

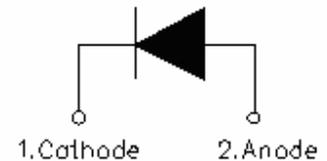
SUR1060 ULTRAFAST PLASTIC RECTIFIER

Applications:

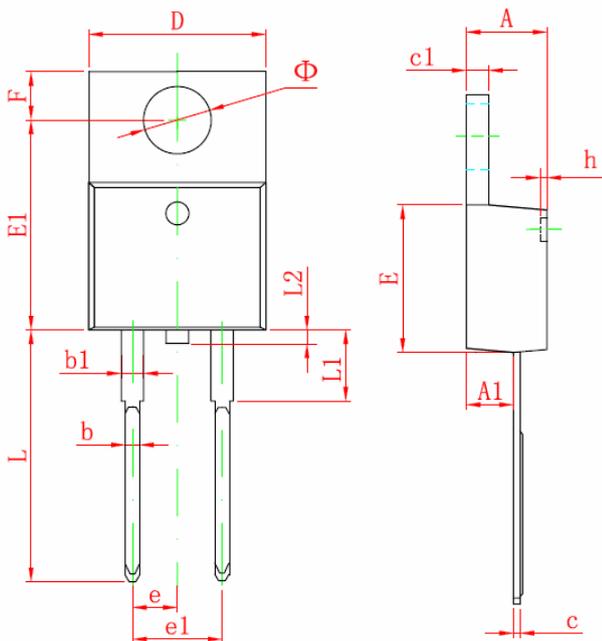
- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners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



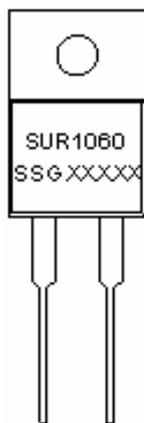
Mechanical Dimensions (In mm) and Marking:



Symbol	Dimensions In Millimeters	
	Min	Max
A	4.470	4.670
A1	2.520	2.820
b	0.710	0.910
b1	1.170	1.370
c	0.310	0.530
c1	1.170	1.370
D	10.010	10.310
E	8.500	8.900
E1	12.060	12.460
e	2.540 TYP	
e1	4.980	5.180
F	2.590	2.890
h	0.000	0.300
L	13.400	13.800
L1	3.560	3.960
L2		1.000
φ	3.735	3.935

TO-220AC

Marking Diagram:



Where XXXXX is YYWWL

SUR = Device Type
10 = Forward Current (10A)
60 = Reverse Voltage (600V)
SSG = SSG
YY = Year
WW = Week
L = Lot Number

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

Ordering Information:

Device	Package	Shipping
SUR1060	TO-220AC (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}	-	600	V
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @TC =100°C rectangular wave form	10	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	110	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 10A, Pulse, $T_J = 25^\circ\text{C}$	2.2	V
	V_{F2}	@ 10 A, Pulse, $T_J = 100^\circ\text{C}$	2.0	V
Max. Reverse Current	I_{R1}	@ $V_R = \text{rated VR}$ $T_J = 25^\circ\text{C}$	5	μA
	I_{R2}	@ $V_R = \text{rated VR}$ $T_J = 100^\circ\text{C}$	50	μA
Max. Reverse Recovery Time	t_{rr}	$I_F=500\text{mA}$, $I_R=1\text{A}$, and $I_{rm}=250\text{mA}$	50	ns

* Pulse Width < 300 μs , Duty Cycle <2%

Measured lead to lead 5 mm from package body

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	4.0	$^\circ\text{C/W}$
Approximate Weight	wt	-	1.6	g
Case Style	TO-220AC			

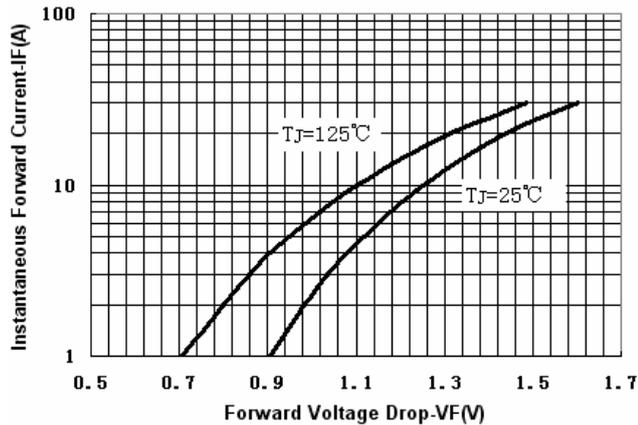


Fig.1-Typical Forward Voltage Drop Characteristics

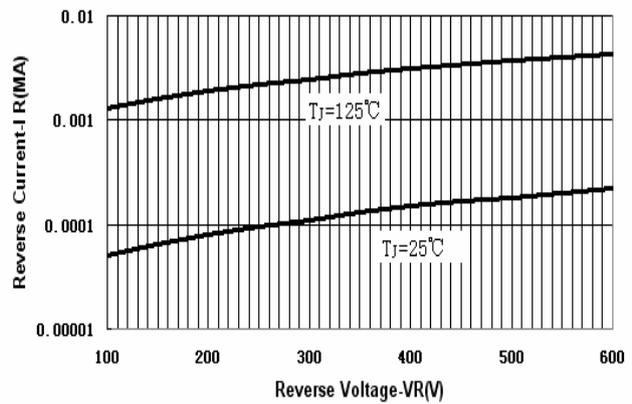


Fig.2-Typical Values of Reverse Current Vs. Reverse Voltage

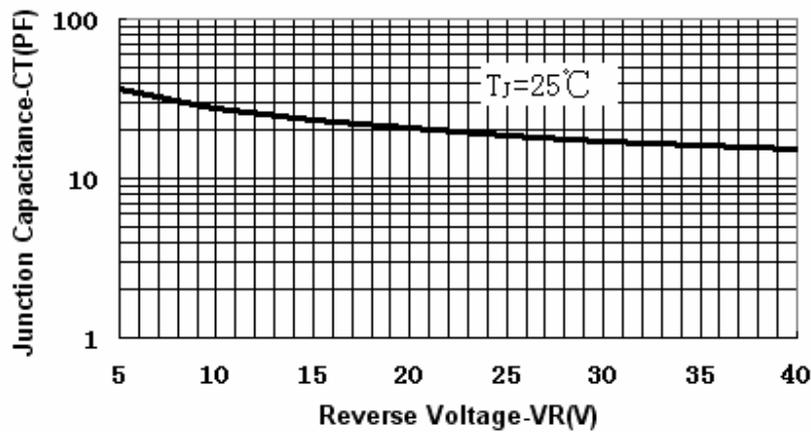


Fig.3-Typical Junction Capacitance Vs. Reverse Voltage

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