

# STRN40100VCT

## Surface Mount Low $V_f$ Schottky Barrier Rectifier

**Voltage**

**100 V**

**Current**

**40 A**

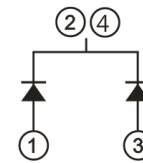
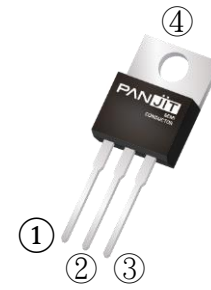
### Features

- 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-220AB Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 1.8904 grams

TO-220AB



### 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	40
		per diode	20
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 $V_R = 4\text{ V}$	$C_J$	3480	pF
Typical Thermal Resistance <sup>(Note 1)</sup>	$R_{\theta JA}$	52	$^\circ\text{C/W}$
	$R_{\theta JC}$	0.9	
	$R_{\theta JL}$	1.4	
Operating Junction Temperature Range	$T_J$	-55~150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55~150	$^\circ\text{C}$

NOTES : 1. Device mounted on a infinite heatsink.

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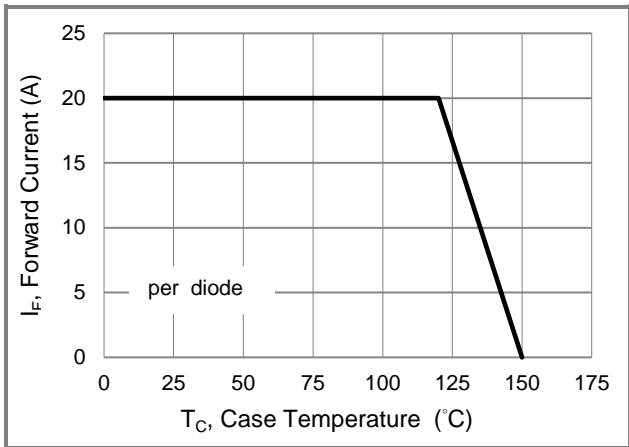
## Electrical Characteristics ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	$V_F$	$I_F = 1\text{ A}, T_J = 25\text{ }^\circ\text{C}$	-	0.38	0.43	V
		$I_F = 10\text{ A}, T_J = 25\text{ }^\circ\text{C}$	-	0.53	0.58	
		$I_F = 20\text{ A}, T_J = 25\text{ }^\circ\text{C}$	-	0.67	0.72	
		$I_F = 1\text{ A}, T_J = 125\text{ }^\circ\text{C}$	-	0.24	0.29	
		$I_F = 10\text{ A}, T_J = 125\text{ }^\circ\text{C}$	-	0.48	0.53	
		$I_F = 20\text{ A}, T_J = 125\text{ }^\circ\text{C}$	-	0.6	0.65	
Reverse Current <sup>(Note 2)</sup>	$I_R$	$V_R = 80\text{ V}, T_J = 25\text{ }^\circ\text{C}$	-	6.5	39	uA
		$V_R = 100\text{ V}, T_J = 25\text{ }^\circ\text{C}$	-	12	160	
		$V_R = 100\text{ V}, T_J = 125\text{ }^\circ\text{C}$	-	8.6	51.6	mA

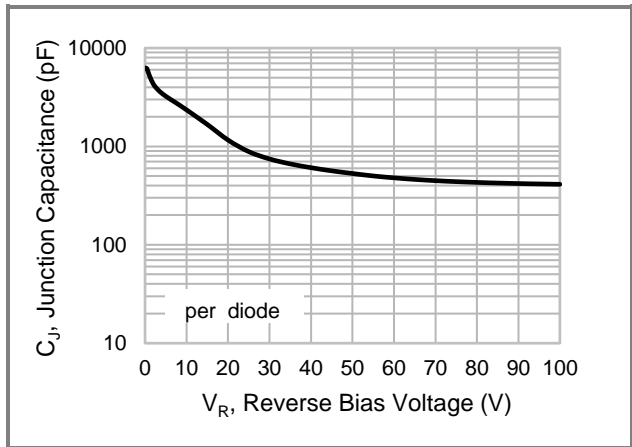
NOTES : 2. Short duration pulse test used to minimize self-heating effect.

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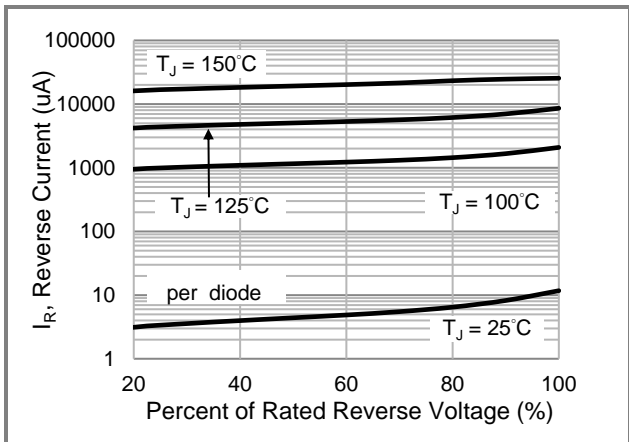
## TYPICAL CHARACTERISTIC CURVES



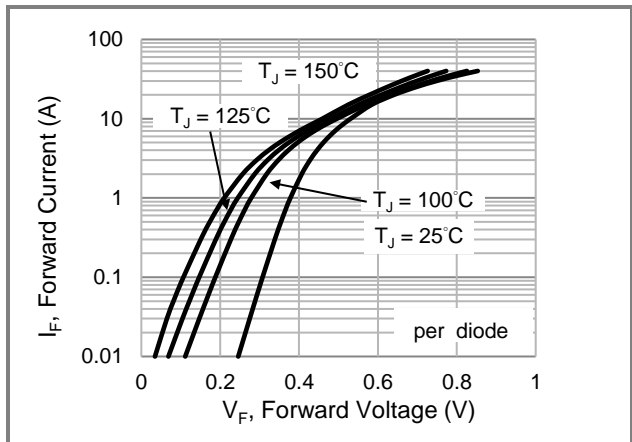
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



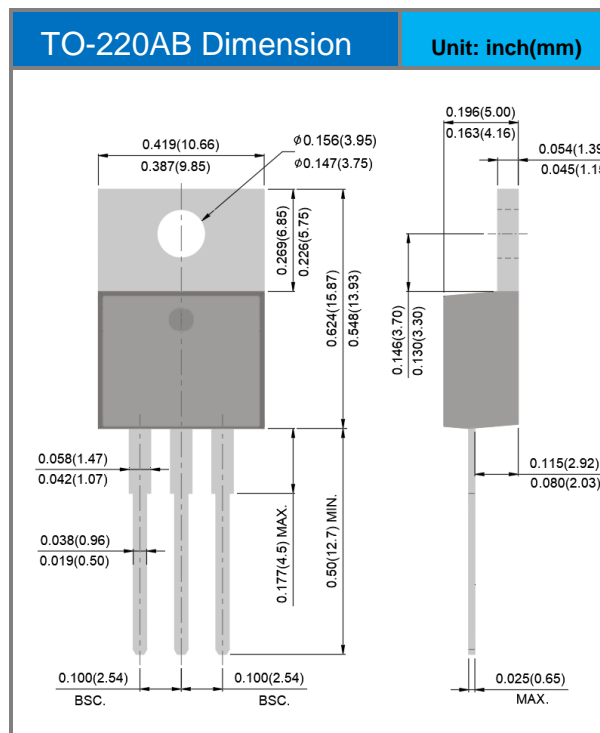
**Fig.4 Typical Forward Characteristics**

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## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
STRN40100VCT	TO-220AB	50pcs / Tube	TN40100VCT

## Packaging Information



## STRN40100VCT

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