



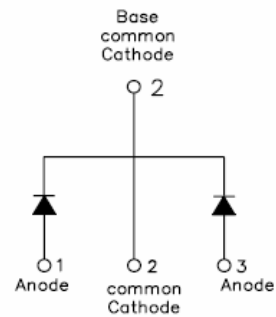
## SDUR2020CTA ULTRAFAST PLASTIC RECTIFIER

### Applications:

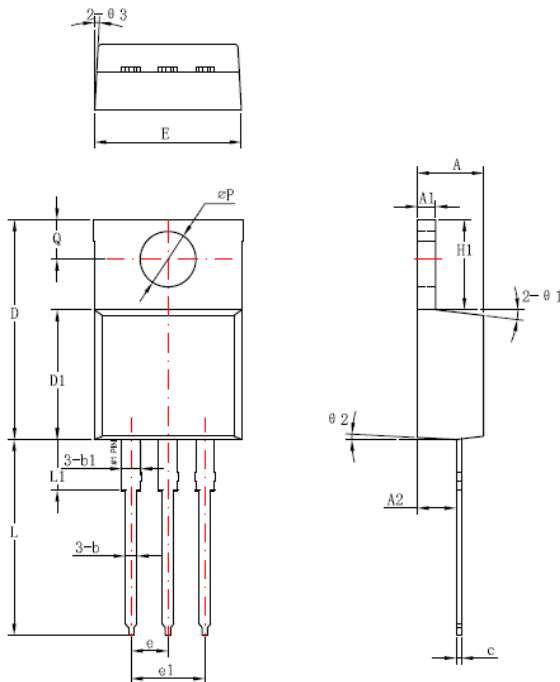
- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners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

### Features:

- Ultra-Fast Switching
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-0
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request



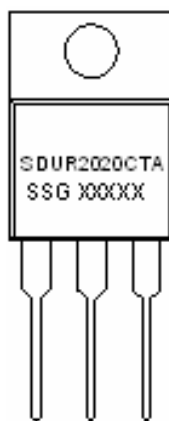
### Mechanical Dimensions: In mm



Symbol	Dimensions in millimeters		
	Min	Typical	Max
A	4.42	4.57	4.72
A1	1.17	1.27	1.37
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1		1.27	
c	0.36	0.38	0.61
D	14.94	15.24	15.54
D1	8.85	9.00	9.15
E	10.01	10.16	10.31
e		2.54	
e1		5.06	
H1	6.04	6.24	6.44
L	12.7	13.56	13.78
L1		3.5	
ΦP	3.74	3.84	4.04
Q	2.54	2.74	2.94
θ1		7°	
θ2		3°	
θ3		4°	

### TO-220AB

**Marking Diagram:**



Where XXXXX is YYWWL

SDUR = Device Type  
 20 = Forward Current (20A)  
 20 = Reverse Voltage (200V)  
 CTA = Configuration  
 SSG = SSG  
 YY = Year  
 WW = Week  
 L = Lot Number

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

**Ordering Information:**

Device	Package	Shipping
SDUR2020CTA	TO-220AB (Pb-Free)	50pcs / tube

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	$V_{RWM}$	-	200	V
Average Rectified Forward Current (total device)	$I_{F(AV)}$	Rated Vr ,@Tc=105°C	20	A
Max. Peak One Cycle Non-Repetitive Surge Current (Per leg)	$I_{FSM}$	8.3ms, Half Sine pulse	96	A



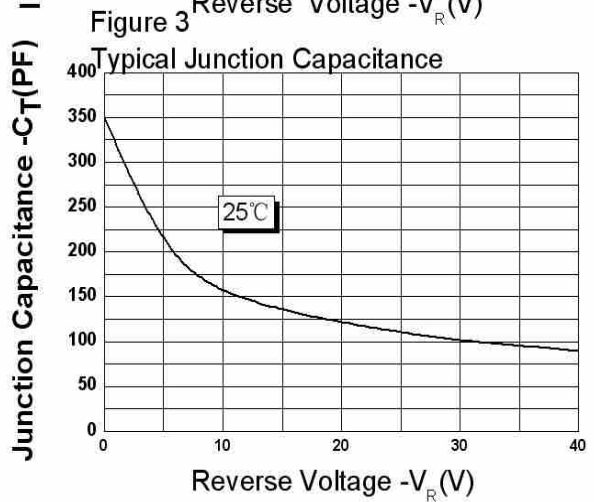
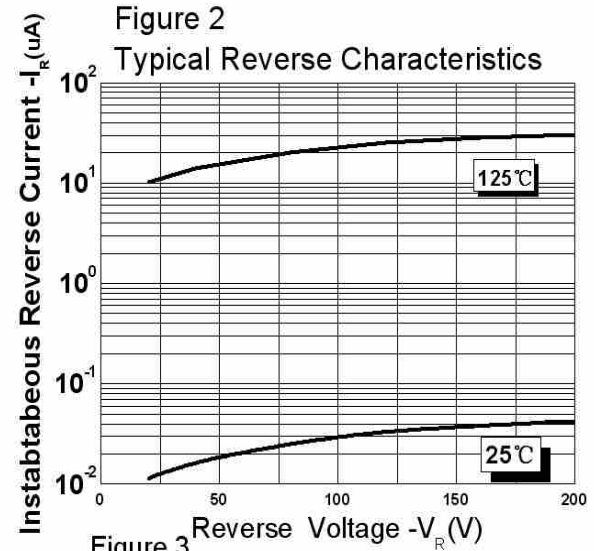
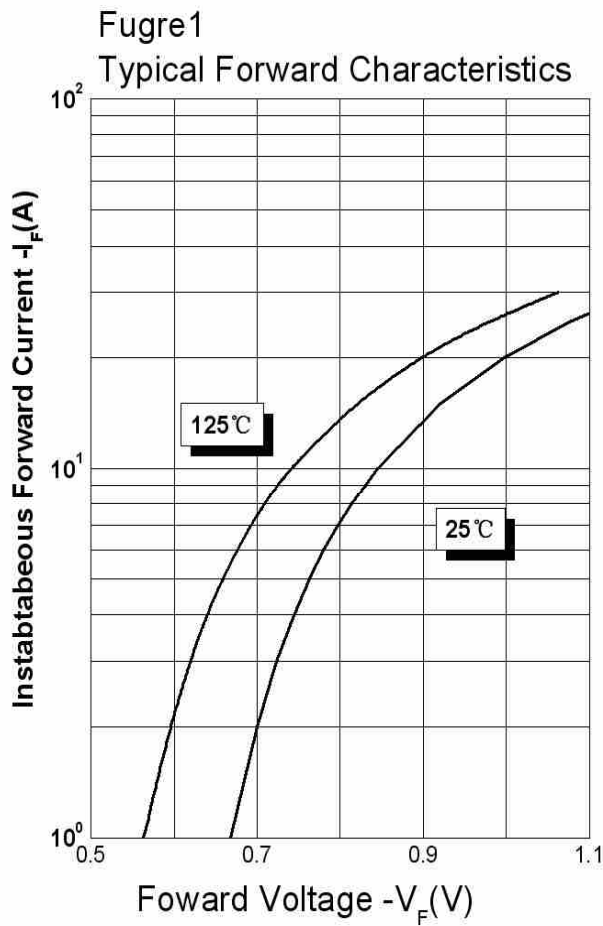
**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop(Per leg)*	$V_{F1}$	@ 10A, Pulse, $T_J = 25^{\circ}\text{C}$	1.05	V
	$V_{F2}$	@ 10A, Pulse, $T_J = 125^{\circ}\text{C}$	0.85	V
Max. Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25^{\circ}\text{C}$	10	$\mu\text{A}$
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 150^{\circ}\text{C}$	500	$\mu\text{A}$
Max. Reverse Recovery Time	$t_{rr}$	$I_F=500\text{mA}$ , $I_R=1\text{A}$ ,and $I_{rm}=250\text{mA}$	35	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	1.6	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	2	g
Case Style	TO-220AB			





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