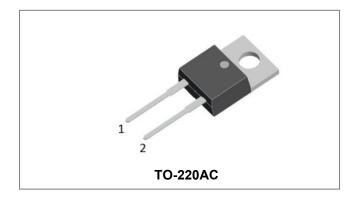






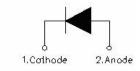
SDUR840 ULTRAFAST RECTIFIER



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 DC Blocking Voltage	V _{RRM} V _{RWM} V _R	-	400	V
Average Rectified Forward Current	I _{F (AV)}	50% duty cycle @Tc=55°C, rectangular wave form	8	Α
Peak One Cycle Non-Repetitive Surge Current	I _{FSM}	8.3ms, Half Sine pulse	80	Α

Electrical Characteristics:

Characteristics	Symbol	Condition	Тур.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 8A, Pulse, T _J = 25°C	1.00	1.3	V
	V _{F2}	@ 8A, Pulse, T _J = 125°C	0.91	1.2	V
Reverse Current*	I _{R1}	$@V_R = \text{rated } V_R$ $T_J = 25^{\circ}C$	0.06	10	μΑ
	I _{R2}	$@V_R = \text{rated } V_R$ $T_J = 125^{\circ}C$	6	500	μΑ
Reverse Recovery Time	t _{rr}	I _F =500mA, I _R =1A,and I _m =250mA	41	45	ns

Pulse width < 300 µs, duty cycle < 2%

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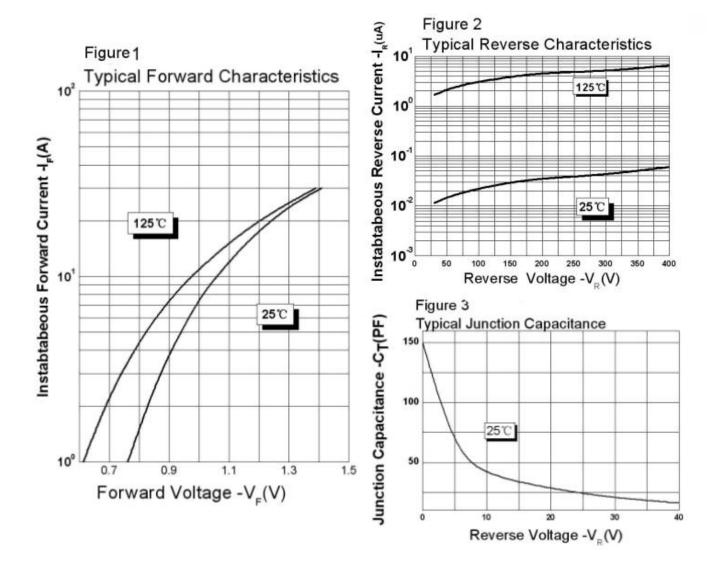




Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	TJ	-	-55 to +150	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case	$R_{ heta JC}$	DC operation	5	°C/W
Approximate Weight	wt	-	1.6	g
Case Style	TO-220AC			

Ratings and Characteristics Curves



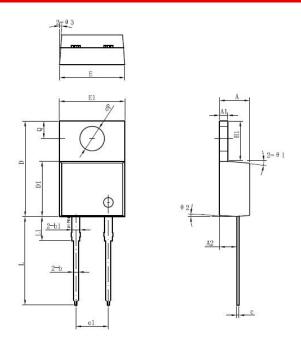
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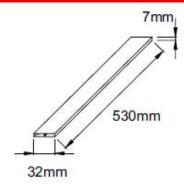


Mechanical Dimensions TO-220AC

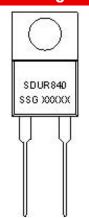


Symbol	Dimensions in millimeters			
	Min.	Typical	Max.	
Α	4.47	4.70	4.85	
A1	1.17	1.27	1.37	
A2	2.52	2.69	2.89	
b	0.71	0.81	0.96	
b1	1.17	1.27	1.37	
С	0.31	0.38	0.61	
D	14.64	14.94	15.24	
D1	8.50	8.07	8.90	
E	10.01	10.16	10.31	
E1	9.98	10.18	10.38	
e1	4.98	5.08	5.18	
H1	6.04	6.24	6.44	
L	13.00	13.86	14.08	
L1	3.56	3.80	3.96	
ФР	3.74	3.84	4.04	
Q	2.54	2.74	2.94	
Θ1		5°		
Θ2		4°		
Θ3		4°		

Tube Specification



Marking Diagram



Where XXXXX is YYWWL

 SDUR
 = Device Type

 8
 = Forward Current (8A)

 40
 = Reverse Voltage(400V)

 SSG
 = SSG

 SSG
 = SSG

 YY
 = Year

 WW
 = Week

 L
 = Lot Number

Cautions: Molding resin

Epoxy resin UL:94V-0

Ordering Information

Device	Package	Shipping	
SDUR840	TO-220AC (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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