

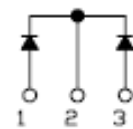
**SDURF1030CT(CTR) ULTRAFAST PLASTIC RECTIFIER**

**Applications:**

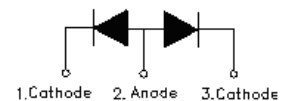
- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners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

**Features:**

- Fully Molded Isolation
- Ultra-Fast Recovery
- Low Forward Voltage Drop
- High Surge Capability
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

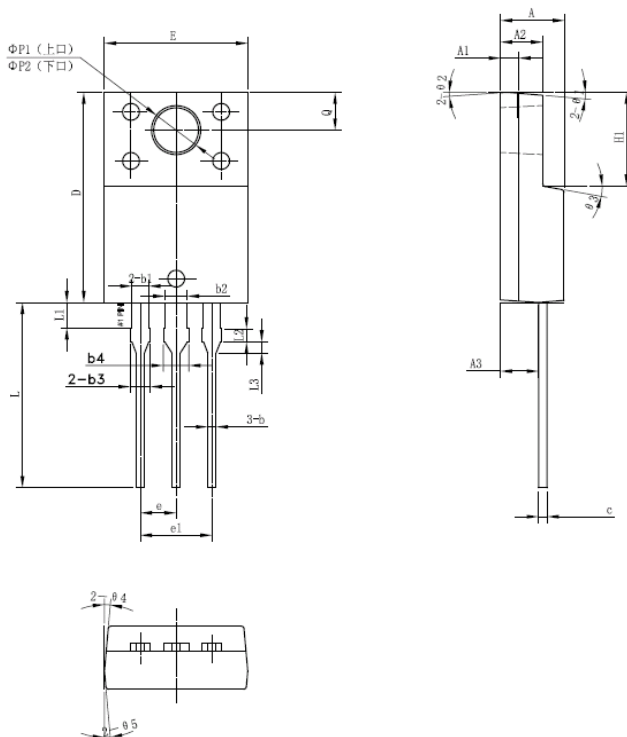


SDURF1030CT



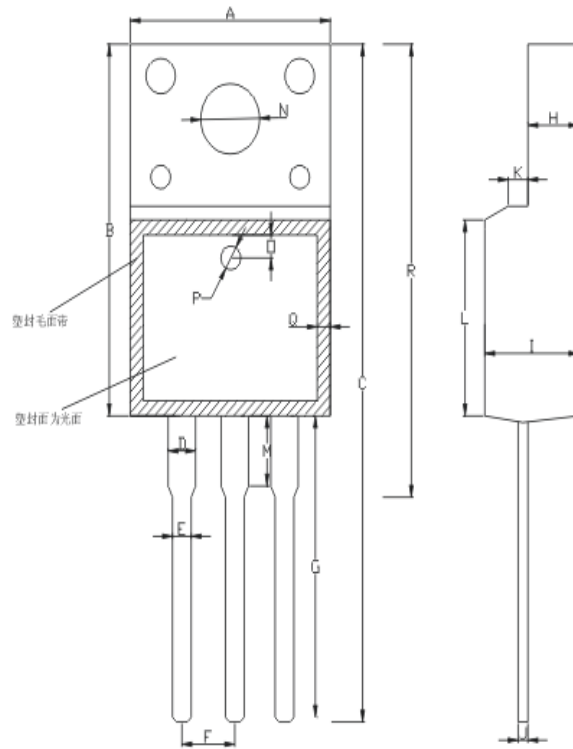
SDURF1030CTR

**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°	

**OPTION 1**

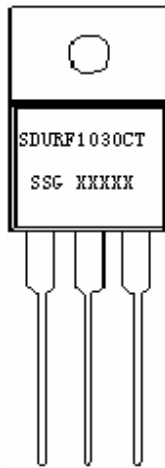


A: 10.20 ± 0.50	B: 15.90 ± 0.50	C: 29.00 ± 1.00	D: 1.24 ± 0.10
E: 0.80 ± 0.10	F: 2.54 ± 0.10	G: 13.10 ± 1.0	H: 2.55 ± 0.05
I: 4.70 ± 0.05	J: 0.50 ± 0.05	K: 1.20 ± 0.20	L: 8.00 ± 0.50
M: 3.00 ± 0.50	N: 3.20 ± 0.20	O: 1.25 ± 0.05	P: 1.5 ± 0.05
Q: 1.0 ± 0.20	R: 19.2 ± 1.0		

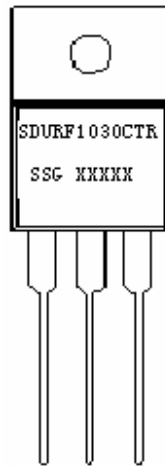
**OPTION 2(SR)**

**ITO-220AB**

### Marking Diagram:



SDURF1030CT



SDURF1030CTR

Where XXXXX is YYWWL

SDUR = Device Type  
 F = Package Type  
 10 = Forward Current (10A)  
 30 = Reverse Voltage (300V)  
 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
SDURF1030CT/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 Repetitive Reverse Voltage	$V_{RRM}$	-	300	V
Working Peak Reverse Voltage	$V_{RWM}$			
DC Blocking Voltage	$V_R$			
Average Forward Current	$I_F (AV)$	50% duty cycle $T_C=112^\circ\text{C}$ , rectangular wave form	10	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3ms, Half Sine pulse	80	A



## SDURF1030CT(CTR)

Technical Data  
Data Sheet N0156, Rev. B

*Green Products*

### Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop(per leg)	$V_F$	@ $I_F = 5A$ , Pulse, $T_J = 25^\circ C$	1.3	V
Reverse Current	$I_R$	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ C$	30	$\mu A$
Junction Capacitance (per leg)	$C_T$	@ $V_R = 5V$ , $T_C = 25^\circ C$ $f_{SIG} = 1MHz$	80	pF
Max. Reverse Recovery Time	$t_{rr}$	$I_F = 500mA$ , $I_R = 1A$ , and $I_{rm} = 250mA$	45	ns

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

### Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-55 to +150	$^\circ C$
Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ C$
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	3.5	$^\circ C / W$
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •

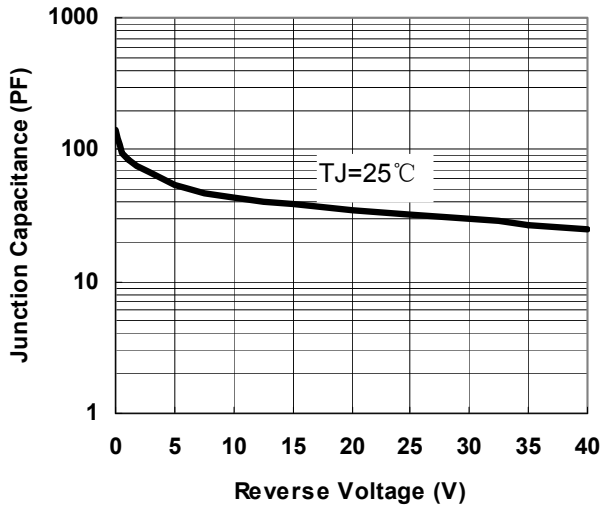


Fig.1-Typical Junction Capacitance

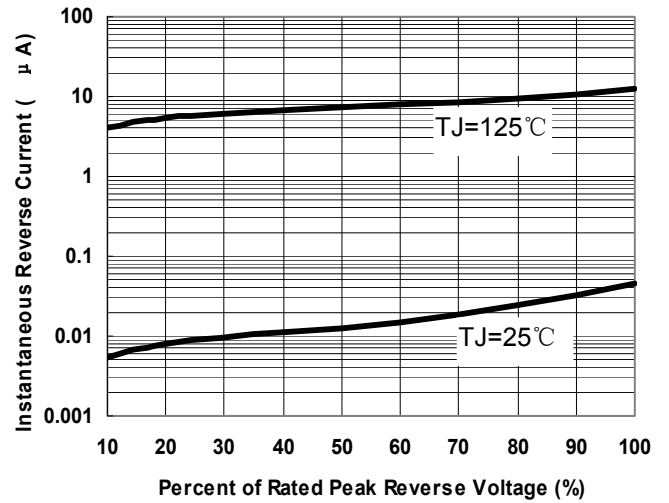


Fig.2-Typical Reverse Characteristics

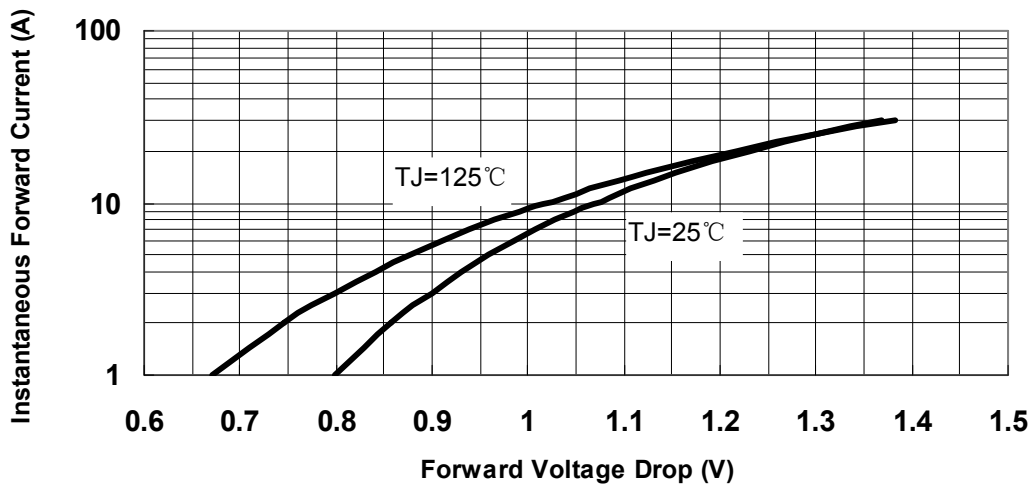
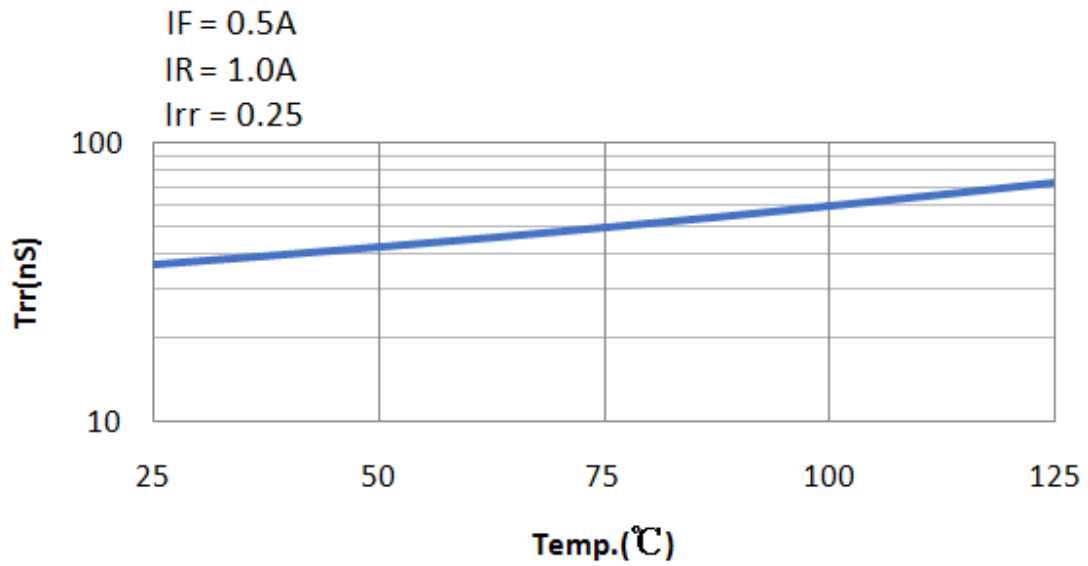


Fig.3-Typical Instantaneous Forward Voltage Characteristics



**Fig.4- Trr & Temp.**



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