NEW PRODUCT

SDT30100CTE

30A
TRENCH SCHOTTKY RECTIFIER

Product Summary (Per Leg)

V_{RRM} (V)	I_O (A)	V_F Max (V) @ +25°C	I_R Max (µA) @ +25°C
100	15	0.75	70

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)**

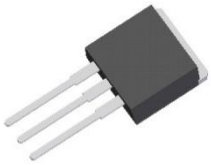
Description and Applications

The SDT30100CTE 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:

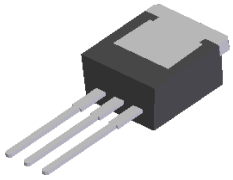
- DC-DC Converters
- AC-DC Adaptors

Mechanical Data

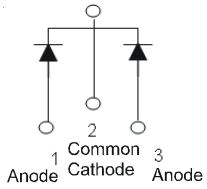
- Case: TO262 (Type HE)
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish Annealed over Copper Leadframe. Solderable per MIL-STD-202, Method 208 e3
- Weight: TO262 (Type HE) –1.355 grams (Approximate)



TO262 (Type HE)
Top View



TO262 (Type HE)
Bottom View



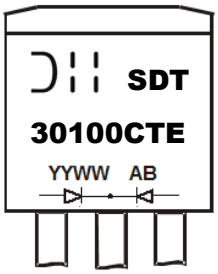
Package Pin Out
Configuration

Ordering Information (Note 4)

Part Number	Case	Packaging
SDT30100CTE	TO262 (Type HE)	50 Pieces/Tube

Notes:
1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
2. See http://www.diodes.com/quality/lead_free.html 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



SDT30100CTE = Product Type Marking Code
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last Two Digits of Year (ex: 17 = 2017)
WW = Week (01 to 53)

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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	15 30	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	200	A

Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (Note 5) Package = TO262 (Type HE)	$R_{\theta JC}$	3	°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	— —	0.70 0.65	0.75 0.70	V	I_F = 15A, T_J = +25°C I_F = 15A, T_J = +125°C
Leakage Current (Note 6)	I_R	— —	8 5	70 16	µA mA	V_R = 100V, T_J = +25°C V_R = 100V, T_J = +125°C

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

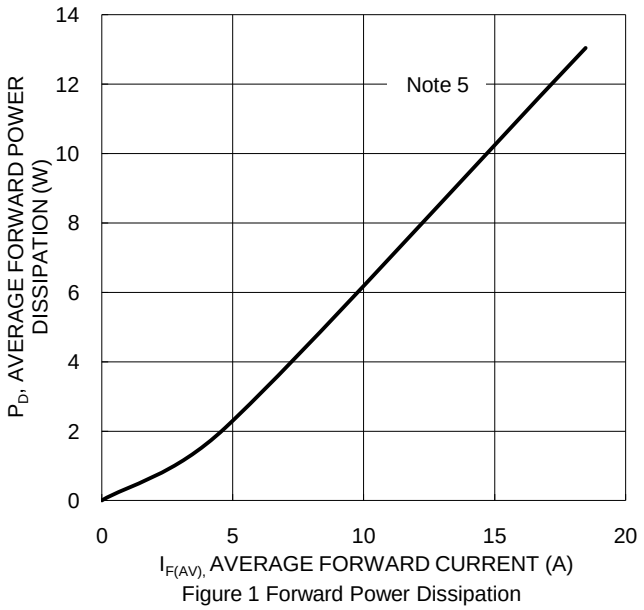

Figure 1 Forward Power Dissipation

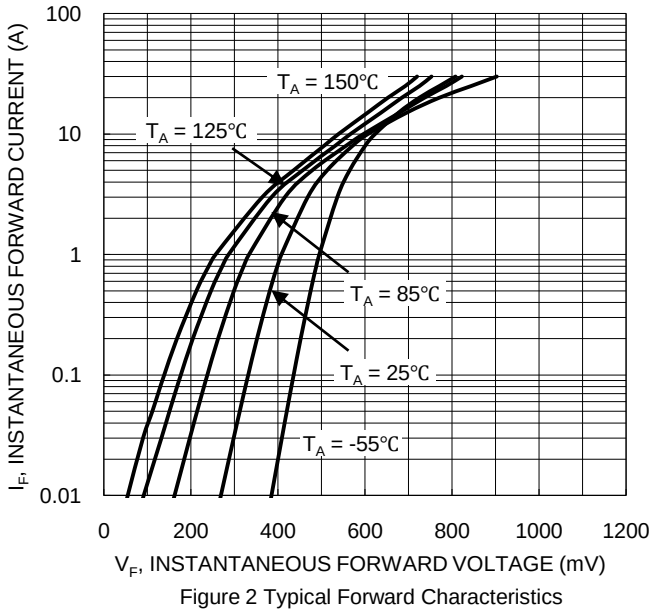

Figure 2 Typical Forward Characteristics

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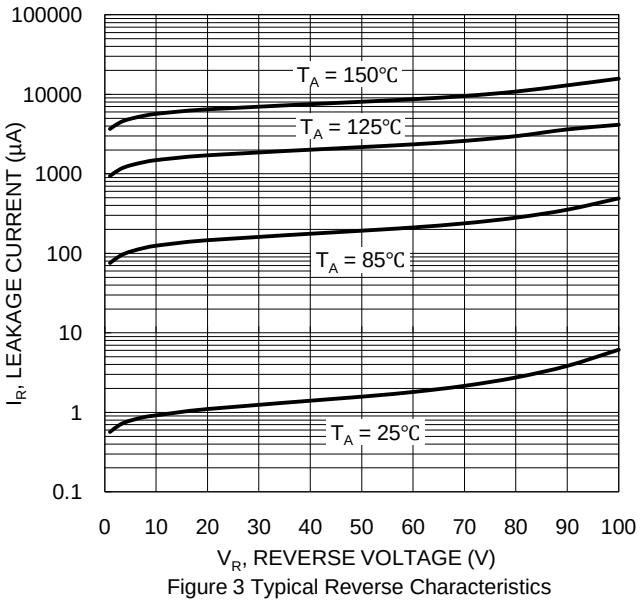

Figure 3 Typical Reverse Characteristics

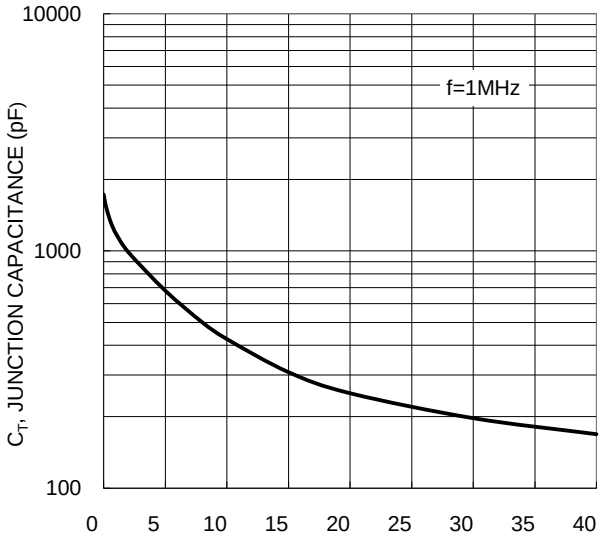

Figure 4 Typical Junction Capacitance

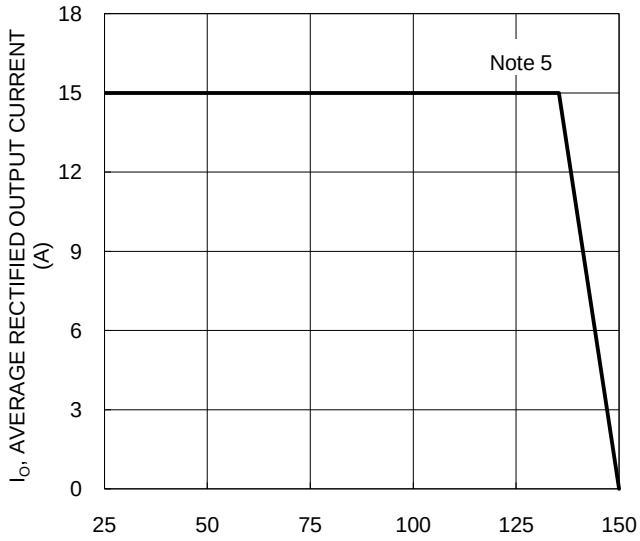

Figure 5 DC Forward Current Derating

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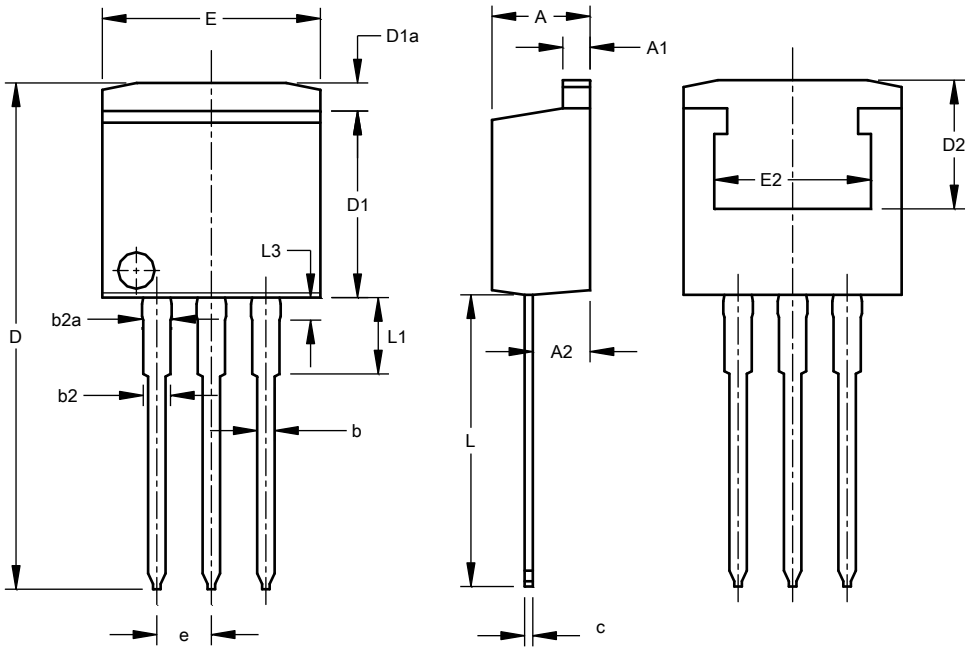
Package Outline Dimensions

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

TO262 (Type HE)



TO262 (Type HE)			
Dim	**Min**	**Max**	**Typ**
A	4.37	4.77	4.57
A1	1.22	1.42	1.27
A2	2.47	2.87	2.67
b	0.70	0.97	0.813
b2	1.17	1.42	1.27
b2a	1.25	1.50	1.35
c	0.28	0.53	0.381
D	23.20	24.02	23.61
D1	8.38	8.90	8.70
D1a	--	1.31	--
D2	6.00	--	--
e	2.54 BSC		
E	9.90	10.39	10.16
E2	7.30	--	--
L	13.34	14.10	13.73
L1	3.30	4.06	3.56
L3	0.95	1.15	1.05
All Dimensions in mm			

NEW PRODUCT

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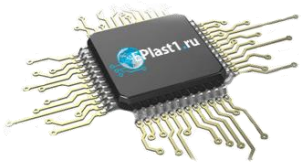

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