

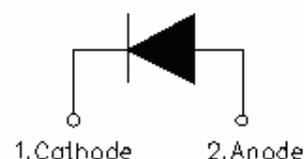
## SDURF2040 ULTRAFAST PLASTIC RECTIFIER

### Applications:

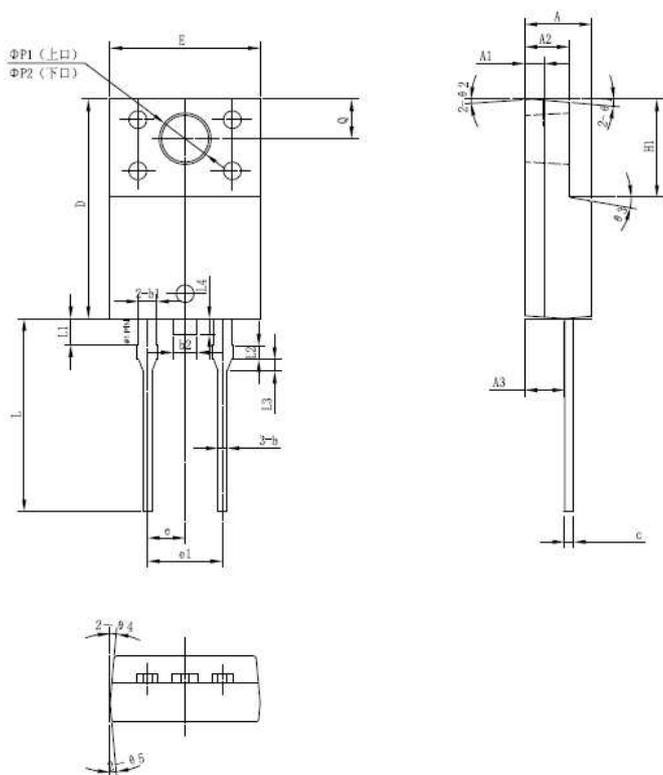
- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners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

### Features:

- Ultra-Fast Switching
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- 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



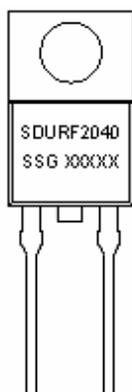
### Mechanical Dimensions: In mm



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
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
L4	-	1.10	1.50
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-220AC(HD)

**Marking Diagram:**



Where XXXXX is YYWWL

SDUR = Device Type  
F = Package type  
20 = Forward Current (20A)  
40 = Reverse Voltage (400V)  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

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

**Ordering Information:**

Device	Package	Shipping
SDURF2040	ITO-220AC (Pb-Free)	50 pcs / 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	$V_{RWM}$	-	400	V
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @ $T_c=105^{\circ}C$ , rectangular wave form	20	A
Max. Peak One Cycle Non-Repetitive Surge Current (Per leg)	$I_{FSM}$	8.3ms, Half Sine pulse	150	A

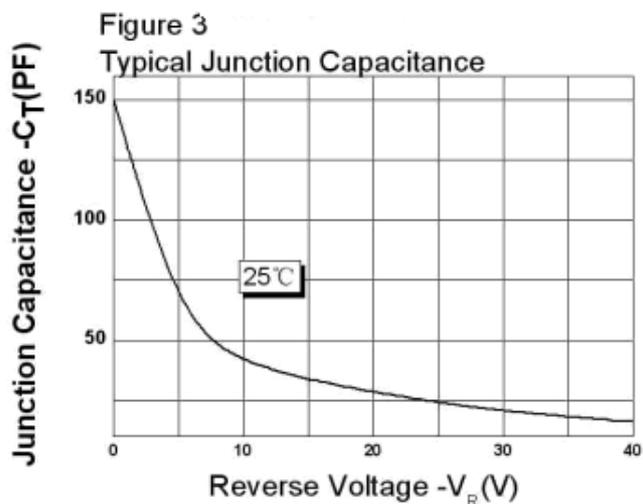
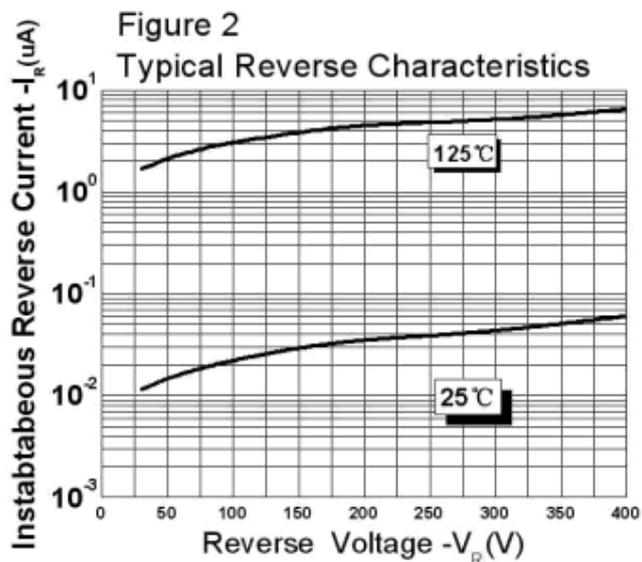
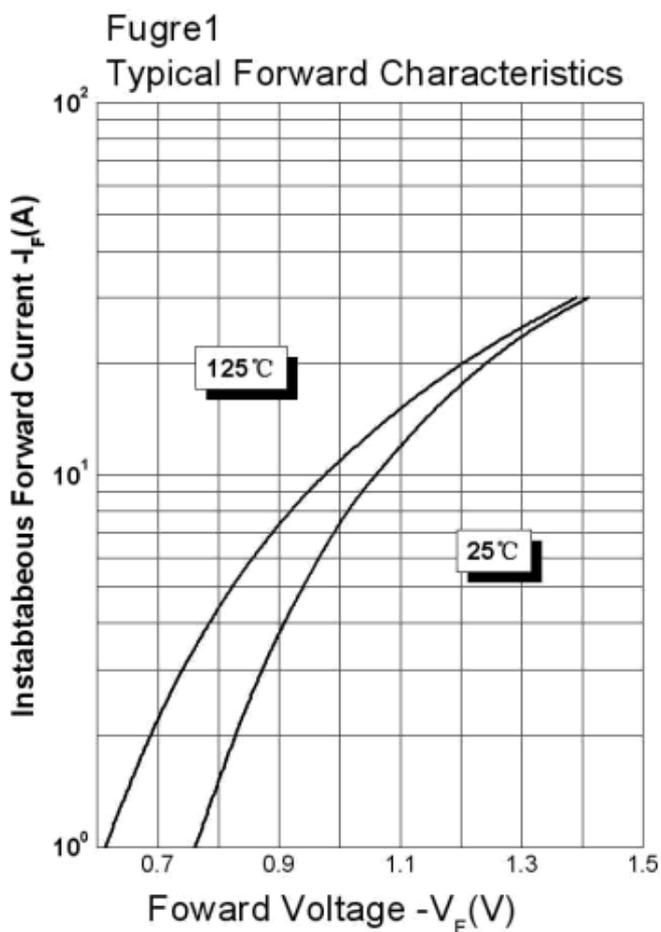
**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	$V_F$	@20A, Pulse, $T_J = 25^\circ\text{C}$	1.51	V
	$V_F$	@20A, Pulse, $T_J = 150^\circ\text{C}$	1.24	V
Max. Reverse Current*	$I_R$	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	15	$\mu\text{A}$
	$I_R$	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$	500	$\mu\text{A}$
Max. Reverse Recovery Time	$t_{rr}$	$I_F = 500\text{mA}$ , $I_R = 1\text{A}$ , and $I_{rm} = 250\text{mA}$	45	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 +150	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	2	K/W
Approximate Weight	wt	-	1.6	g
Case Style	ITO-220AC			



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