

Green Products

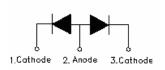
SDURF1620CTR ULTRAFAST PLASTIC RECTIFIER

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:

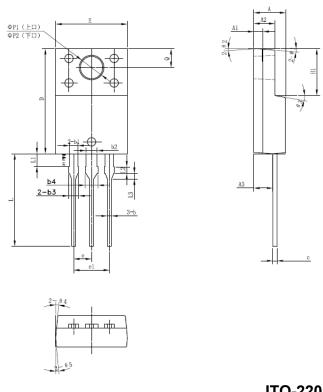
- **Fully Molded Isolation**
- **Dual Diodes-Anode Common**
- **Ultra-Fast Recovery**
- **Low Forward Voltage Drop**
- **High Surge Capability**
- 200 Volts thru 600 Volts Types Available
- This is a Pb Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request



MAX.

TYP.

Mechanical Dimensions: In mm



A 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 c 0.55 0.60 0.75 D 14.80 15.00 15.20 E 9.96 10.16 10.36 e 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 ΦP2(下□) 2.99 3.19 3.39 Q 2.50 2.70 2.90 <th></th> <th></th> <th></th> <th> 0 (1</th>				0 (1
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 c 0.55 0.60 0.75 D 14.80 15.00 15.20 E 9.96 10.16 10.36 e 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 ΦP2(下□) 2.99 3.19 3.39 Q <t< td=""><td></td><td>4.30</td><td>4.50</td><td>4.70</td></t<>		4.30	4.50	4.70
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 c 0.55 0.60 0.75 D 14.80 15.00 15.20 E 9.96 10.16 10.36 e 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 ΦP2(下□) 2.99 3.19 3.39 Q 2.50 2.70 2.90 Θ1 <t< td=""><td>A1</td><td>1.10</td><td>1.30</td><td>1.50</td></t<>	A1	1.10	1.30	1.50
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 c 0.55 0.60 0.75 D 14.80 15.00 15.20 E 9.96 10.16 10.36 e 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 ΦP2(下□) 2.99 3.19 3.39 Q 2.50 2.70 2.90 Θ1 5° 69 69 Θ2 4° 69 69 Θ3 10° 69 69 </td <td>A2</td> <td></td> <td>3.00</td> <td></td>	A2		3.00	
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b2	b	0.50	0.60	0.75
b2	b1	1.10		1.35
b4 1.60 1.70 1.85 c 0.55 0.60 0.75 D 14.80 15.00 15.20 E 9.96 10.16 10.36 e 2.55 10 10.16 10.36 H1 6.50 6.70 6.90 10.00 10.00 10.00 L 12.70 13.20 13.70 13.70 10.00 1.20 10.00 1.20 10.00 1.20 10.00 1.20 10.00 1.00		1.50	1.60	1.75
c 0.55 0.60 0.75 D 14.80 15.00 15.20 E 9.96 10.16 10.36 e 2.55 10 10.36 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 ΦP2(下□) 2.99 3.19 3.39 Q 2.50 2.70 2.90 Θ1 5° 62 4° Θ3 10° 64 5°	b3		1.30	1.45
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D 14.80 15.00 15.20 E 9.96 10.16 10.36 e 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 ΦP2(下□) 2.99 3.19 3.39 Q 2.50 2.70 2.90 Θ1 5° Θ2 4° Θ3 10° Θ4 5°		0.55		0.75
e 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 ΦP2(下□) 2.99 3.19 3.39 Q 2.50 2.70 2.90 Θ1 5° Θ2 4° Θ3 10° Θ4 5°	D		15.00	15.20
e 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 ФР1(上□) 3.30 3.50 3.70 ФР2(下□) 2.99 3.19 3.39 Q 2.50 2.70 2.90 Θ1 5° 62 4° Θ3 10° 64 Θ4 5°			10.16	
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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 ΦP2(下□) 2.99 3.19 3.39 Q 2.50 2.70 2.90 Θ1 5° Θ2 4° Θ3 10° Θ4 5°			5.10	
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 ФР1(上□) 3.30 3.50 3.70 ФР2(下□) 2.99 3.19 3.39 Q 2.50 2.70 2.90 Θ1 5° Θ2 4° Θ3 10° Θ4 5°	H1	6.50	6.70	6.90
L1 1.60 1.80 2.00 L2 0.80 1.00 1.20 L3 0.60 0.80 1.00 ΦР1(上口) 3.30 3.50 3.70 ΦР2(下口) 2.99 3.19 3.39 Q 2.50 2.70 2.90 Θ1 5° Θ2 4° Θ3 10° Θ4 5°	L	12.70	13.20	13.70
L2 0.80 1.00 1.20 L3 0.60 0.80 1.00 ΦР1(上口) 3.30 3.50 3.70 ΦР2(下口) 2.99 3.19 3.39 Q 2.50 2.70 2.90 Θ1 5° Θ2 4° Θ3 10° Θ4 5°	L1	1.60	1.80	2.00
L3 0.60 0.80 1.00 ФР1(上口) 3.30 3.50 3.70 ФР2(下口) 2.99 3.19 3.39 Q 2.50 2.70 2.90 Θ1 5° Θ2 4° Θ3 10° Θ4 5°	L2	0.80	1.00	1.20
中P1(上口) 3.30 3.50 3.70 中P2(下口) 2.99 3.19 3.39 Q 2.50 2.70 2.90 Θ1 5° Θ2 4° Θ3 10° Θ4 5°	L3		0.80	1.00
Q 2.50 2.70 2.90 Θ1 5° Θ2 4° Θ3 10° Θ4 5°		3.30		3.70
Q 2.50 2.70 2.90 Θ1 5° Θ2 4° Θ3 10° Θ4 5°	ΦP2(下口)	2.99	3.19	3.39
Θ2 4° Θ3 10° Θ4 5°	Q		2.70	2.90
Θ2 4° Θ3 10° Θ4 5°	Θ1		5°	
Θ3 10° Θ4 5°	Θ2		4°	
Θ4 5°	Θ3		10°	
O5 5°	Θ4		5°	
	Θ5		5°	

MIN.

SYMBOL

ITO-220AB

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Marking Diagram:



Where XXXXX is YYWWL

SDUR = Device Type F = Package Type

16 = Forward Current (16A) 20 = Reverse Voltage (200V)

CTR = Configuration

SSG = SSG YY = Year WW = Week L = Lot Number

Cautions: Molding resin

Epoxy resin UL:94V-0

Ordering Information:

Device	Package	Shipping
SDURF1620CTR	ITO-220AB	FOnce / tube
	(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 Inverse Voltage	V_{RWM}	-	200	V
Max. Average Forward	I _{F (AV)}	50% duty cycle @Tc=105°C, rectangular wave form	16	А
Max. Peak One Cycle Non- Repetitive Surge Current (Per leg)	I _{FSM}	8.3ms, Half Sine pulse	80	А

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Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@8A, Pulse, T _J = 25°C	1.2	V
(Per leg)*	V _{F2}	@8A, Pulse, T _J = 125°C	1.1	V
	I _{R1}	@V _R = rated V _R	5	μA
Max. Reverse Current*		T _J = 25°C		
	I _{R2}	@V _R = rated V _R	500	μA
		$T_{J} = 125^{\circ}C$		
Max. Reverse Recovery Time	t _{rr}	I_F =500mA, I_R =1A,and I_{rm} =250mA	35	ns

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

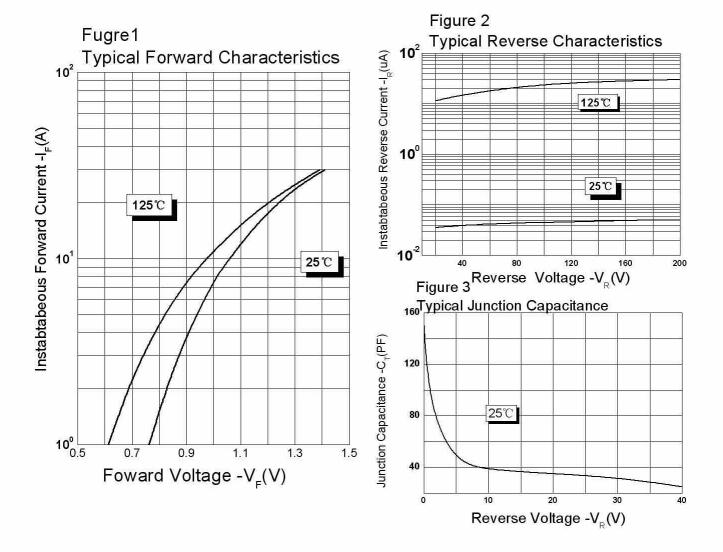
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T _J	-	-55 to +150	°C
Max. Storage Temperature	T _{stg}	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	5.0	°C/W
Approximate Weight	wt	-	2	g
Case Style		ITO-220AB		





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SDURF1620CTR

Technical Data Data Sheet N1080, Rev. - Green Products

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