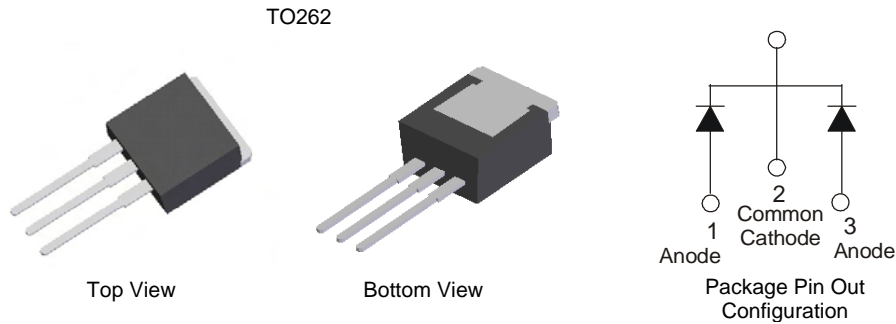


Features

- Low Forward Voltage Drop
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Also Available in Green Molding Compound**
 - **Halogen and Antimony Free. "Green" Device (Note 3)**

Mechanical Data

- Case: TO262
- 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: 1.355 grams (approximate)

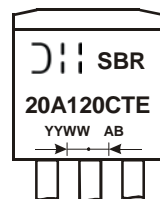


Ordering Information (Notes 4 & 5)

	Part Number	Case	Packaging
	SBR20A120CTE	TO262	50 pieces/tube
	SBR20A120CTE-G	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> 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 Green Molding Compound version part numbers, add "-G" suffix to part number above. Examples: SBR20A120CTE-G.
 5. For packaging details, go to our website at <http://www.diodes.com>.

Marking Information



SBR20A120CTE = Product Type Marking Code
 AB = Foundry and Assembly Code
 YYWW = Date Code Marking
 YY = Last two digits of year (ex: 11 = 2011)
 WW = Week (01 - 53)

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

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitance 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 Device	I _O	10	A
(Per Leg) (Total)		20	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	180	A

Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance, Junction to Case	R _{θJC}	2	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 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	-	0.75	0.79	V	I _F = 10A, T _J = +25°C
		-	0.62	0.65		I _F = 10A, T _J = +125°C
Leakage Current (Note 6)	I _R	-	-	0.1	mA	V _R = 120V, T _J = +25°C
		-	-	20		V _R = 120V, T _J = +125°C

Notes: 6. Short duration pulse test used to minimize self-heating effect.

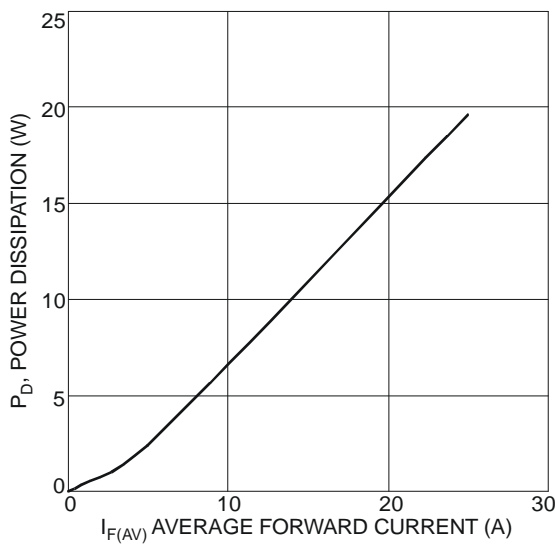


Fig. 1 Forward Power Dissipation

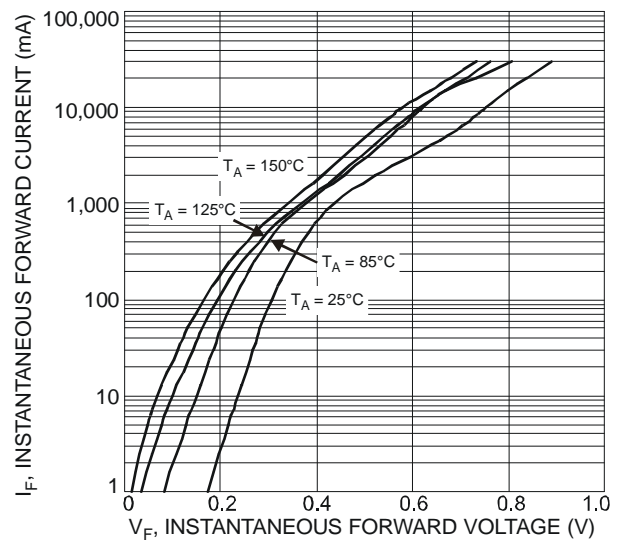


Fig. 2 Typical Forward Characteristics

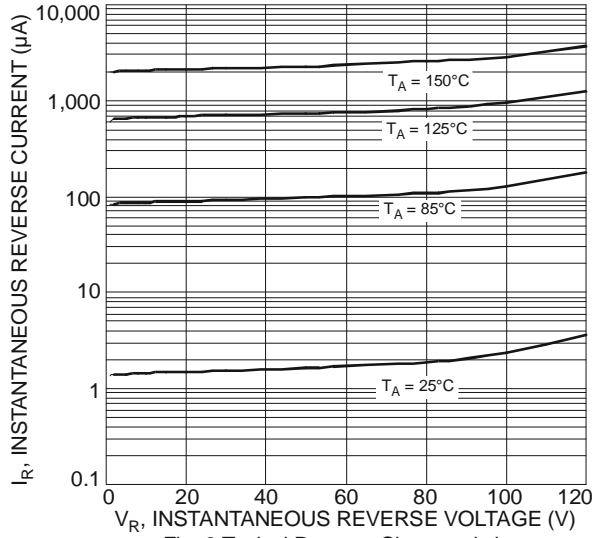


Fig. 3 Typical Reverse Characteristics

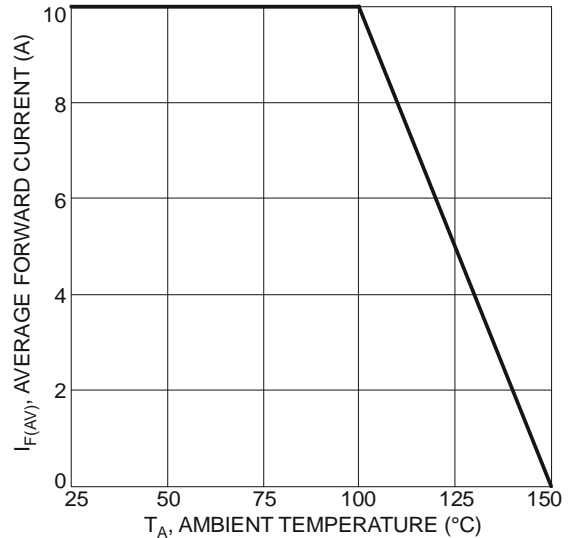


Fig. 4 Forward Current Derating Curve

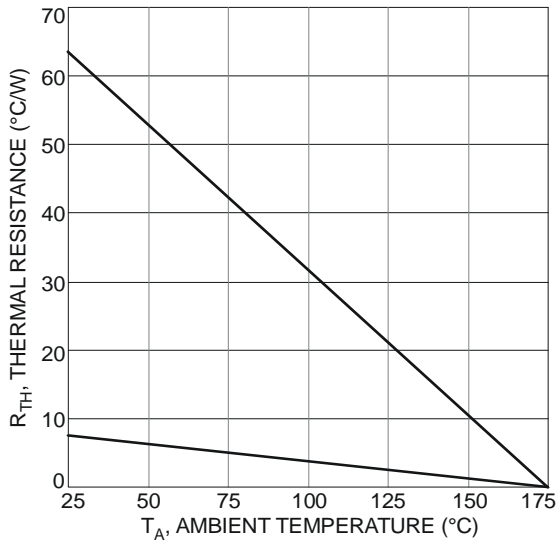
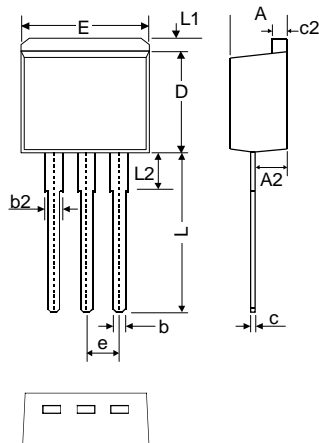


Fig. 5 Thermal Resistance vs. Ambient Temperature

Package Outline Dimensions

Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for 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	0.35	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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