

## SDURB8100CT ULTRAFAST PLASTIC RECTIFIER

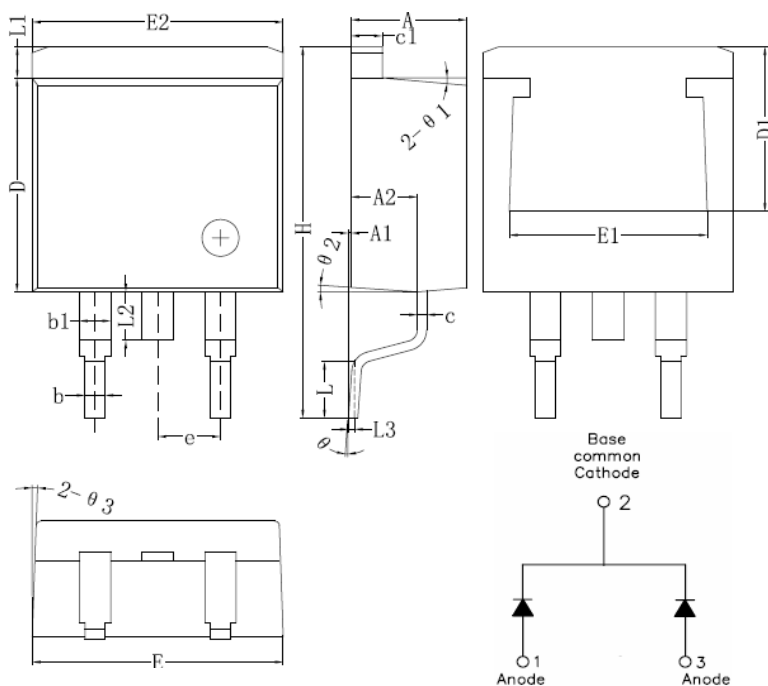
### Applications:

- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners and welders

### Features:

- Ultra-Fast Switching
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Mechanical Dimensions: In mm



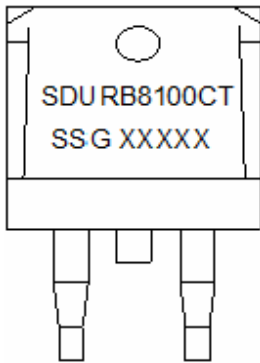
Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	4.55	4.70	4.85
A1	0	0.10	0.25
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1		1.27	
c	0.36	0.38	0.61
c1	1.17	1.27	1.37
D	8.55	8.70	8.85
D1	6.40		
E	10.01	10.16	10.31
E1	7.6		
E2	9.98	10.08	10.18
e		2.54	
H	14.6	15.1	15.6
L	2.00	2.30	2.70
L1	1.17	1.27	1.40
L2			2.20
L3		0.25BSC	
e	0	-	8°
e1		5°	
e2		4°	
e3		4°	

**D<sup>2</sup>PAK**

Technical Data  
Data Sheet N1248, Rev. -

*Green Products*

**Marking Diagram:**



Where XXXXX is YYWWL

- SDUR = Device Type
- B = Package type
- 8 = Forward Current (8A)
- 100 = Reverse Voltage (1000V)
- CT = Configuration
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

**Ordering Information:**

Device	Package	Shipping
SDURB8100CT	D <sup>2</sup> PAK (Pb-Free)	800pcs/ reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	1000	V
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @Tc=100°C, rectangular wave form	8	A
Max. Peak One Cycle Non-Repetitive Surge Current (Per leg)	$I_{FSM}$	8.3ms, Half Sine pulse	80	A



**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop(Per leg)*	$V_{F1}$	@ 4A, Pulse, $T_J = 25^{\circ}\text{C}$	2.5	V
	$V_{F2}$	@ 4A, Pulse, $T_J = 150^{\circ}\text{C}$	1.9	V
Max. Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25^{\circ}\text{C}$	50	$\mu\text{A}$
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 125^{\circ}\text{C}$	1.3	mA
Max. Reverse Recovery Time	$t_{rr}$	$I_F=500\text{mA}$ , $I_R=1\text{A}$ , and $I_{rm}=250\text{mA}$	75	ns

\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	$T_J$	-	-55 to +150	$^{\circ}\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-55 to +150	$^{\circ}\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	5.0	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	1.85	g
Case Style	D <sup>2</sup> PAK			

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