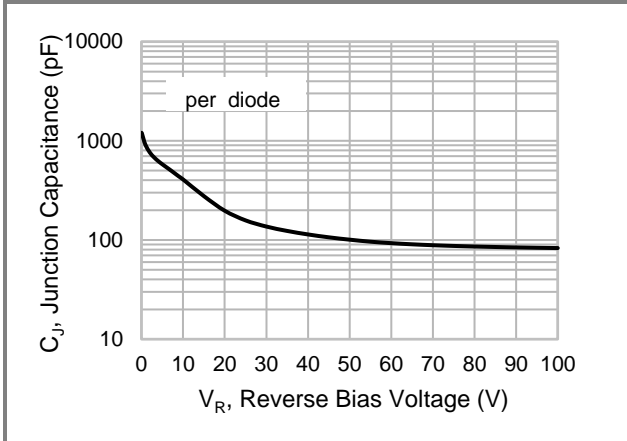


Fig.2 Typical Junction Capacitance

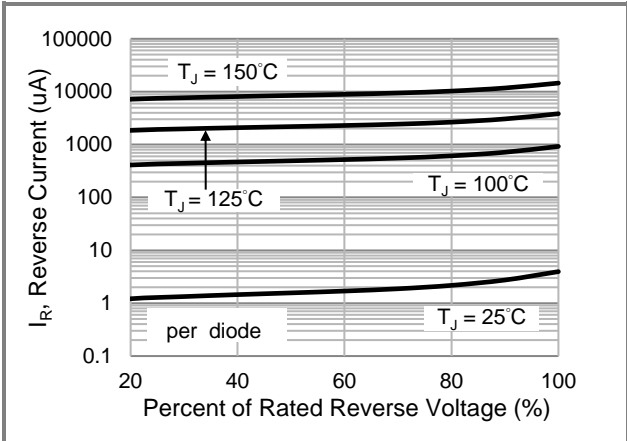


Fig.3 Typical Reverse Characteristics

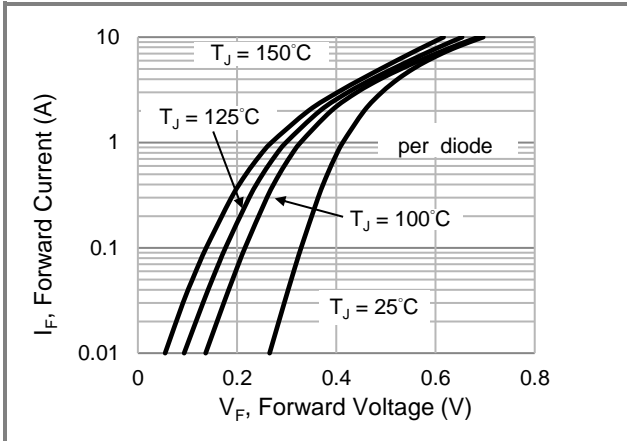


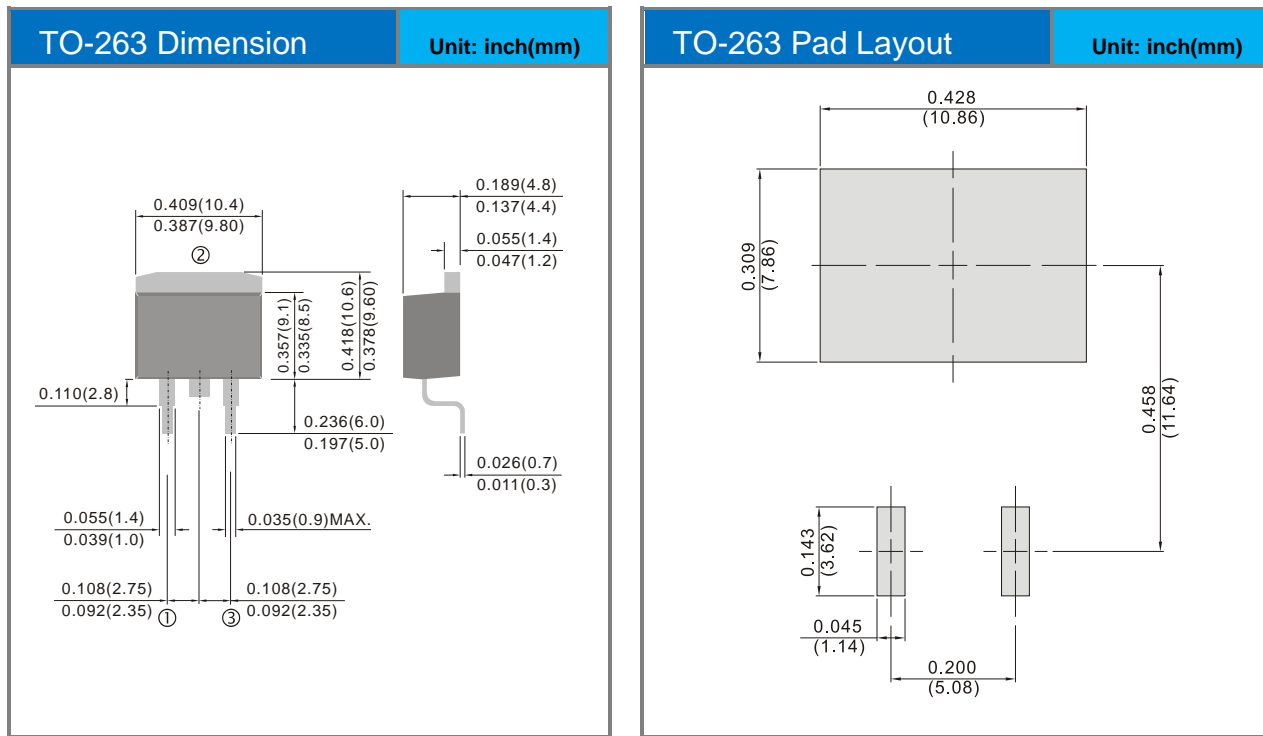
Fig.4 Typical Forward Characteristics

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
STRN10100XCB	TO-263	800 pcs / 13" reel	TN10100XCB

Packaging Information & Mounting Pad Layout



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