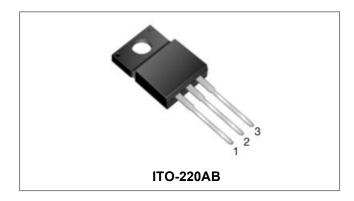


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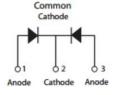
# SDURF1520CT/CTR ULTRAFAST RECTIFIER

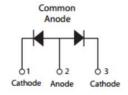


### **Applications**

- 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**





SDURF1520CT

SDURF1520CTR

### **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	$egin{array}{c} V_{RRM} \ V_{RWM} \ \end{array}$	-	200	V
Average Rectified Forward Current	I <sub>F (AV)</sub>	50% duty cycle @Tc=105°C, rectangular wave form	8(Per Leg) 15(Per Device)	Α
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I <sub>FSM</sub>	8.3ms, Half Sine pulse	80	Α

### **Electrical Characteristics:**

Characteristics	Symbol	Condition	Тур.	Max.	Units
Forward Voltage Drop(Per Leg)*	V <sub>F1</sub>	@8A, Pulse, T <sub>J</sub> = 25°C	1.01	1.2	V
	V <sub>F2</sub>	@8A, Pulse, T <sub>J</sub> = 150°C	-	1.1	V
Reverse Current(Per Leg)*	I <sub>R1</sub>	$@V_R = \text{rated } V_R$ , $T_J = 25^{\circ}C$	0.05	5	μA
	I <sub>R2</sub>	@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 125°C	30	500	uA
Reverse Recovery Time(Per Leg)	t <sub>rr</sub>	I <sub>F</sub> =500mA, I <sub>R</sub> =1A,and I <sub>rm</sub> =250mA	28	35	ns

<sup>\*</sup> Pulse width < 300 µs, duty cycle < 2%

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



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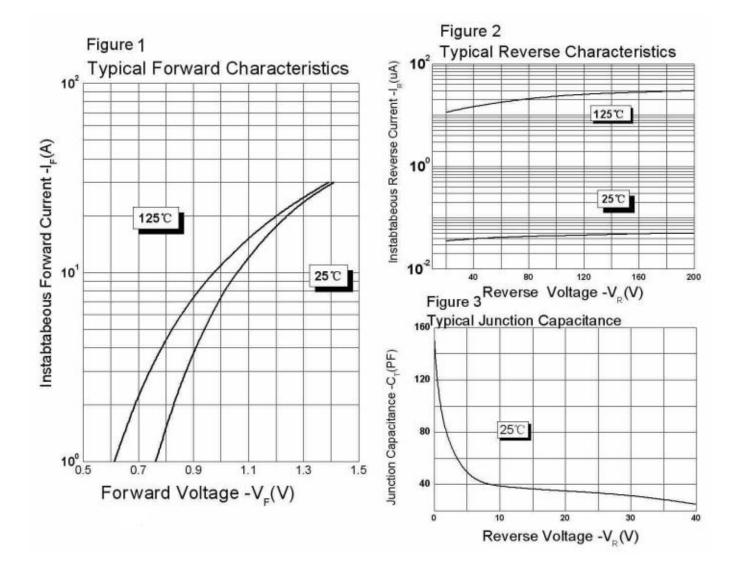




# **Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	TJ	-	-55 to +150	°C
Storage Temperature	T <sub>stg</sub>	-	-55 to +150	°C
Typical Thermal Resistance Junction to	Rejc	DC operation	5	°C/W
Case				
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			

# **Ratings and Characteristics Curves**



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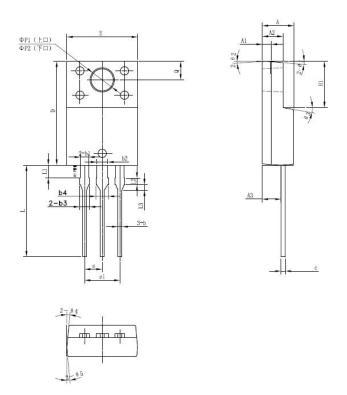


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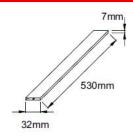


### **Mechanical Dimensions ITO-220AB**



CVMDOL	Millimeters			
SYMBOL	MIN.	TYP.	MAX.	
Α	4.30	4.50	4.70	
A1	1.10	1.30	1.50	
A2	2.80	3.00	3.20	
A3	2.50	2.70	2.90	
b	0.50	0.60	0.75	
b1	1.10	1.20	1.35	
b2	1.50	1.60	1.75	
b3	1.20	1.30	1.45	
b4	1.60	1.70	1.85	
С	0.50	0.60	0.75	
D	14.80	15.00	15.20	
E	9.96	10.16	10.36	
е		2.55		
e1		5.10		
H1	6.50	6.70	6.90	
L	12.70	13.20	13.70	
L1	1.60	1.80	2.00	
L2	0.80	1.00	1.20	
L3	0.60	0.80	1.00	
ΦP1(上□)	3.30	3.50	3.70	
<b>ΦP2</b> (下口)	2.99	3.19	3.39	
Q	2.50	2.70	2.90	
Θ1		5°		
Θ2		4°		
Θ3		10°		
Θ4		5°		
Θ5		5°		

# **Tube Specification**

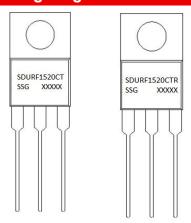


# **Ordering Information**

Device	Package	Shipping	
SDURF1520CT(CTR)	ITO-220AB	50 pcs/ tube	
02001(0111)	(Pb-Free)	00 poor tabe	

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

# **Marking Diagram**



Where XXXXX is YYWWL

 SDUR
 = Device Type

 F
 = Package type

 15
 = Forward Current (15A)

 20
 = Reverse Voltage (200V)

 CT(CTR)
 = Configuration

CT(CTR) = Configuration
SSG = SSG
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin

Epoxy resin UL:94V-0

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### SDURF1520CT/CTR



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