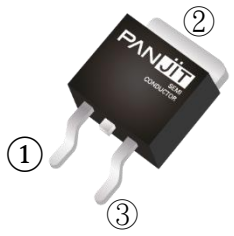
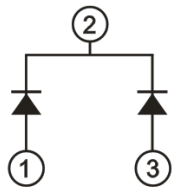
STRN40100VCB

Surface Mount Low V_F Schottky Barrier Rectifier

Voltage 100 V **Current** 40 A

TO-263





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 °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 per diode	$I_{F(AV)}$	40 20	A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load		I_{FSM}	300	A
Typical Junction Capacitance Measured at 1 MHZ And Applied V_R = 4 V		C_J	3480	pF
Typical Thermal Resistance	(Note 1) (Note 2) (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	40 4.4 4.2	°C/W
Operating Junction Temperature Range		T_J	-55~150	°C
Storage Temperature Range		T_{STG}	-55~150	°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 °C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	I_F = 1 A, T_J = 25 °C	-	0.38	0.43	V
		I_F = 10 A, T_J = 25 °C	-	0.53	0.58	
		I_F = 20 A, T_J = 25 °C	-	0.67	0.72	
		I_F = 1 A, T_J = 125 °C	-	0.24	0.29	
		I_F = 10 A, T_J = 125 °C	-	0.48	0.53	
		I_F = 20 A, T_J = 125 °C	-	0.6	0.65	
Reverse Current(Note 3)	I_R	V_R = 80 V, T_J = 25 °C	-	6.5	39	uA
		V_R = 100 V, T_J = 25 °C	-	12	160	
		V_R = 100V,T_J= 125 °C	-	8.6	51.6	mA

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

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TYPICAL CHARACTERISTIC CURVES

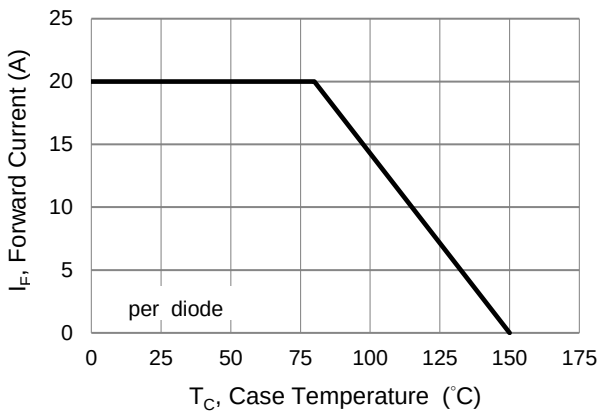

Fig.1 Forward Current Derating Curve

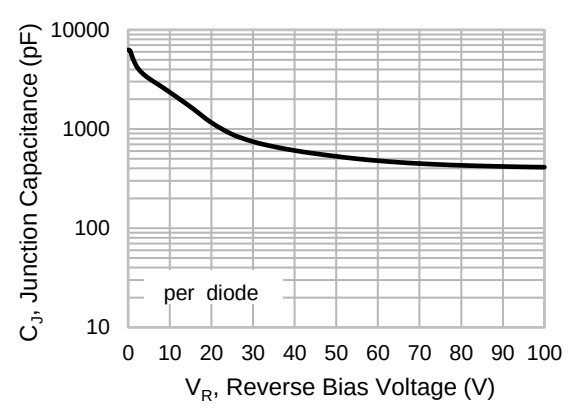

Fig.2 Typical Junction Capacitance

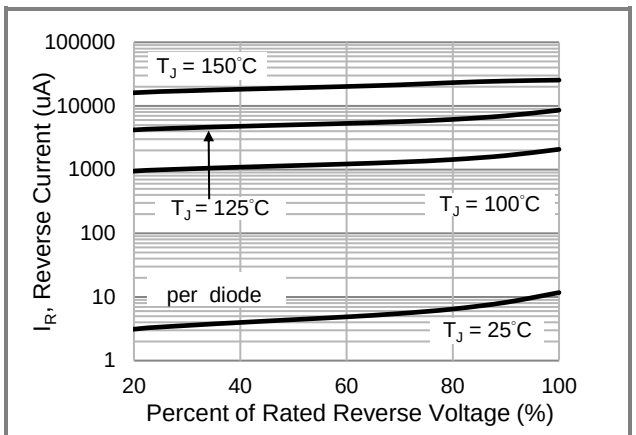

Fig.3 Typical Reverse Characteristics

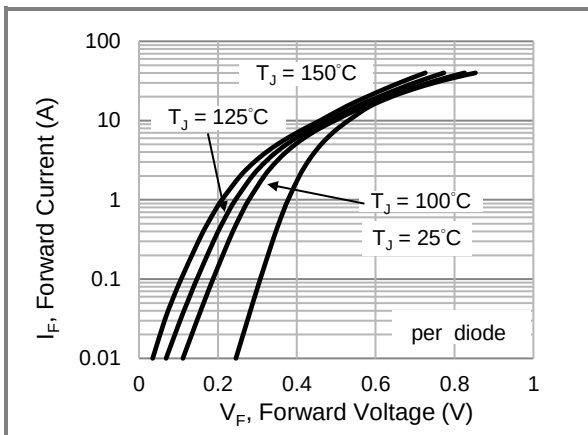

Fig.4 Typical Forward Characteristics

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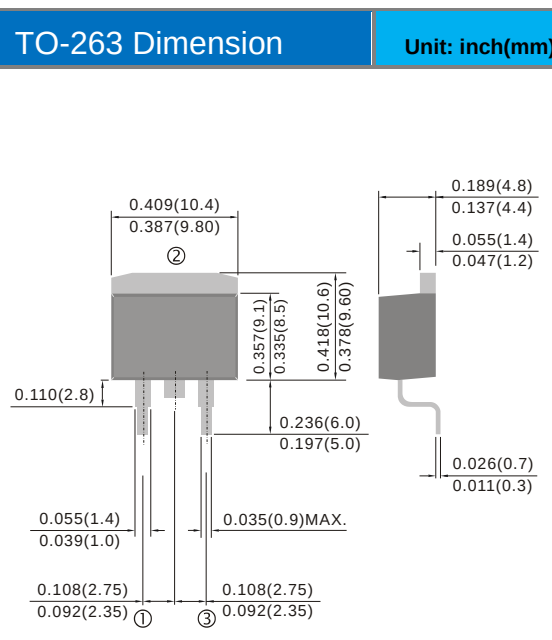
Product and Packing Information

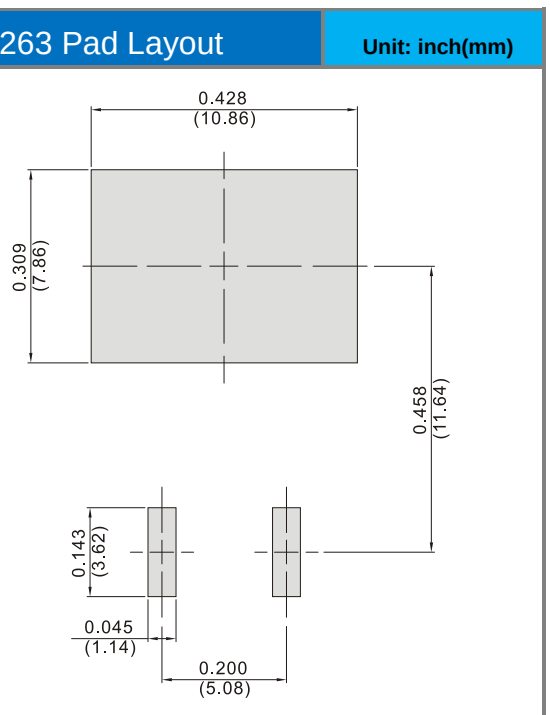
Part No.	Package Type	Packing Type	Marking
STRN40100VCB	TO-263	800 pcs / 13” reel	TN40100VCB

Packaging Information & Mounting Pad Layout

TO-263 Dimension — Unit: inch(mm)



TO-263 Pad Layout — Unit: inch(mm)



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