



**THE DATASHEET OF
SBR30A120CTE**



Product Summary

V_{RRM} (V)	I_o (A)	V_F (MAX) (V) @ +25°C	I_R (MAX) (mA) @ +25°C
120	15 (Per Leg)	0.83	0.1

Description and Applications

The SBR30A120CTE has been designed to meet the general requirements of commercial applications. It is ideally suited for use as:

- Polarity Protection Diode
- Re-Circulating Diode
- Switching Diode

Features and Benefits

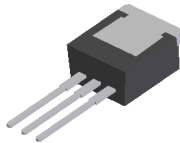
- Patented Super Barrier Rectifier SBR[®] Technology
- Guard Ring Die Construction for Transient Protection
- High Surge Current Capability
- High Surge Current Capability
- Low Forward Voltage Drop
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **Qualified to AEC-Q101 Standards for High Reliability**

Mechanical Data

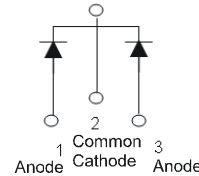
- Case: TO262
- Case Material: Molded Plastic, "Green" Molding compound
UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - Matte Tin Annealed over Copper Leadframe
Solderable per MIL-STD-202, Method 208 Ⓜ3
- Polarity: See Below
- Weight: 1.355 grams (Approximate)



Top View



Bottom View

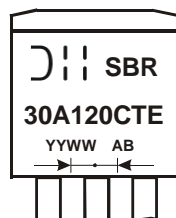


Ordering Information (Note 4)

Part Number	Case	Packaging
SBR30A120CTE	TO262	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 <http://www.diodes.com/products/packages.html>.

Marking Information



Ⓜ = Manufacturer's Marking
 SBR30A120CTE = Product Type Marking Code
 AB = Foundry and Assembly Code
 YYWW = Date Code Marking
 YY = Last Two Digits of Year (ex: 16 = 2016)
 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}	120	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _{RM}		
Average Rectified Output Current (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}	250	A

Thermal Characteristics (Per Leg)

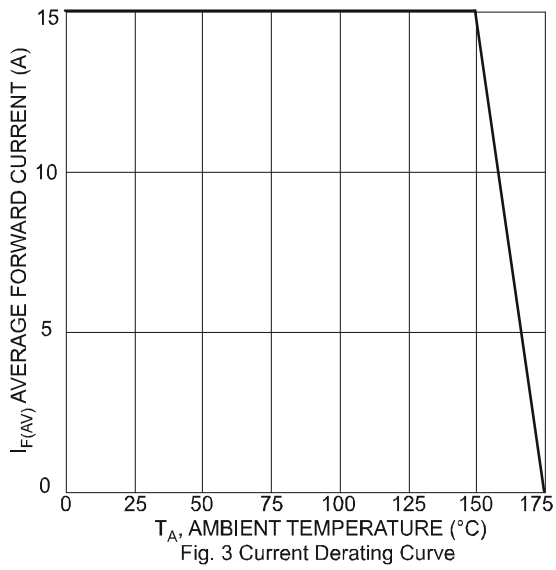
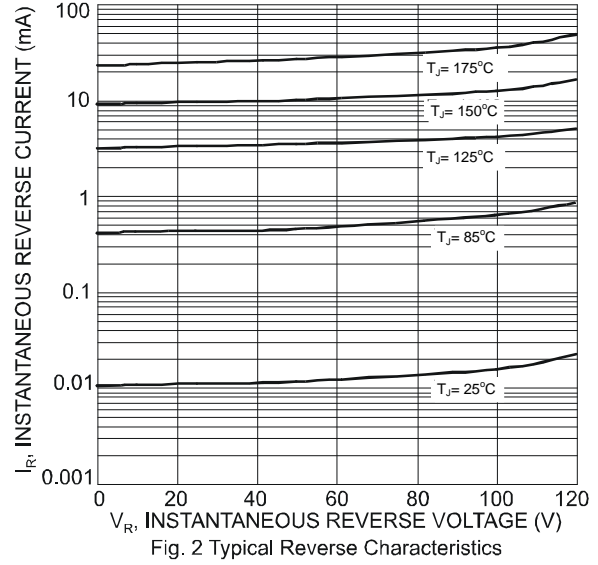
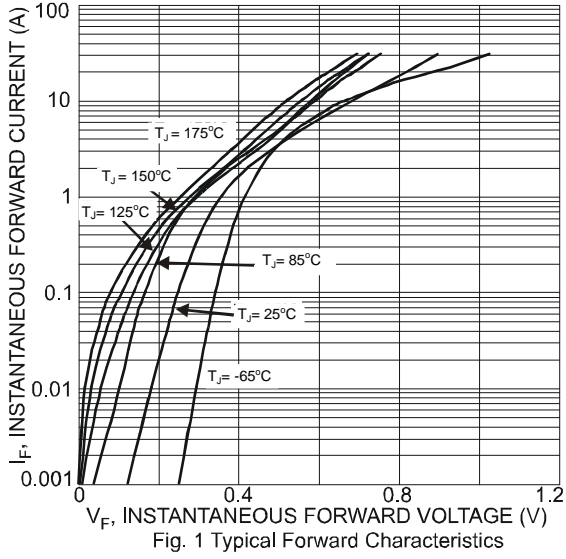
Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (Note 5)	R _{θJC}	3	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V _F	-	0.78	0.83	V	I _F = 15A, T _J = +25°C
			0.65	0.68		I _F = 15A, T _J = +125°C
			0.90	0.95		I _F = 30A, T _J = +25°C
Leakage Current (Note 6)	I _R	-	22	100	μA mA	V _R = 120V, T _J = +25°C
			5	20		V _R = 120V, T _J = +125°C

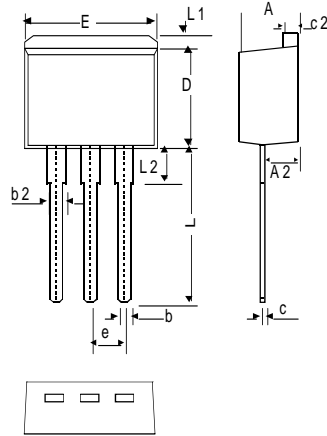
Note: 5. Test with Aluminum heatsink 50 x 50 x 23 mm.

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.



TO262			
Dim	Min	Max	Typ
A	4.06	4.83	4.57
A2	2.03	2.79	2.67
b	0.64	0.99	-
b2	1.14	1.40	1.24
c	0.356	0.74	-
c2	1.14	1.40	1.27
D	8.64	9.65	8.70
E	9.65	10.29	10.11
e	2.54 Typ		
L	12.70	14.73	13.60
L1	-	1.67	-
L2	-	4.00	-
All Dimensions in mm			

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