



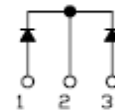
Technical Data  
Data Sheet N1300, Rev. -

*Green Products*

## SDURF20120CT(CTR) ULTRAFAST PLASTIC RECTIFIER

### Applications:

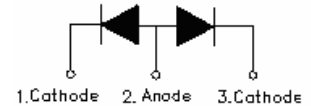
- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners and welders



SDURF20120CT

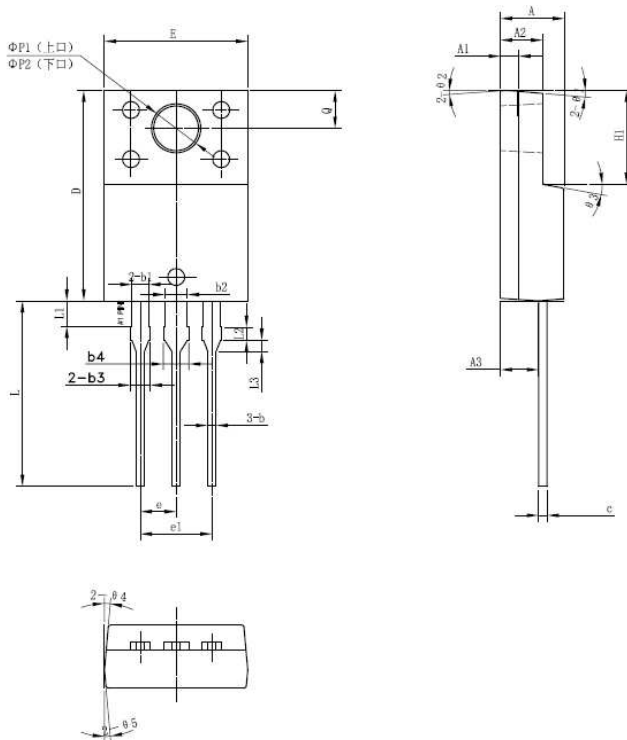
### Features:

- Ultra-Fast Switching
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-0
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request



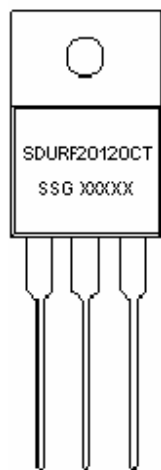
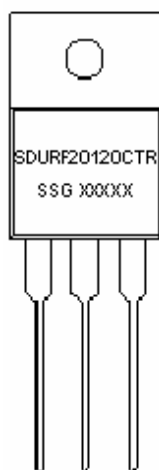
SDURF20120CTR

### Mechanical Dimensions: In mm



SYMBOL	MIN.	TYP.	MAX.
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(上口)	3.30	3.50	3.70
ΦP2(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°	

ITO-220AB

**Technical Data**  
**Data Sheet N1300, Rev. -**
**Green Products**
**Marking Diagram:**

**SDURF20120CT**

**SDURF20120CTR**

Where XXXXX is YYWWL

SDUR	= Device Type
F	= Package Type
20	= Forward Current (20A)
120	= Reverse Voltage (1200V)
CT/CTR	= Configuration
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

**Cautions:** Molding resin  
 Epoxy resin UL:94V-0

**Ordering Information:**

Device	Package	Shipping
SDURF20120CT/CTR	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	$V_{RWM}$	-	1200	V
Average Rectified Forward Current	$I_{F(AV)}$	Rated Vr , @Tc=115°C	20	A
Max. Peak One Cycle Non-Repetitive Surge Current (Per leg)	$I_{FSM}$	8.3ms, Half Sine pulse	40	A

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	$V_{F1}$	@ 10A, Pulse, $T_J = 25^\circ\text{C}$	2.94	V
	$V_{F2}$	@ 10A, Pulse, $T_J = 150^\circ\text{C}$	1.96	V
Max. Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	60	$\mu\text{A}$
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 150^\circ\text{C}$	0.25	mA
Max. Reverse Recovery Time	$t_{rr}$	$I_F = 1\text{A}$ , $-di/dt = 50\text{A}/\mu\text{s}$ , $V_R = 30\text{V}$ , and $T_J = 25^\circ\text{C}$	50	ns

\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	$T_J$	-	-55 to +175	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	5.0	$^\circ\text{C}/\text{W}$
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			

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