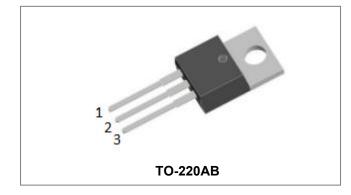


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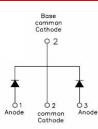
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SDUR3020CT ULTRAFAST RECTIFIER



Circuit Diagram



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

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	lf (AV)	50% duty cycle @Tc=105°C, rectangular wave form	15(Per Leg) 30(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I _{FSM}	8.3ms, Half Sine pulse	200	А

Electrical Characteristics:

Characteristics	Symbol	Condition	Тур.	Max.	Units
Forward Voltage Drop(Per Leg)*	V _{F1}	@ 15A, Pulse, T」= 25°C @ 30A, Pulse, T」= 25°C	1.01 1.19	1.05 -	V
	V _{F2}	@ 15A, Pulse, T」= 125°C @ 30A, Pulse, T」= 125°C	0.91 1.13	0.95 -	V
Reverse Current(Per Leg)*	I _{R1}	$@V_R = rated V_{R, T_J} = 25^{\circ}C$	0.3	10	μA
	I _{R2}	$@V_R = rated V_{R, T_J} = 125^{\circ}C$	51	500	uA
Reverse Recovery Time(Per Leg)	trr1	I_F =500mA, I_R =1A,and I_m =250mA	25	35	ns
Reverse Recovery Time(Per Leg)	t _{rr2}	IF=1A, VR=30V, -diF/dt=200A/us	31	-	ns

* Pulse width < 300 μ s, duty cycle < 2%

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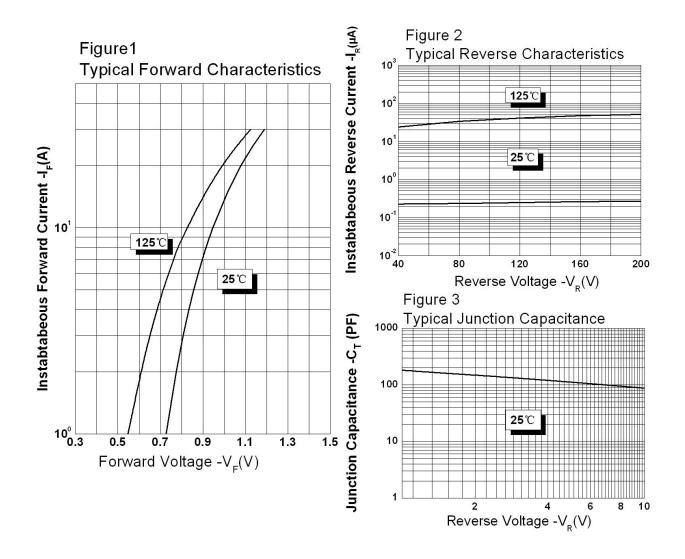
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RoHS 🧭

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	TJ	-	-55 to +175	°C
Storage Temperature	T _{stg}	-	-55 to +175	°C
Typical Thermal Resistance Junction to Case	$R_{ ext{ heta}JC}$	DC operation	1.6	°C/W
Approximate Weight	wt	-	2	g
Case Style	TO-220AB			

Ratings and Characteristics Curves



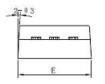


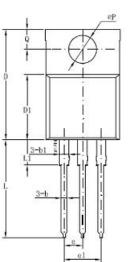
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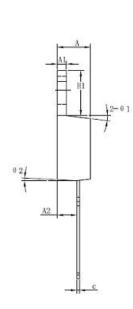
RoHS 🗭

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Mechanical Dimensions TO-220AB

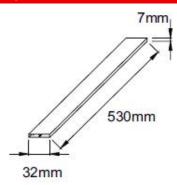




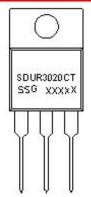


Symbol	Dimensions in millimeters			
	Min	Typical	Max	
Α	4.42	4.57	4.72	
A1	1.17	1.27	1.37	
A2	2.52	2.69	2.89	
b	0.71	0.81	0.96	
b1	1.17	1.27	1.37	
С	0.31	0.38	0.61	
D	14.94	15.24	15.54	
D1	8.85	9.00	9.15	
Е	10.01	10.16	10.31	
е		2.54		
e1	4.98	5.06	5.18	
H1	6.04	6.24	6.44	
L	12.7	13.56	13.80	
L1	3.56	3.5	3.96	
ΦΡ	3.74	3.84	4.04	
Q	2.54	2.74	2.94	
Θ1		7 °		
Θ2		3°		
Θ3		4 °		

Tube Specification



Marking Diagram



Where XXXXX is YYWWL

SDUR = Device Type 30 = Forward Curr

- = Forward Current (30A) = Reverse Voltage(200V)
- = Reverse Voltage
- = SSG

20

СТ

YY

L

WW

SSG

= Year

= Week = Lot Number

= Lot Number

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

Ordering Information

Device	Package	Shipping	
SDUR3020CT	TO-220AB (Pb-Free)	50 pcs/ tube	

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

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