

NOT RECOMMENDED FOR NEW DESIGN -**CONTACT US**



SBRT20V60CTB

20A TrenchSBR TRENCH SUPER BARRIER RECTIFIER

Product Summary (Per Leg)

V _{RRM} (V)	I _O (A)	V _{F (MAX)} (V) @ +25°C	I _{R (MAX)} (mA) @ +25°C
60	10	0.55	0.3

Description and Applications

Packaged in the robust industry-standard TO263 (D2PAK) package, the SBRT20V60CTB provides very low V_F and 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 and Benefits

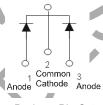
- Reduced Ultra-Low Forward Voltage Drop (V_F). Better Efficiency and Cooler Operation
- Reduced High Temperature Reverse Leakage. Increased Reliability Against Thermal Runaway Failure in High Temperature Operation.
- Lead-Free Finish; RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free, "Green" Device (Note 3)

Mechanical Data

- Case: TO263 (D²PAK)
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish. Solderable per MIL-STD-202, Method 208 @3
- Polarity: See Below
- Weight: TO263 (D²PAK) 1.6 grams (Approximate)



Top View



Package Pin-Out Configuration

Ordering Information (Note 4)

Part Number	Case	Packaging
SBRT20V60CTB-13	TO263	800/Tape & Reel

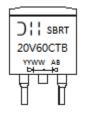
Notes:

- 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"
- Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

 For packaging details, go to our website at http"//www.diodes.com/products/packages.html.

Marking Information

TO263



SBRT20V60CTB = Product Type Marking Code AB = Foundry and Assembly Code YYWW = Date Code Marking YY = Last Two Digits of Year (ex: 14 = 2014) WW = Week (01 - 53)



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

Single phase, half wave, 60Hz, resistive or inductive load. For capacitance load, derate current by 20%.

Characteristic			Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V _{RRM} V _{RWM} V _{RM}	60	V
Average Rectified Output Current	(Per Leg) (Total)	Io	10 20	Α
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	(Per Leg)	I _{FSM}	190	Α

Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Case (Note 5)	$R_{\theta JC}$	4	°C/W
Operating and Storage Temperature Range	T _{J,} T _{STG}	-55 to +150	°C

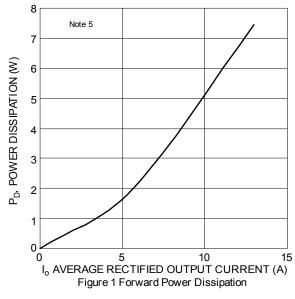
Electrical Characteristics (Per Leg) (@TA = +25°C, unless otherwise specified.)

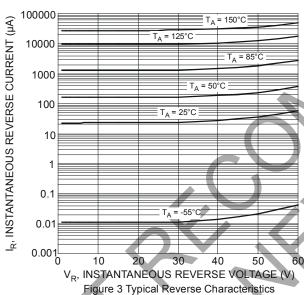
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
			0.48	0.55		I _F = 10A, T _J = +25°C
Forward Voltage Drop (Note 6)	V _F			0.53 0.69		$I_F = 10A$, $T_J = +125^{\circ}C$
			2.40			I _F = 20A, T _J = +25°C
_eakage Current (Note 6)	. IR	_	0.10	0.30	mA	$V_R = 60V, T_J = +25^{\circ}C$
_eakage Current (Note 6)	l _R		4.10	50	mA	$V_R = 60V, T_J$

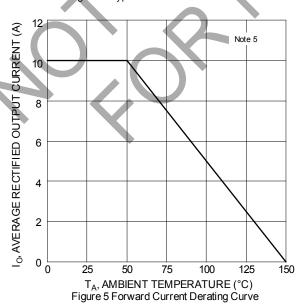
Notes:

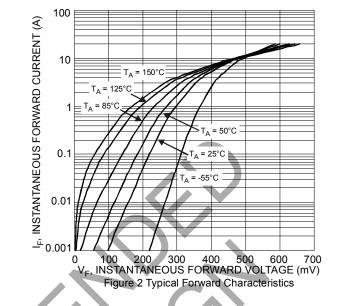
- 5. Mounted on Aluminum substrate board (50mm x 50mm).
- 6. Short duration pulse test used to minimize self-heating effect.

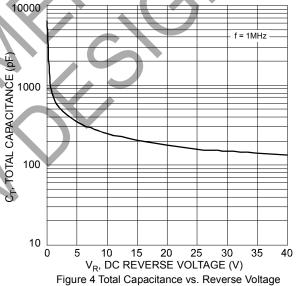










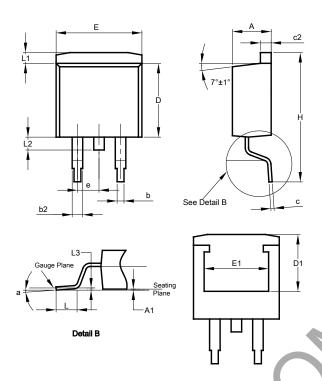


SBR is a registered trademark of Diodes Incorporated.



Package Outline Dimensions

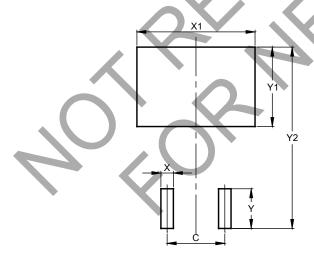
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for the latest version.



TO263AB (D2PAK)				
Dim	Min	Max	Тур	
Α	4.07	4.82		
A1	0.00	0.25	-	
b	0.51	0.99	-	
b2	1.15	1.77	-	
С	0.356	0.73	-	
c2	1.143	1.65	-	
D	8.39	9.65	-	
D1	6.55	6.95	-	
е		2.54 T\	/P	
E	9.66	10.66		
E1	6.23	8.23	-	
н	14.61	15.87	_	
L	1.78	2.79	ĺ	
L1		1.67	·	
L2	-	1.77	-	
L3)		0.254	
а	0°	8°	-	
All Dimensions in mm				

Suggested Pad Layout

Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.



Dimensions	Value (in mm)		
С	5.08		
Х	1.10		
X1	10.41		
Υ	3.50		
Y1	7.01		
Y2	15.99		



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