

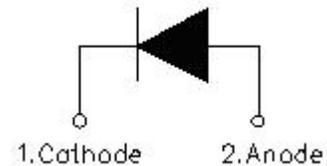
## SDUR6040W ULTRAFAST PLASTIC RECTIFIER

### Applications:

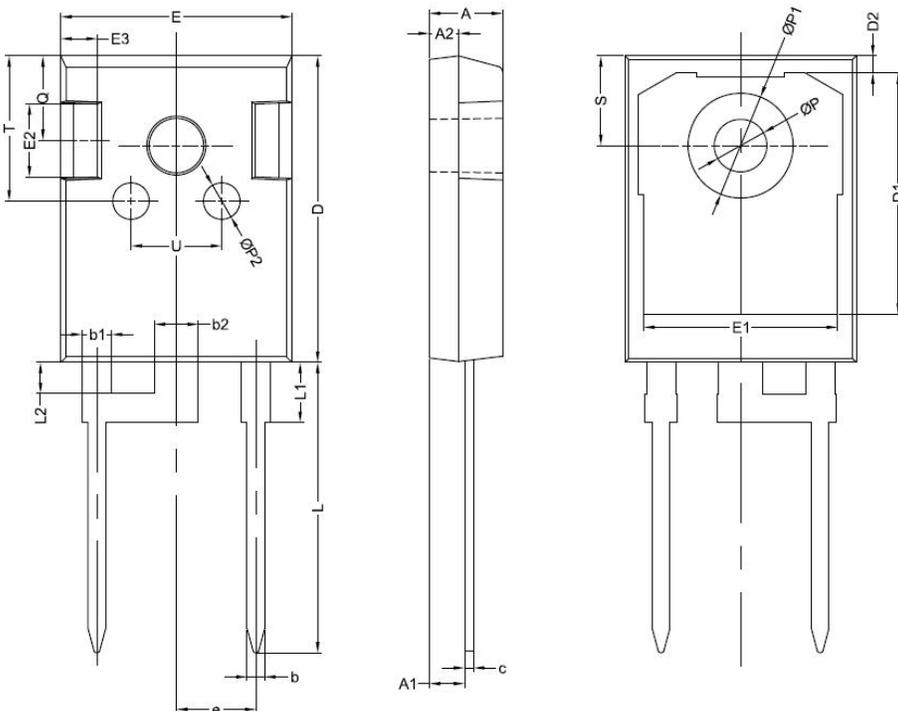
- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners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

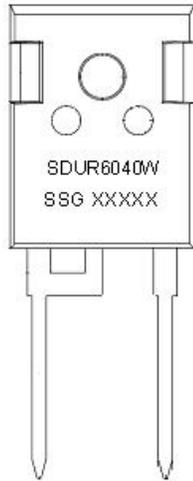


SYMBOL	MIN.	TYP.	MAX.
A	4.80	5.00	5.20
A1	2.21	2.41	2.61
A2	1.90	2.00	2.10
b	1.10	1.20	1.35
b1		2.00	
b2		3.00	
c	0.55	0.60	0.75
D	20.80	21.00	21.20
D1		16.55	
D2		1.20	
E	15.6	15.8	16.0
E1		13.30	
E2		5.00	
E3		2.50	
e		5.44	
L	19.42	19.92	20.42
L1		4.13	
L2		2.15	
P	3.50	3.60	3.70
P1	-	-	7.40
P2		2.50	
Q		5.80	
S	6.05	6.15	6.25
T		10.00	
U		6.20	

**TO-247AC**

**Technical Data**  
**Data Sheet N1281, Rev. A**  
**Marking Diagram:**

**Green Products**



Where XXXXX is YYWWL

SDUR = Device Type  
60 = Forward Current (60A)  
40 = Reverse Voltage (400V)  
W = Configuration  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

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

**Ordering Information:**

Device	Package	Shipping
SDUR6040W	TO-247AC (Pb-Free)	25pcs / 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 Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	-	400	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 105^\circ\text{C}$ , rectangular wave form	60	A
Peak One Cycle Non-Repetitive Surge Current (Per leg)	$I_{FSM}$	8.3ms, Half Sine pulse	450	A

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 60A, Pulse, $T_J = 25^\circ\text{C}$	1.47	V
	$V_{F2}$	@ 60A, Pulse, $T_J = 150^\circ\text{C}$	1.22	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	10	$\mu\text{A}$
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$	300	$\mu\text{A}$
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
Junction Temperature	$T_J$	-	-55 to +150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ\text{C}$
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	4	$^\circ\text{C}/\text{W}$
Approximate Weight	wt	-	6.7	g
Case Style	TO-247AC			

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