

Technical Data Data Sheet N0409, Rev. - **Green Products**

SDURF2030CT ULTRAFAST PLASTIC RECTIFIER

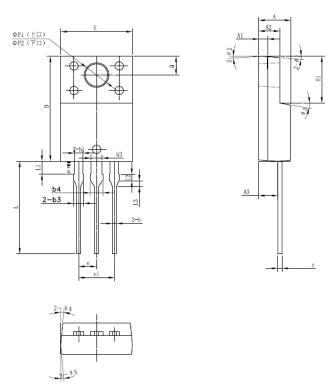
Applications:

- 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:

- 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

Mechanical Dimensions: In mm



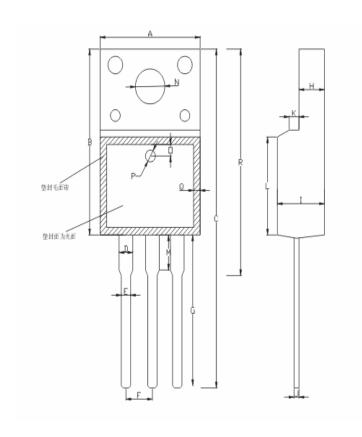
A 4.30 4.50 4.70 A1 1.10 1.30 1.50 A2 2.80 3.00 3.20 A3 2.50 2.70 2.90 b 0.50 0.60 0.75 b1 1.10 1.20 1.35 b2 1.50 1.60 1.75 b3 1.20 1.30 1.45 b4 1.60 1.70 1.85 c 0.55 0.60 0.75 D 14.80 15.00 15.20 E 9.96 10.16 10.36 e 2.55 e1 5.10 H1 6.50 6.70 6.90 L 12.70 13.20 13.70 L1 1.60 1.80 2.00 L2 0.80 1.00 1.20 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>SYMBOL</th> <th>MIN.</th> <th>TYP.</th> <th>MAX.</th>	SYMBOL	MIN.	TYP.	MAX.
A1	Α	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 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°	A1	1.10		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 D4 1.50 2.90 O9 2.50 2.70 2.90 O9 01 5° O9 04 5°	A2	2.80	3.00	3.20
D2	A3	2.50	2.70	2.90
D2	b	0.50	0.60	0.75
D2	b1	1.10	1.20	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 e 10.16 10.36 H1 6.50 6.70 6.90 6.90 L 12.70 13.20 13.70 13.70 L1 1.60 1.80 2.00 1.20 L2 0.80 1.00 1.20 1.20 L3 0.60 0.80 1.00 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° 60 60 Θ3 10° 60 60 Θ4 5° 60 60 60		1.50	1.60	1.75
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 e 10.16 10.36 H1 6.50 6.70 6.90 6.90 L 12.70 13.20 13.70 13.70 L1 1.60 1.80 2.00 1.20 L2 0.80 1.00 1.20 1.20 L3 0.60 0.80 1.00 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° 60 60 Θ3 10° 60 60 Θ4 5° 60 60 60	b3		1.30	
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°	b4	1.60	1.70	1.85
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°	С	0.55	0.60	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	14.80	15 00	15.20
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°		9.96	10.16	10.36
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°	е		2.55	
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°	e1		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 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°	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□) 3.30 3.50 3.70 ΦР2(下□) 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 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°	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	0.60	0.80	1.00
Q 2.50 2.70 2.90 Θ1 5° Θ2 4° Θ3 10° Θ4 5°	ΦP1(上口)	3.30	3.50	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
Θ1 5° Θ2 4° Θ3 10° Θ4 5°	Q		2.70	2.90
Θ3 10° Θ4 5°	Θ1		5°	
Θ3 10° Θ4 5°	Θ2		4°	
Θ4 5°	Θ3		10°	
Θ5 5°	Θ4		5°	
	Θ5		5°	

OPTION 1

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A:10.20	± 0.50	B:15.90	±0.50	C:29.00	±1.00	D:1.24	± 0.10
E:0.80	± 0.10	F:2.54	±0.10	G:13.10	$\pm 1,0$	H:2.55	± 0.05
I:4.70	± 0.05	J:0.50	± 0.05	K:1.20	± 0.20	L:8.00	± 0.50
M:3.00	± 0.50	N:3.20	± 0.20	O:1,25	±0.05	P:1.5	± 0.05
Q:1.0	±0.20	R:19.2	±1.0				

OPTION 2(SR)

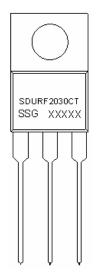
ITO-220AB



SDURF2030CT

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Marking Diagram:



Where XXXXX is YYWWL

SDUR = Device Type F = Package type

20 = Forward Current (20A) 30 = Reverse Voltage (300V)

CT = Configuration

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

Cautions: Molding resin

Epoxy resin UL:94V-0

Ordering Information:

Device	Package	Shipping
SDURF2030CT	ITO-220AB (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}	-	300	V
Max. Average Forward	I _{F (AV)}	50% duty cycle @Tc=100°C, rectangular wave form	20	А
Max. Peak One Cycle Non- Repetitive Surge Current (Per leg)	I _{FSM}	8.3ms, Half Sine pulse	125	А

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Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop(Per leg)*	V _F	@10A, Pulse, T _J = 25°C	1.3	V
Max. Reverse Current*	I _R	$@V_R = \text{rated } V_R$ $T_J = 25^{\circ}C$	30	μA
Max. Reverse Recovery Time	t _{rr}	I_F =500mA, I_R =1A,and I_m =250mA	45	ns

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

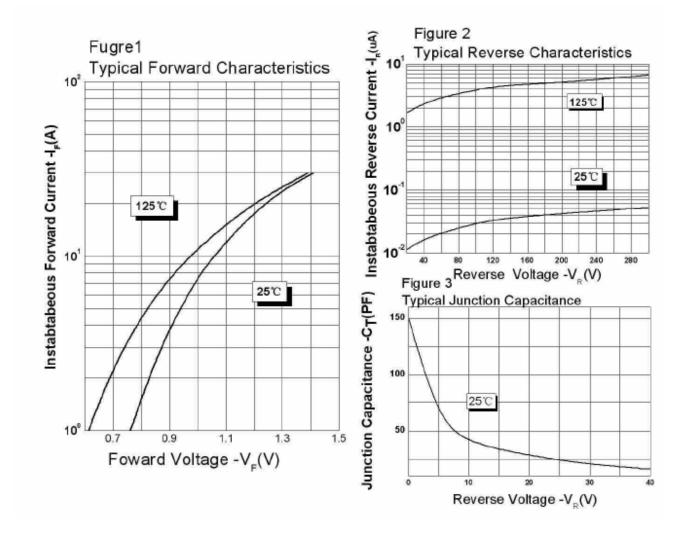
Thermal-Mechanical Specifications:

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	$R_{ heta JC}$	DC operation	5.0	°C/W
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			





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