

Product Summary (Per Leg)

V_{RRM} (V)	I_o (A)	V_F Max (V) @ +25°C	I_R Max (μ A) @ +25°C
100	15	0.73	100

Description and Applications

The SDT30A100CT/SDT30A100CTFP 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:

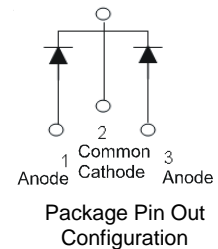
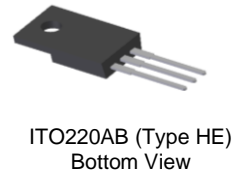
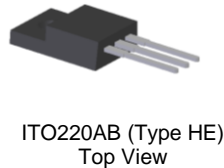
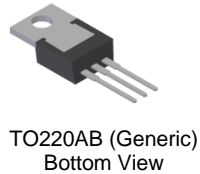
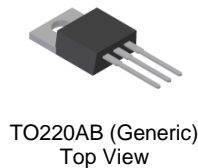
- DC-DC Converters
- AC-DC Adaptors

Features

- Low Forward Voltage Drop
- Low Power Loss
- 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: TO220AB (Generic), ITO220AB (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 Ⓔ3
- Weight: TO220AB (Generic) - 1.85 grams (Approximate)
ITO220AB (Type HE) – 1.69 grams (Approximate)



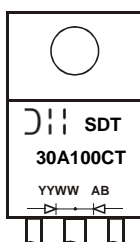
Ordering Information (Note 4)

Part Number	Case	Packaging
SDT30A100CT	TO220AB (Generic)	50 Pieces/Tube
SDT30A100CTFP	ITO220AB (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

TO220AB (Generic)



⏏ = Manufacturer's Marking
SDT30A100CT = 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)

ITO220AB (Type HE)



⏏ = Manufacturer's Marking
SDT30A100CTFP = 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)

Maximum Ratings (Per Leg) (@ $T_A = +25^\circ\text{C}$, 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	15 30	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	200	A

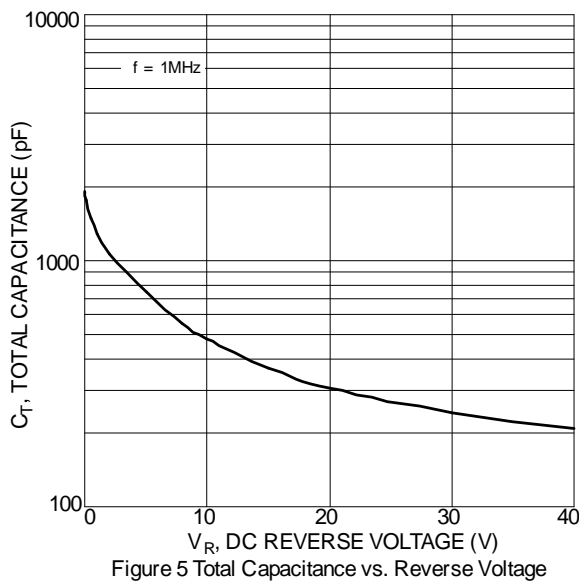
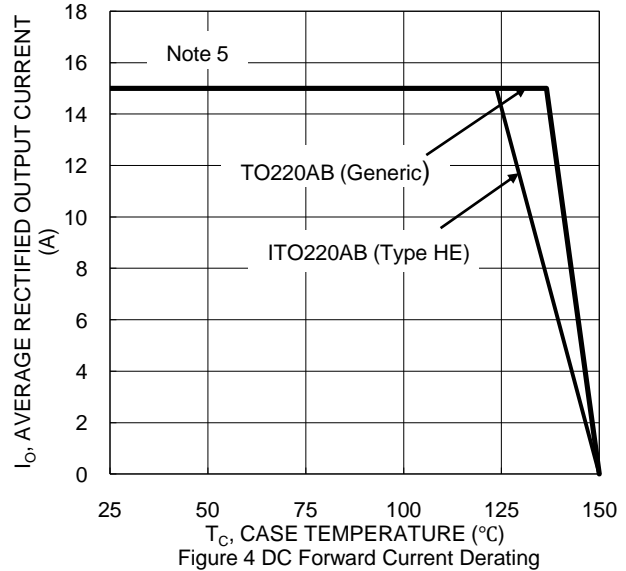
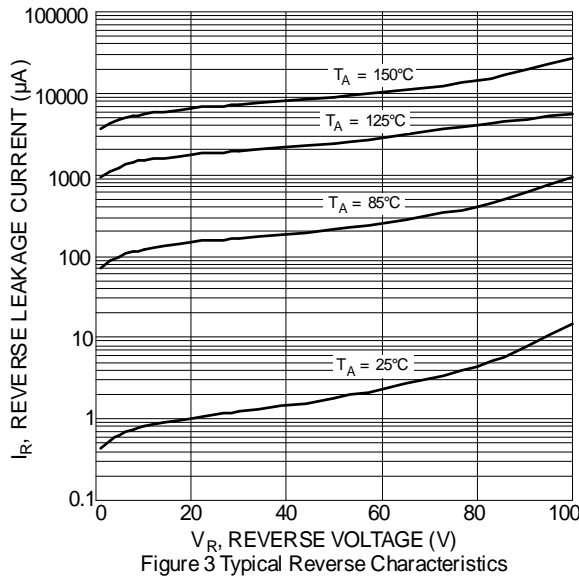
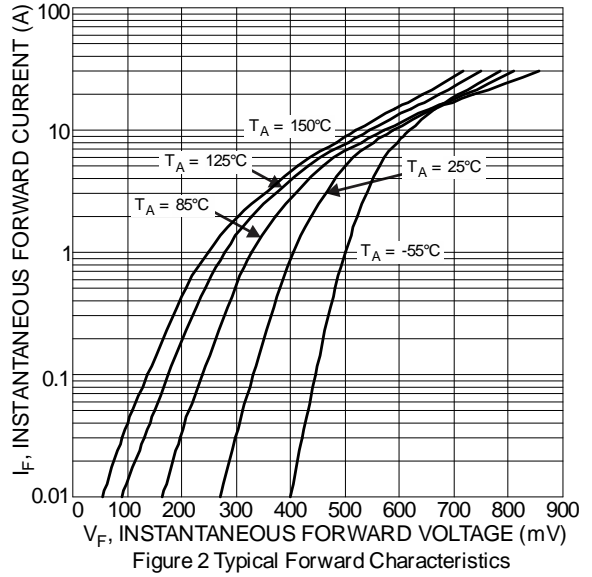
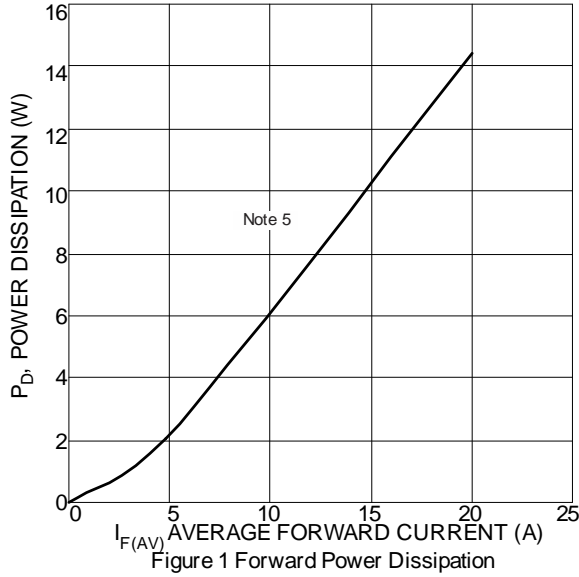
Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (Note 5) Package = TO220AB (Generic) Package = ITO220AB (Type HE)	$R_{\theta JC}$	2 4	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics (Per Leg) (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V_F	—	0.67	0.73	V	$I_F = 15\text{A}, T_J = +25^\circ\text{C}$
			0.62	0.68		$I_F = 15\text{A}, T_J = +125^\circ\text{C}$
Leakage Current (Note 6)	I_R	—	10	100	μA mA	$V_R = 100\text{V}, T_J = +25^\circ\text{C}$
			6	20		$V_R = 100\text{V}, T_J = +125^\circ\text{C}$

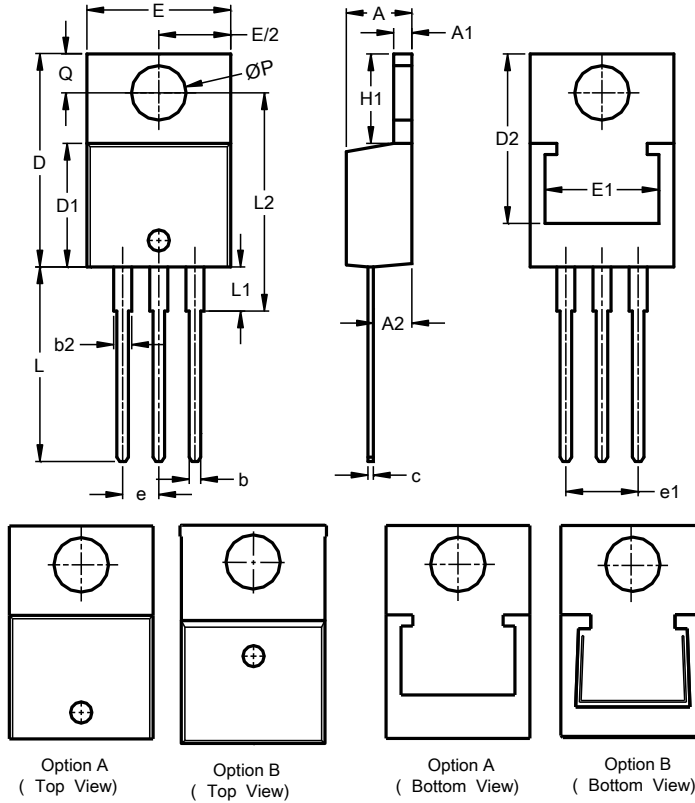
Notes: 5. With 50mm x 50mm x 23mm Al heatsink.
6. Short duration pulse test used to minimize self-heating effect.



Package Outline Dimensions

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

TO220AB (Generic)

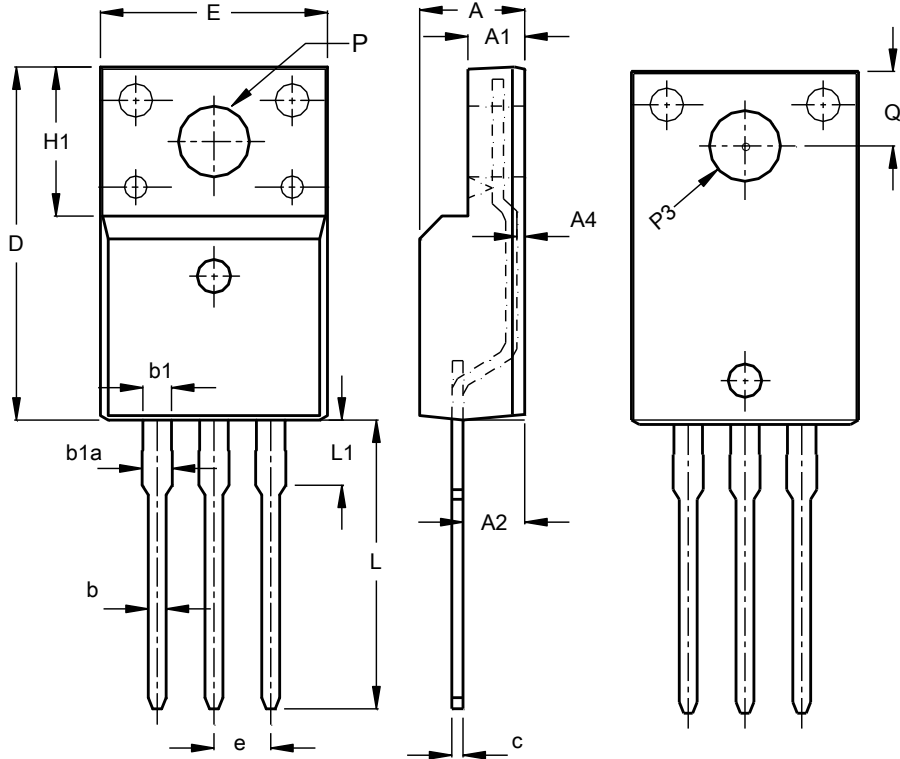


TO220AB (Generic)			
Dim	Min	Max	Typ
A	3.56	4.82	-
A1	0.51	1.39	-
A2	2.04	2.92	-
b	0.39	1.01	0.81
b2	1.15	1.77	1.24
c	0.356	0.61	-
D	14.22	16.51	-
D1	8.39	9.01	-
D2	11.45	12.87	-
e	-	-	2.54
e1	-	-	5.08
E	9.66	10.66	-
E1	6.86	8.89	-
H1	5.85	6.85	-
L	12.70	14.73	-
L1	-	4.42	-
L2	15.80	17.51	16.00
P	3.54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



ITO220AB (Type HE)			
Dim	Min	Max	Typ
A	4.50	4.90	4.70
A1	2.34	2.74	2.54
A2	2.56	2.96	2.76
A4	0.30	0.60	0.45
b	0.70	0.95	0.80
b1	1.18	1.43	1.28
b1a	1.25	1.55	1.35
c	0.45	0.60	0.50
D	15.57	16.17	15.87
e	2.54 BSC		
E	9.96	10.36	10.16
H1	6.70 REF		
L	12.68	13.28	12.98
L1	3.03	3.43	3.23
Q	3.15	3.45	3.30
ØP	3.03	3.38	3.18
ØP3	3.15	3.65	3.45
All Dimensions in mm			

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