

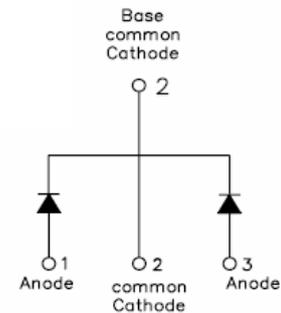
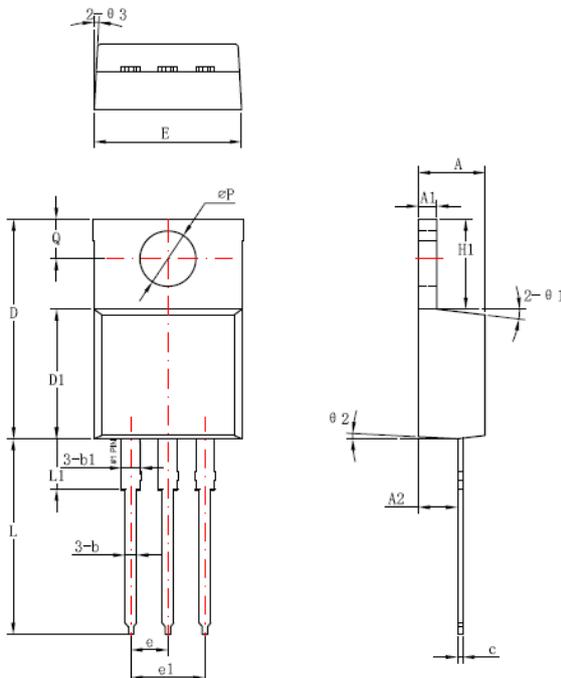
SDUR3020CT ULTRAFAST PLASTIC RECTIFIER

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:

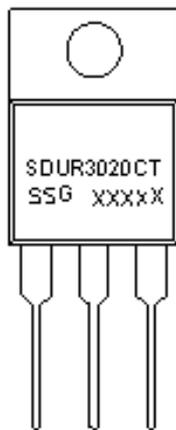
- Ultra-Fast Switching
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-0
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request


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
$\theta 1$		7°	
$\theta 2$		3°	
$\theta 3$		4°	

TO-220AB

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

Technical Data
Data Sheet N0382, Rev. A
Marking Diagram:


Where XXXXX is YYWWL

SDUR	= Device Type
30	= Forward Current (30A)
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
SDUR3020CT	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 Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	200	V
Average Rectified Forward Current	$I_F (AV)$	Rated V_r , @ $T_c=105^\circ C$	30	A
Peak One Cycle Non-Repetitive Surge Current(Per device)	I_{FSM}	8.3ms, Half Sine pulse	200	A

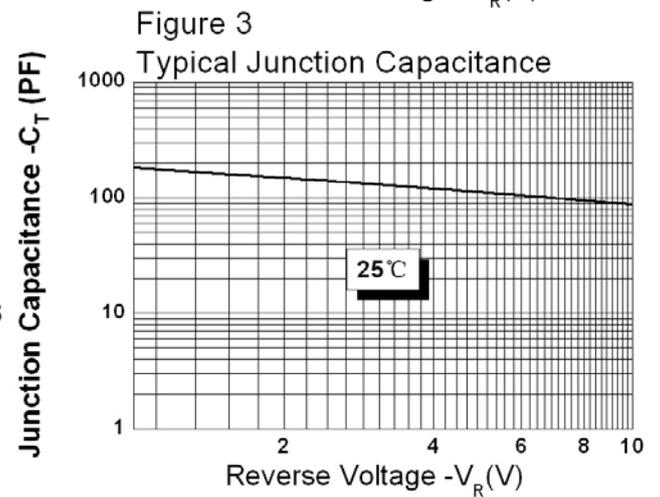
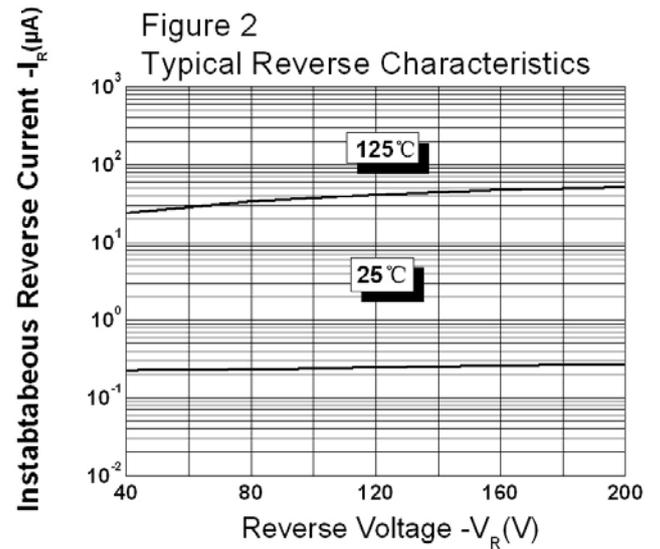
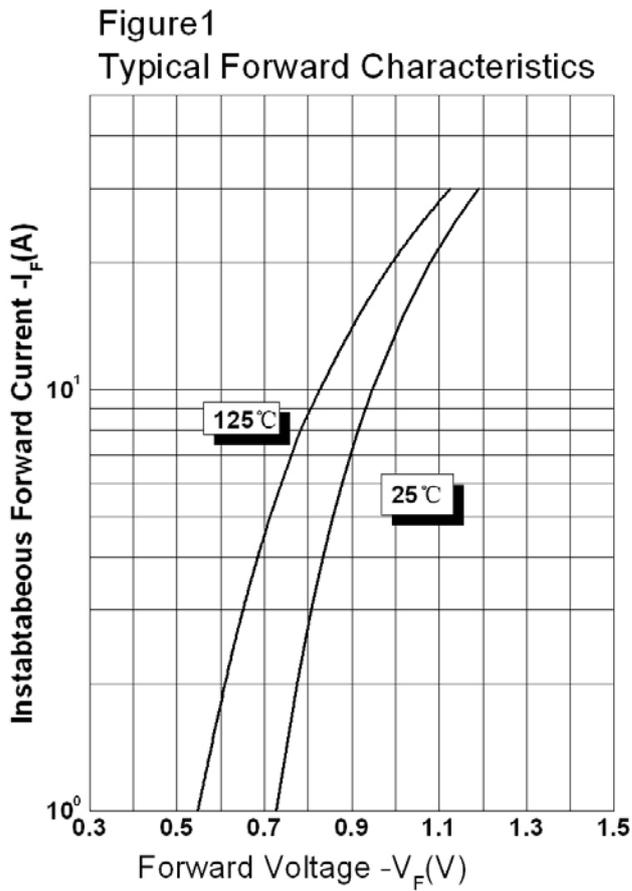
Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (Per leg)*	V_{F1}	@ 15A, Pulse, $T_J = 25^\circ\text{C}$	1.01	1.05	V
		@ 30A, Pulse, $T_J = 25^\circ\text{C}$	1.19	-	
	V_{F2}	@ 15A, Pulse, $T_J = 125^\circ\text{C}$	0.91	0.95	V
		@ 30A, Pulse, $T_J = 125^\circ\text{C}$	1.13	-	
Reverse Current(Per leg)*	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	0.3	10	μA
		@ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$	51	500	μA
Reverse Recovery Time	t_{rr}	$I_F=500\text{mA}$, $I_R=1\text{A}$, and $I_{rm}=250\text{mA}$	25	35	ns
Reverse Recovery Time	t_{rr}	$I_F=1\text{A}$, $V_R=30\text{V}$, $-diF/dt=200\text{A/us}$	31	-	ns

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

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	$^\circ\text{C}$
Storage Temperature	T_{stg}	-	-55 to +175	$^\circ\text{C}$
Typical 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			





SDUR3020CT

Green Products

Technical Data
Data Sheet N0382, Rev. A

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