

SDURB2020CT ULTRAFAST PLASTIC RECTIFIER

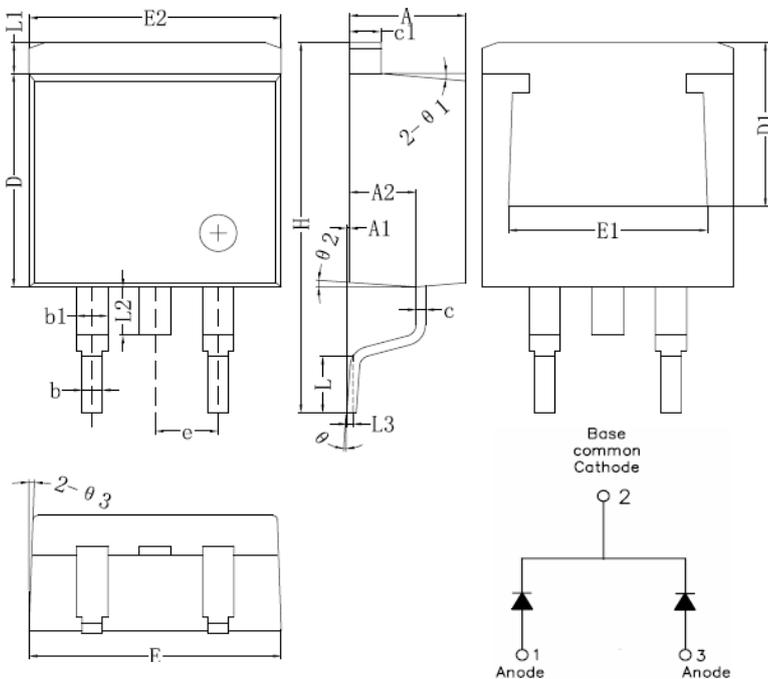
Applications:

- 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



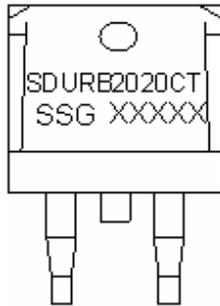
Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	4.55	4.70	4.85
A1	0	0.10	0.25
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1		1.27	
c	0.36	0.38	0.61
c1	1.17	1.27	1.37
D	8.55	8.70	8.85
D1	6.40		
E	10.01	10.16	10.31
E1	7.6		
E2	9.98	10.08	10.18
e		2.54	
H	14.6	15.1	15.6
L	2.00	2.30	2.70
L1	1.17	1.27	1.40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

D²PAK

Technical Data
Data Sheet N0168, Rev. -

Green Products

Marking Diagram:



Where XXXXX is YYWWL

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

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

Ordering Information:

Device	Package	Shipping
SDURB2020CT	D ² 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}	-	200	V
Average rectified forward current	$I_{F(AV)}$	50% duty cycle @Tc=105°C, rectangular wave form	20	A
Peak One Cycle Non-Repetitive Surge Current (Per leg)	I_{FSM}	8.3ms, Half Sine pulse	125	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop (Per leg)	V_F	@ $I_F=10A$, Pulse, $T_J=25^\circ C$	1.15	V
Reverse Current	I_R	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ C$	15	μA
	I_R	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ C$	250	μA
Junction Capacitance	C_T	BAIS=5V, 10KHZ	60	PF
Reverse Recovery Time	t_{rr1}	$I_F=500mA$, $I_R=1A$, and $I_{rm}=250mA$	35	ns

* Pulse width < 300 μs , duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	$^\circ C$
Storage Temperature	T_{stg}	-	-55 to +150	$^\circ C$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	3.5	$^\circ C / W$
Maximum Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation	50	$^\circ C / W$
Approximate Weight	wt	-	1.41	g
Case Style	D2PAK			

Figure 1
Typical Forward Characteristics

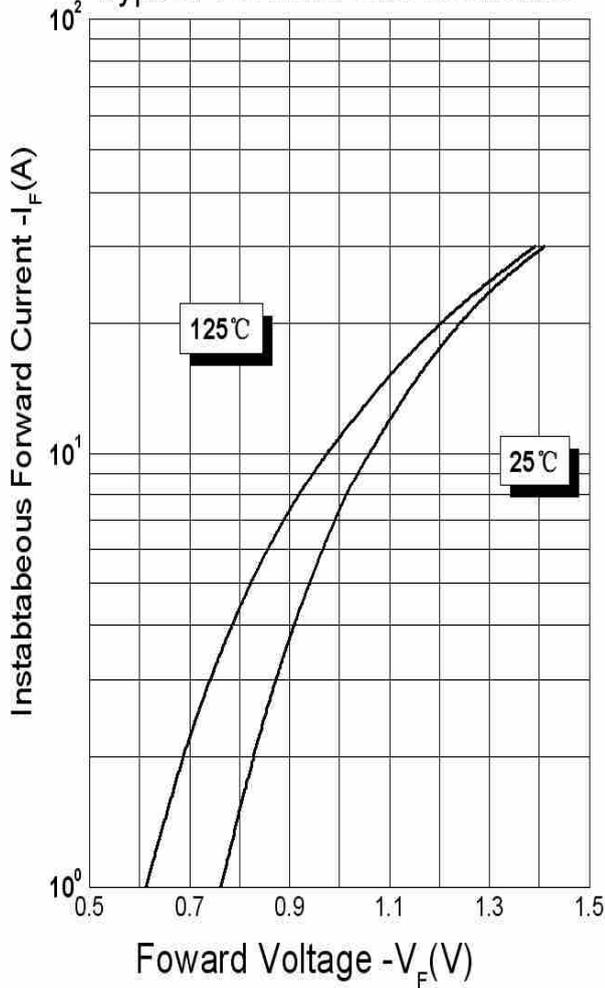


Figure 2
Typical Reverse Characteristics

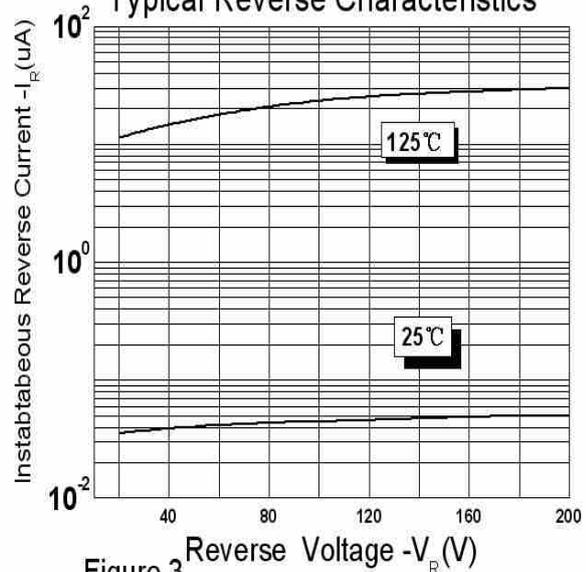
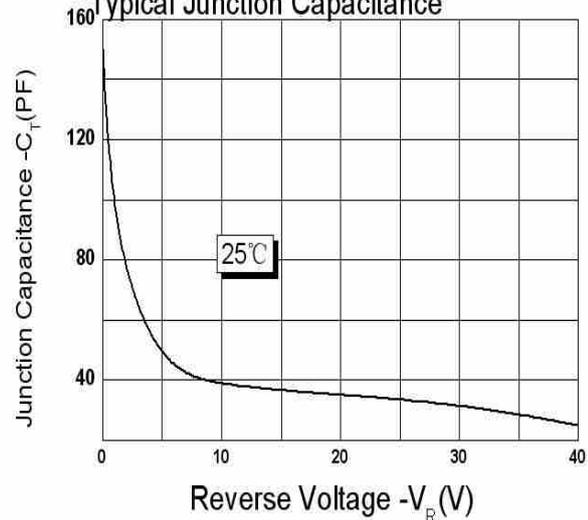


Figure 3
Typical Junction Capacitance



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