

Product Summary (Per Leg)

V _{RRM} (V)	I _O (A)	V _F Max (V) @ +25°C	I _R Max (μA) @ +25°C
100	10	0.72	30

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)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](mailto:contact@diodes.com) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

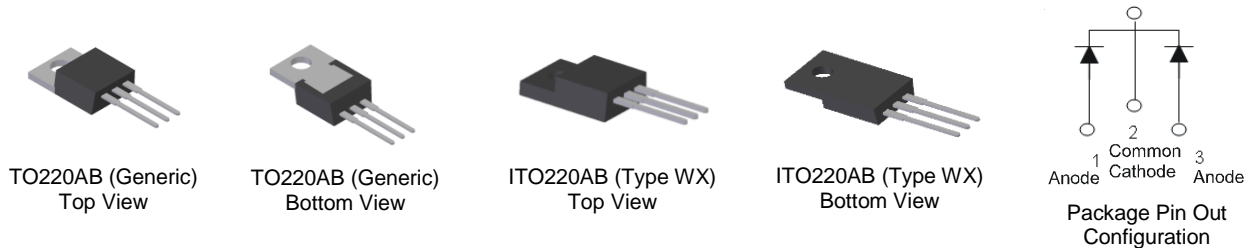
Description and Applications

The SDT20100GCT, SDT20100GCTFP 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: TO220AB, ITO220AB
- 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 (3)
- Weight: TO220AB (Generic) – 1.85 grams (Approximate)
ITO220AB (Type WX) – 1.65 grams (Approximate)



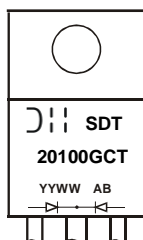
Ordering Information (Note 4)

Part Number	Case	Packaging
SDT20100GCT	TO220AB (Generic)	50 Pieces/Tube
SDT20100GCTFP	ITO220AB (Type WX)	50 Pieces/Tube

- 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 <https://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/>.

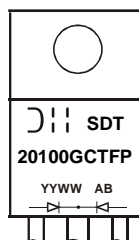
Marking Information

TO220AB (Generic)



⌋|| = Manufacturer's Marking
SDT20100GCT = Product Type Marking Code
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last Two Digits of Year (ex: 20 = 2020)
WW = Week (01 to 53)

ITO220AB (Type WX)



⌋|| = Manufacturer's Marking
SDT20100GCTFP = Product Type Marking Code
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last Two Digits of Year (ex: 20 = 2020)
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	V _{RRM}	100	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _{RM}		
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}	250	A

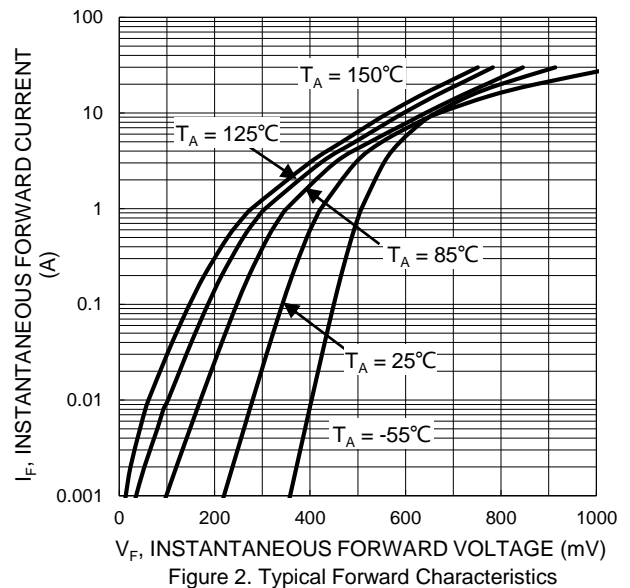
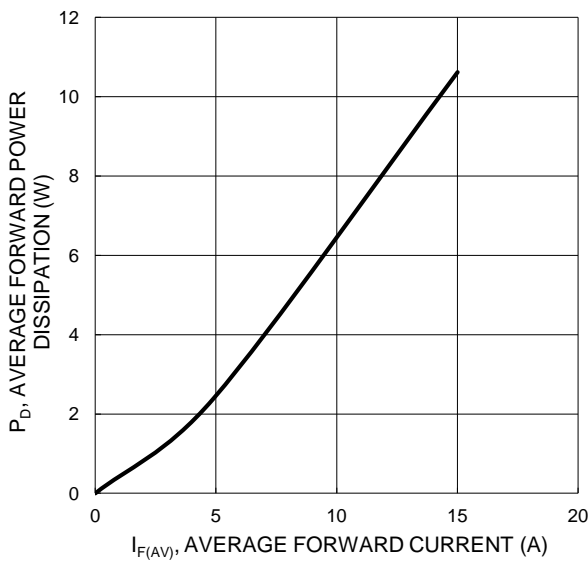
Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (Note 5) Package = TO220AB (Generic) Package = ITO220AB (Type WX)	R _{θJC}	2 4	°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	—	0.67	0.72 0.64	V	I _F = 10A, T _J = +25°C I _F = 10A, T _J = +125°C
Leakage Current (Note 6)	I _R	—	—	30 12	μA mA	V _R = 100V, T _J = +25°C V _R = 100V, T _J = +125°C

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



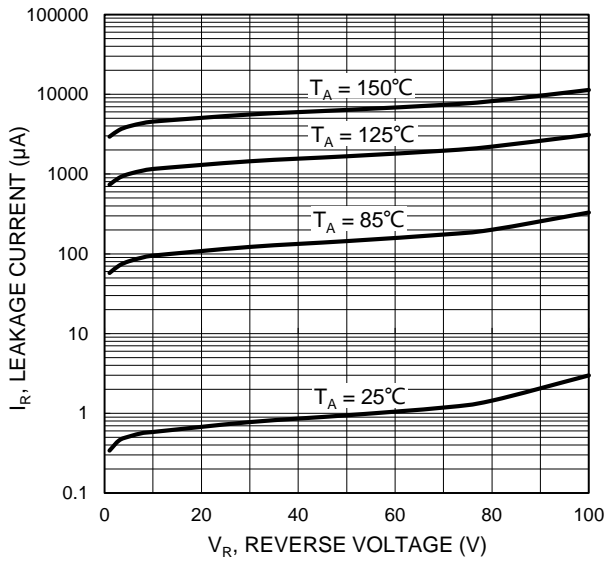


Figure 3. Typical Reverse Characteristics

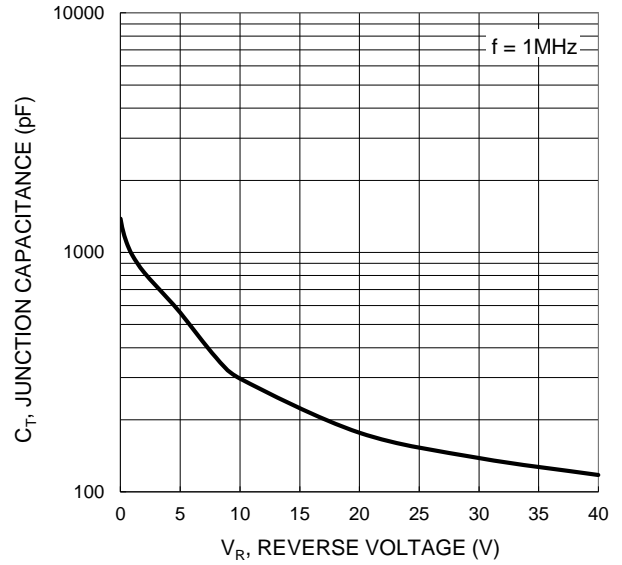


Figure 4. Typical Junction Capacitance

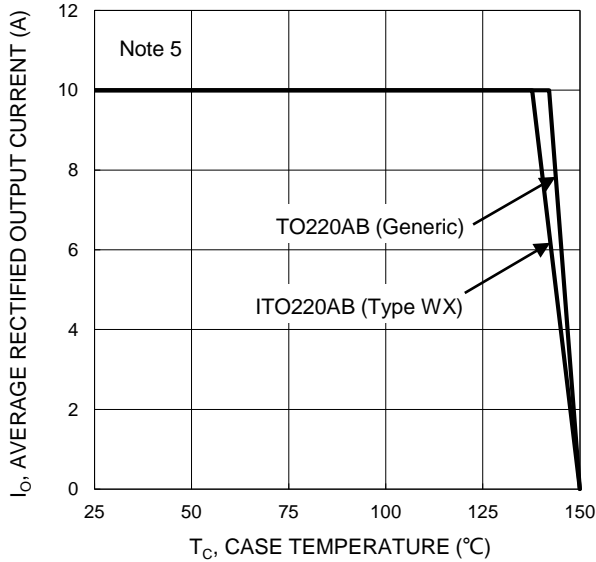
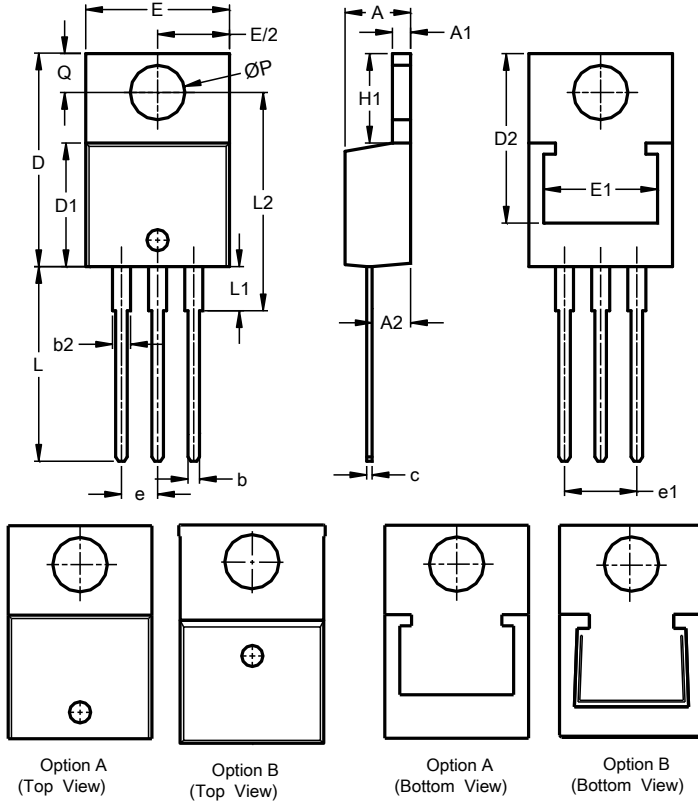


Figure 5. DC Forward Current Derating

Package Outline Dimensions

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

TO220AB (Generic)

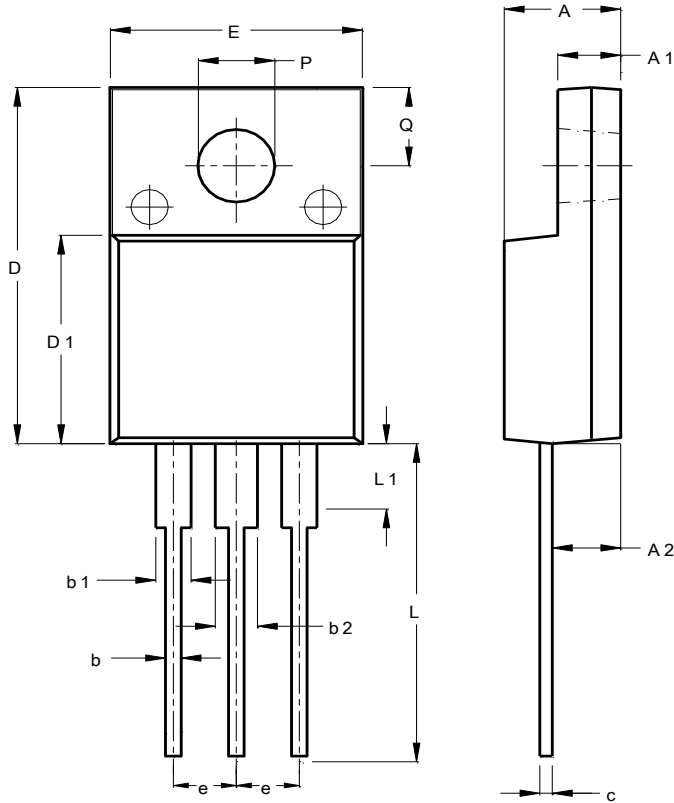


TO220AB (Generic)			
Dim	Min	Max	Typ
A	3.56	4.82	-
A1	0.51	1.39	-
A2	2.04	2.92	-
b	0.39	1.01	0.81
b2	1.15	1.77	1.24
c	0.356	0.61	-
D	14.22	16.51	-
D1	8.39	9.01	-
D2	11.45	12.87	-
e	-	-	2.54
e1	-	-	5.08
E	9.66	10.66	-
E1	6.86	8.89	-
H1	5.85	6.85	-
L	12.70	14.73	-
L1	-	4.42	-
L2	15.80	17.51	16.00
P	3.54	4.08	-
Q	2.54	3.42	-
All Dimensions in mm			

Package Outline Dimensions (continued)

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

ITO220AB (Type WX)



ITO220AB (Type WX)		
Dim	Min	Max
A	4.46	4.87
A1	2.48	2.80
A2	2.50	2.80
b	0.50	0.80
b1	1.15	1.17
b2	1.50	1.90
c	0.45	0.70
D	14.95	15.95
D1	8.50	8.80
E	10.00	10.40
e	2.40	2.70
L	13.00	13.70
L1	3.30	3.90
Q	2.76	3.36
P	3.00	3.30
All Dimensions in mm		

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