



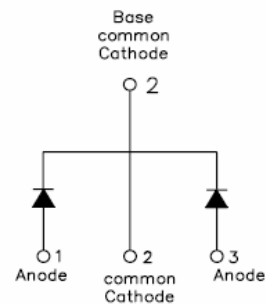
## SDFR1030CT FAST RECOVERY RECTIFIER

### Features:

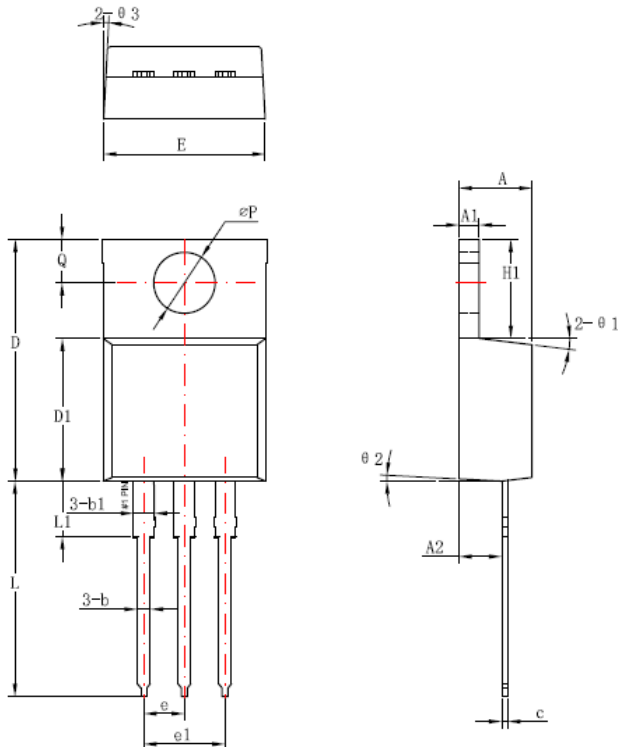
- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Mechanical Data:

- Case: Molded Plastic
- Terminals: Plated Leads Solderable Per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.6 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



### Mechanical Dimensions (In mm):

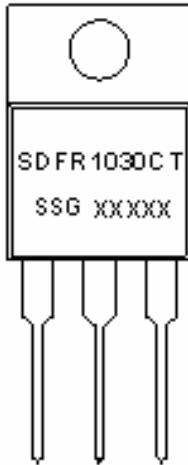


Symbol	Dimensions in millimeters		
	Min	Typical	Max
A	4.42	4.57	4.72
A1	1.17	1.27	1.37
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1		1.27	
c	0.36	0.38	0.61
D	14.94	15.24	15.54
D1	8.85	9.00	9.15
E	10.01	10.16	10.31
e		2.54	
e1		5.06	
H1	6.04	6.24	6.44
L	12.7	13.56	13.78
L1		3.5	
ΦP	3.74	3.84	4.04
Q	2.54	2.74	2.94
θ1		7°	
θ2		3°	
θ3		4°	

### TO-220AB



**Marking Diagram:**



Where XXXXX is YYWWL

SDFR1030CT = Part Name  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

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

**Ordering Information:**

Device	Package	Shipping
SDFR1030CT	TO-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	$I_{O(AV)}$	50Hz, Sine wave, $T_C=105^{\circ}C$	10	A
Max. Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	50Hz, Half Sine wave	150	A



**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop(per leg)	$V_F$	@ $I_F = 5A$ , Pulse, $T_J = 25^\circ C$	1.0	V
Max. Reverse Current	$I_R$	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ C$	30	$\mu A$
Max. Reverse Recovery Time	$t_{rr}$	$I_F = 500mA$ , $I_R = 1A$ , and $I_m = 250mA$	100	ns

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

**Thermal-Mechanical Specifications:**

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

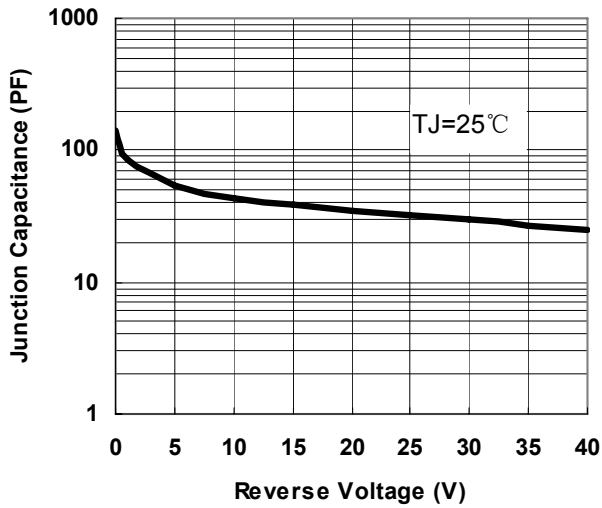


Fig.1-Typical Junction Capacitance

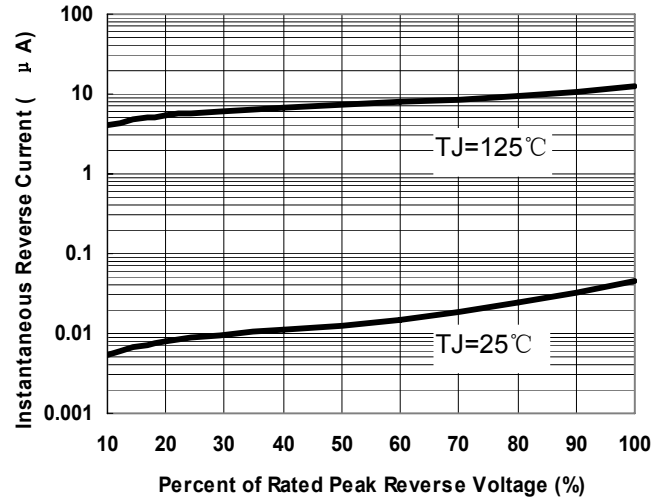


Fig.2-Typical Reverse Characteristics

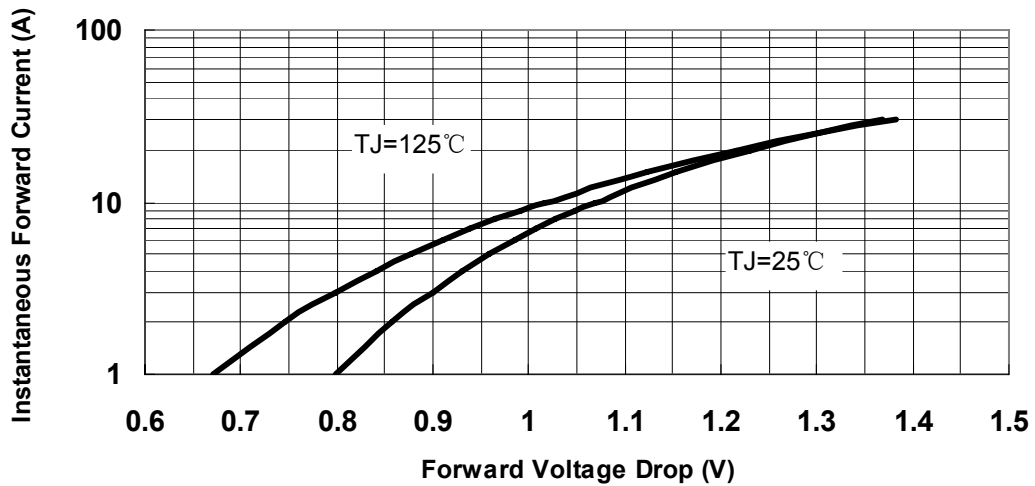


Fig.3-Typical Instantaneous Forward Voltage Characteristics



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