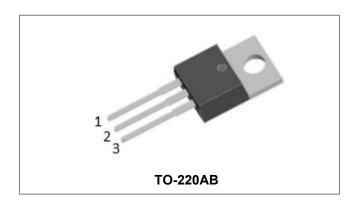






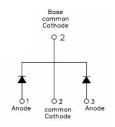
SDUR3020CT ULTRAFAST RECTIFIER



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

Circuit Diagram



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	V _{RRM} V _{RWM}	-	200	٧
DC Blocking Voltage Average Rectified Forward Current	V _R	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 _J = 25°C	1.01	1.05	V
	V F1	@ 30A, Pulse, T _J = 25°C	1.19	-	V
	V_{F2}	@ 15A, Pulse, T _J = 125°C	0.91	0.95	V
	VF2	@ 30A, Pulse, T _J = 125°C	1.13	-	V
Reverse Current(Per Leg)*	I _{R1}	$@V_R = \text{rated } V_{R_1} T_J = 25^{\circ}\text{C}$	0.3	10	μA
	I _{R2}	$@V_R = \text{rated } V_{R_1} T_J = 125^{\circ} C$	51	500	uA
Reverse Recovery Time(Per Leg)	t _{rr1}	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	ı	ns

^{*} Pulse width < 300 μs, duty cycle < 2%

- China Germany Korea Singapore United States
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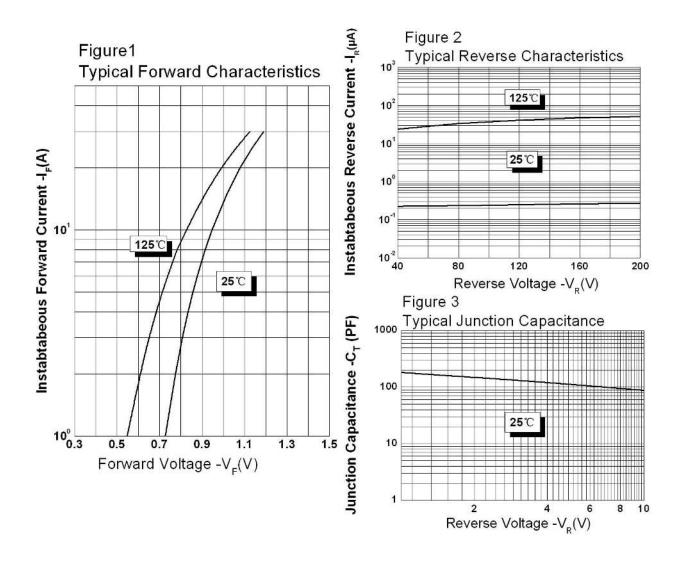




Thermal-Mechanical Specifications:

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 ₀ JC	DC operation	1.6	°C/W
Approximate Weight	wt	-	2	g
Case Style	TO-220AB			

Ratings and Characteristics Curves



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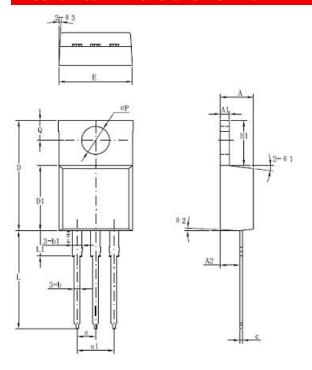
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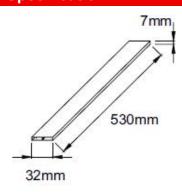


Mechanical Dimensions TO-220AB

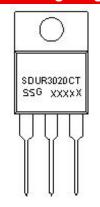


Symbol	Dimensions in millimeters		
Cymbol	Min	Typical	Max
Α	4.42	4.57	4.72
A1	1.17	1.27	1.37
A2	2.52	2.69	2.89
b	0.71	0.81	0.96
b1	1.17	1.27	1.37
С	0.31	0.38	0.61
D	14.94	15.24	15.54
D1	8.85	9.00	9.15
E	10.01	10.16	10.31
е		2.54	
e1	4.98	5.06	5.18
H1	6.04	6.24	6.44
L	12.7	13.56	13.80
L1	3.56	3.5	3.96
ФР	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 = Forward Current (30A) 30 20 = Reverse Voltage(200V)

CT = Configuration SSG = SSG = Year WW = Week = 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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