

Product Summary (Per Leg)

| V_{RRM} (V) | I_O (A) | V_F Max (V) @ +25°C | I_R Max (μ A) @ +25°C |
|---------------|-----------|--------------------------|---------------------------------|
| 100 | 10 | 0.71 | 80 |

Description and Applications

The Trench Schottky provides very low V_F and extremely excellent reverse leakage stability at high temperatures. It is ideal for use as a rectifier, freewheel diode or blocking diode in:

- DC-DC Converters
- AC-DC Adaptors

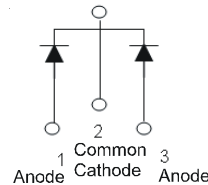

 TO263AB (Standard)
Top View

Features

- Low Forward Voltage Drop
- Excellent High Temperature Stability
- Soft, Fast Switching Capability
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

Mechanical Data

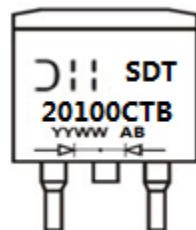
- Case: TO263AB
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish Annealed over Copper Leadframe. Solderable per MIL-STD-202, Method 208 e3
- Weight: 1.6 grams (Approximate)


 Package Pin Out
Configuration

Ordering Information (Note 4)

| Part Number | Case | Packaging |
|----------------|--------------------|-----------------|
| SDT20100CTB-13 | TO263AB (Standard) | 800 Pieces/Reel |

- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 2. See http://www.diodes.com/quality/lead_free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information


- = Manufacturers' Code Marking
 SDT20100CTB = Product Type Marking Code
 AB = Foundry and Assembly Code
 YYWW = Date Code Marking
 YY = Last Two Digits of Year (ex: 18 = 2018)
 WW = Week (01 to 53)

Maximum Ratings (Per Leg) (@T_A = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | Value | Unit |
|---|---|----------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _{RM} | 100 | V |
| Average Rectified Output Current per Device (Per Leg) (Total) | I _o | 10 20 | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | I _{FSM} | 150 | A |

Thermal Characteristics (Per Leg)

| Characteristic | Symbol | Value | Unit |
|---|-----------------------------------|-------------|------|
| Typical Thermal Resistance (Note 5) | R _{θJC} | 2 | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +150 | °C |

Electrical Characteristics (Per Leg) (@T_A = +25°C, unless otherwise specified.)

| Characteristic | Symbol | Min | Typ. | Max | Unit | Test Condition |
|--------------------------|----------------|-----|----------------------|----------------|----------------|---|
| Forward Voltage Drop | V _F | — | 0.53 0.65 0.60 | — 0.71 — | V | I _F = 5A, T _J = +25°C I _F = 10A, T _J = +25°C I _F = 10A, T _J = +125°C |
| Leakage Current (Note 6) | I _R | — | 3 8 5 | — 80 20 | μA μA mA | V _R = 70V, T _J = +25°C V _R = 100V, T _J = +25°C V _R = 100V, T _J = +125°C |

Notes: 5. Device mounted on 2inch*2inch Al board + 50mm*50mm*23mm Al heatsink.
6. Short duration pulse test used to minimize self-heating effect.

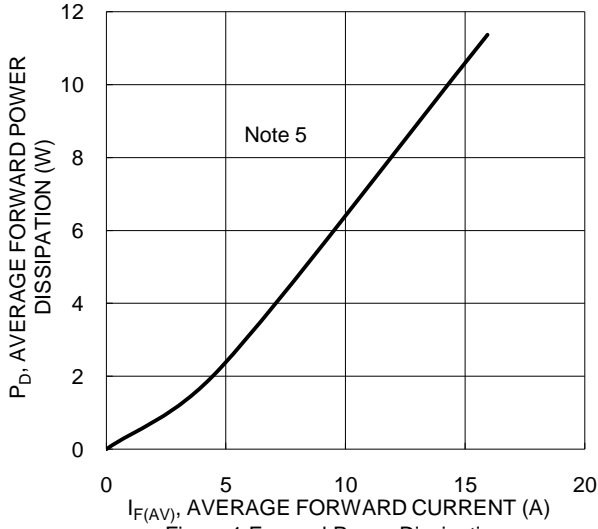


Figure 1 Forward Power Dissipation

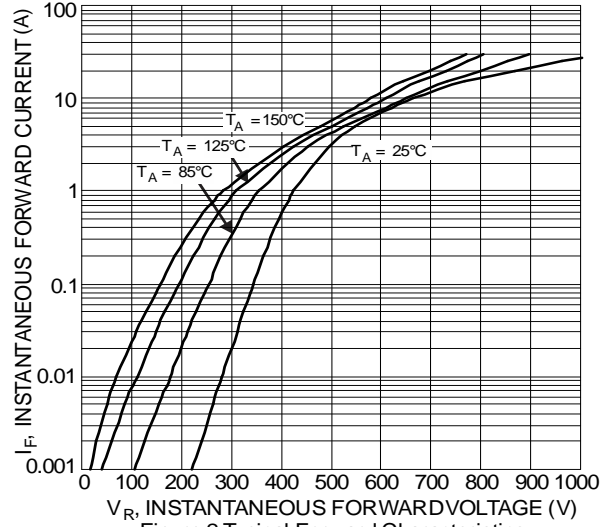


Figure 2 Typical Forward Characteristics

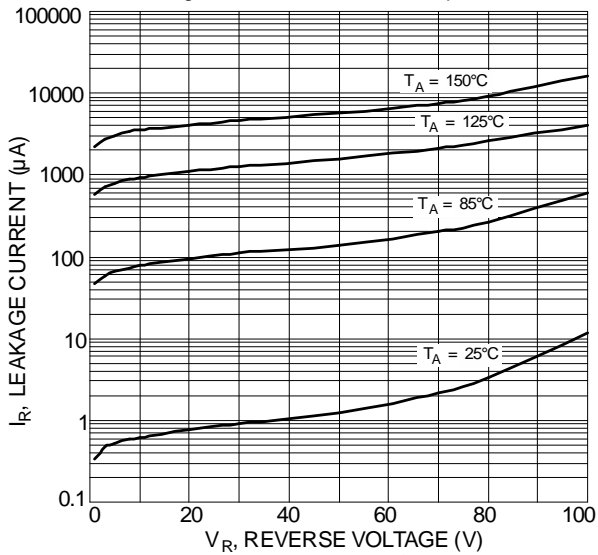


Figure 3 Typical Reverse Characteristics

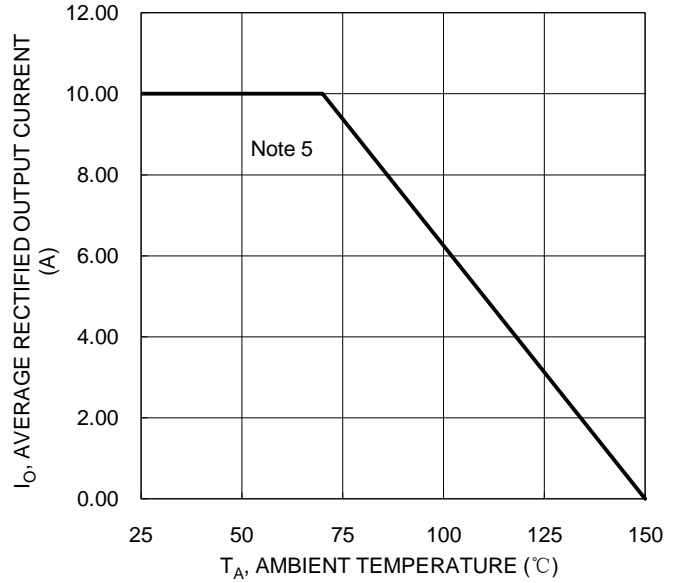


Figure 4 DC Forward Current Derating

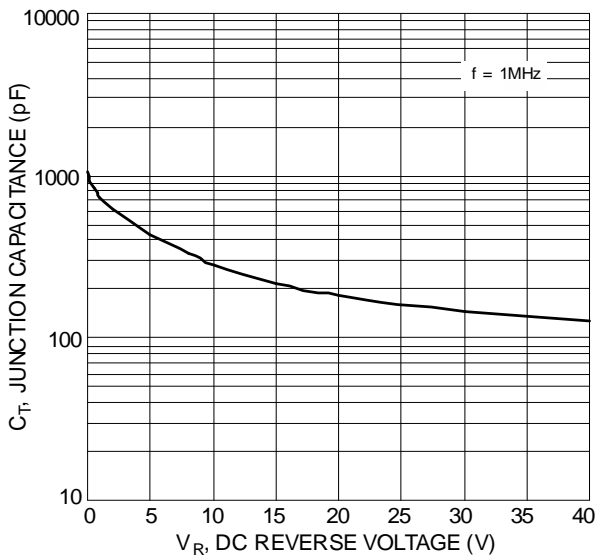
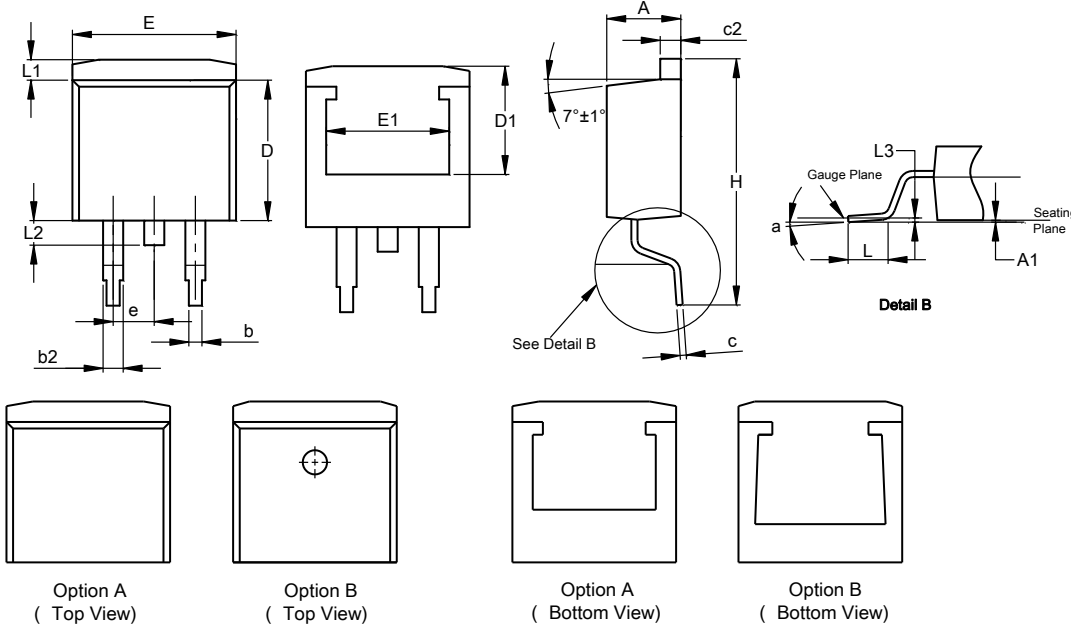


Figure 5 Typical Junction Capacitance

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

TO263AB (Standard)

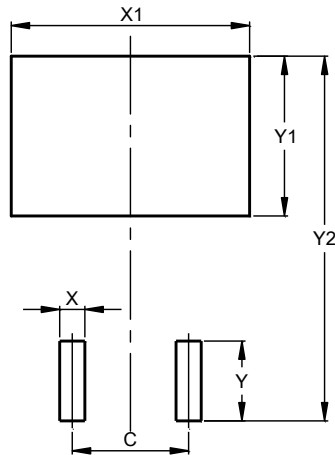


| TO263AB (Standard) | | | |
|--------------------|----------|-------|-------|
| Dim | Min | Max | Typ |
| A | 4.07 | 4.82 | - |
| A1 | 0.00 | 0.25 | - |
| b | 0.51 | 0.99 | - |
| b2 | 1.15 | 1.77 | - |
| c | 0.356 | 0.73 | - |
| c2 | 1.143 | 1.65 | - |
| D | 8.39 | 9.65 | - |
| D1 | 6.55 | 7.80 | - |
| e | 2.54 TYP | | |
| E | 9.66 | 10.66 | - |
| E1 | 6.23 | 8.23 | - |
| H | 14.61 | 15.87 | - |
| L | 1.78 | 2.79 | - |
| L1 | - | 1.67 | - |
| L2 | - | 1.77 | - |
| L3 | - | - | 0.254 |
| a | 0° | 8° | - |

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

TO263AB (Standard)



| Dimensions | Value (in mm) |
|------------|---------------|
| C | 5.08 |
| X | 1.10 |
| X1 | 10.41 |
| Y | 3.50 |
| Y1 | 7.01 |
| Y2 | 15.99 |

NEW PRODUCT

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