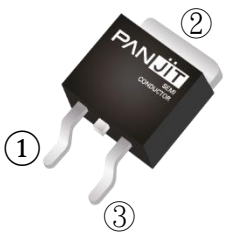
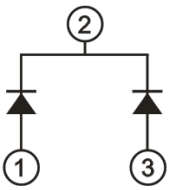
STR40100LCB

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 Per Diode		I_{FSM}	210	A
Typical Junction Capacitance Measured at 1 MHZ And Applied V_R = 4 V		C_J	1400	pF
Typical Thermal Resistance	(Note 1) (Note 2) (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	52 7.5 5.5	°C/W
Operating Junction Temperature Range		T_J	-55~150	°C
Storage Temperature Range		T_{STG}	-55~150	°C

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Electrical Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage Per Diode	V_F	I_F = 1 A, T_J = 25 °C	-	0.37	-	V
		I_F = 10 A, T_J = 25 °C	-	0.53	-	
		I_F = 20 A, T_J = 25 °C	-	-	0.72	
		I_F = 1 A, T_J = 125 °C	-	0.24	-	
		I_F = 10 A, T_J = 125 °C	-	0.5	-	
		I_F = 20 A, T_J = 125 °C	-	0.64	-	
Reverse Current Per Diode(Note 3)	I_R	V_R = 80 V, T_J = 25 °C	-	7	-	uA
		V_R = 100 V, T_J = 25 °C	-	-	100	
		V_R = 100V, T_J = 125 °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 cm^2 copper pad area.
3. Short duration pulse test used to minimize self-heating effect.

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TYPICAL CHARACTERISTIC CURVES

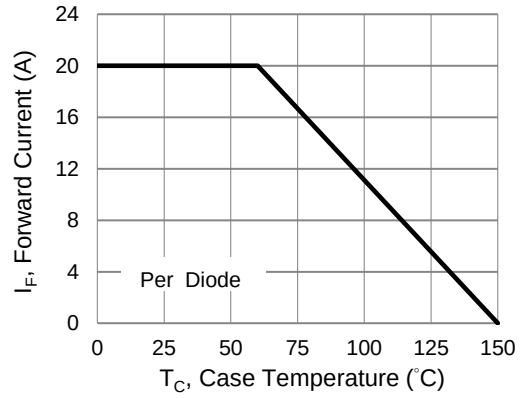


Fig.1 Forward Current Derating Curve

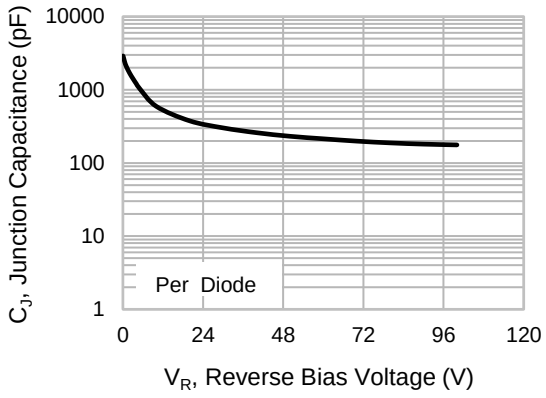


Fig.2 Typical Junction Capacitance

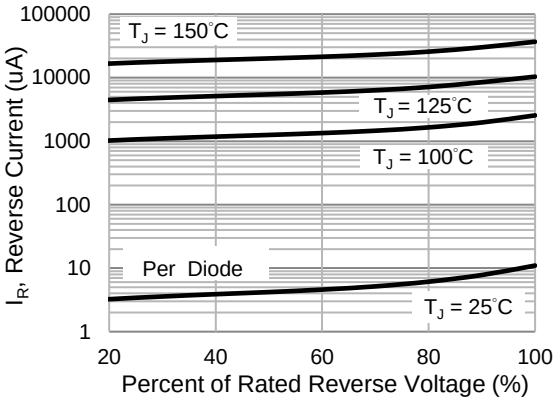


Fig.3 Typical Reverse Characteristics

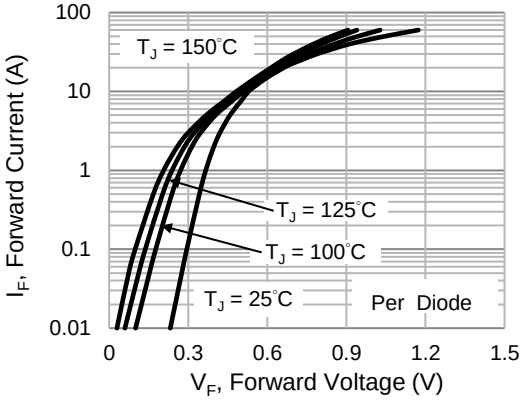


Fig.4 Typical Forward Characteristics

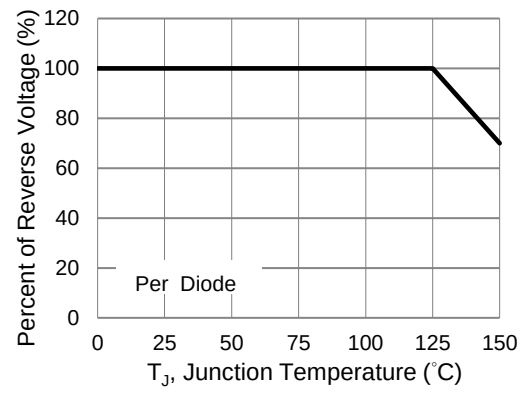


Fig.5 Operating Temperature Derating Curve

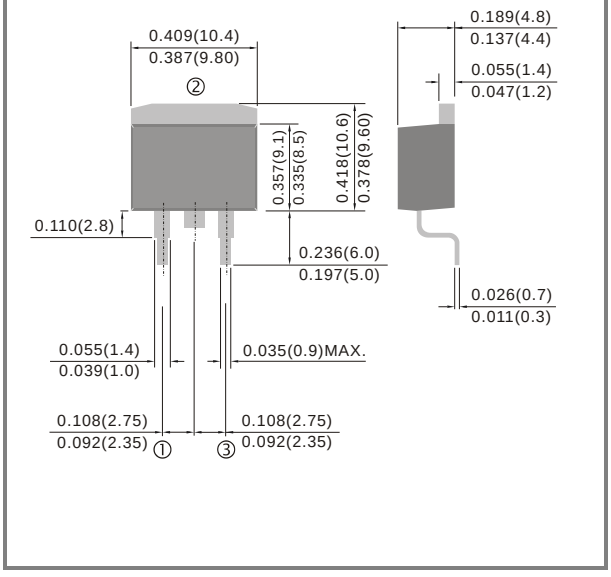
STR40100LCB

Part No. Packing Code Version

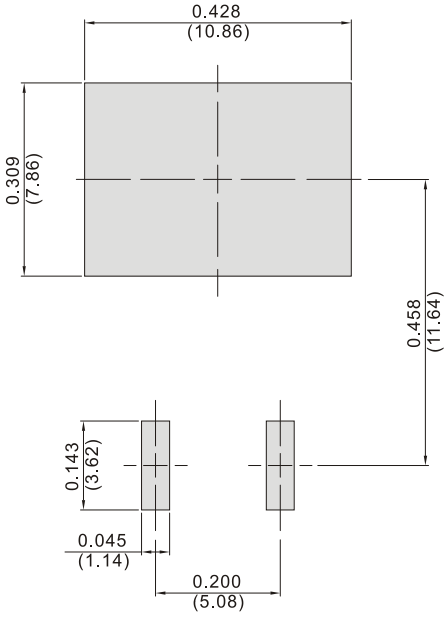
Part No. Packing Code	Package Type	Packing Type	Marking	Version
STR40100LCB_R2_00001	TO-263	800 pcs / 13” reel	STR40100LCB	Halogen free RoHS compliant

Packaging Information & Mounting Pad Layout

TO-263 Dimension — Unit: inch(mm)



TO-263 Pad Layout — Unit: inch(mm)



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