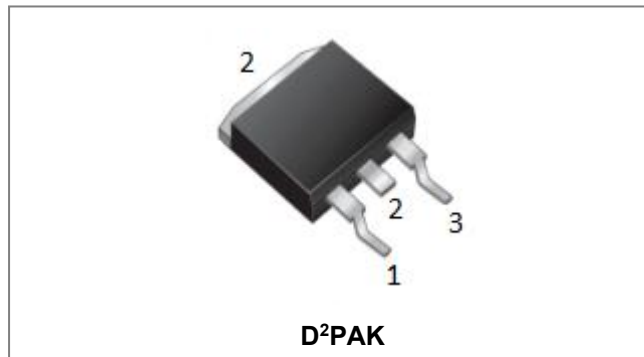


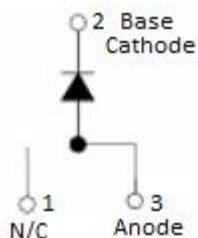
## SDURB2060-A ULTRAFAST RECTIFIER



### 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

### Circuit Diagram



### Features

- Ultra-Fast switching
- High current capability
- Low reverse leakage current
- 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
- This is an AEC-Q101 qualified device

### Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	-	600	V
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_c=93^{\circ}C$ , rectangular wave form	20	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3ms, Half Sine pulse	110	A

### Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 20A, Pulse, $T_J = 25^{\circ}C$	1.60	2.00	V
	$V_{F2}$	@ 20A, Pulse, $T_J = 125^{\circ}C$	1.40	1.60	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25^{\circ}C$	0.5	5	$\mu A$
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 125^{\circ}C$	-	2	mA
Reverse Recovery Time	$t_{rr}$	$I_F=500mA, I_R=1A, \text{ and } I_m=250mA$	37	50	ns

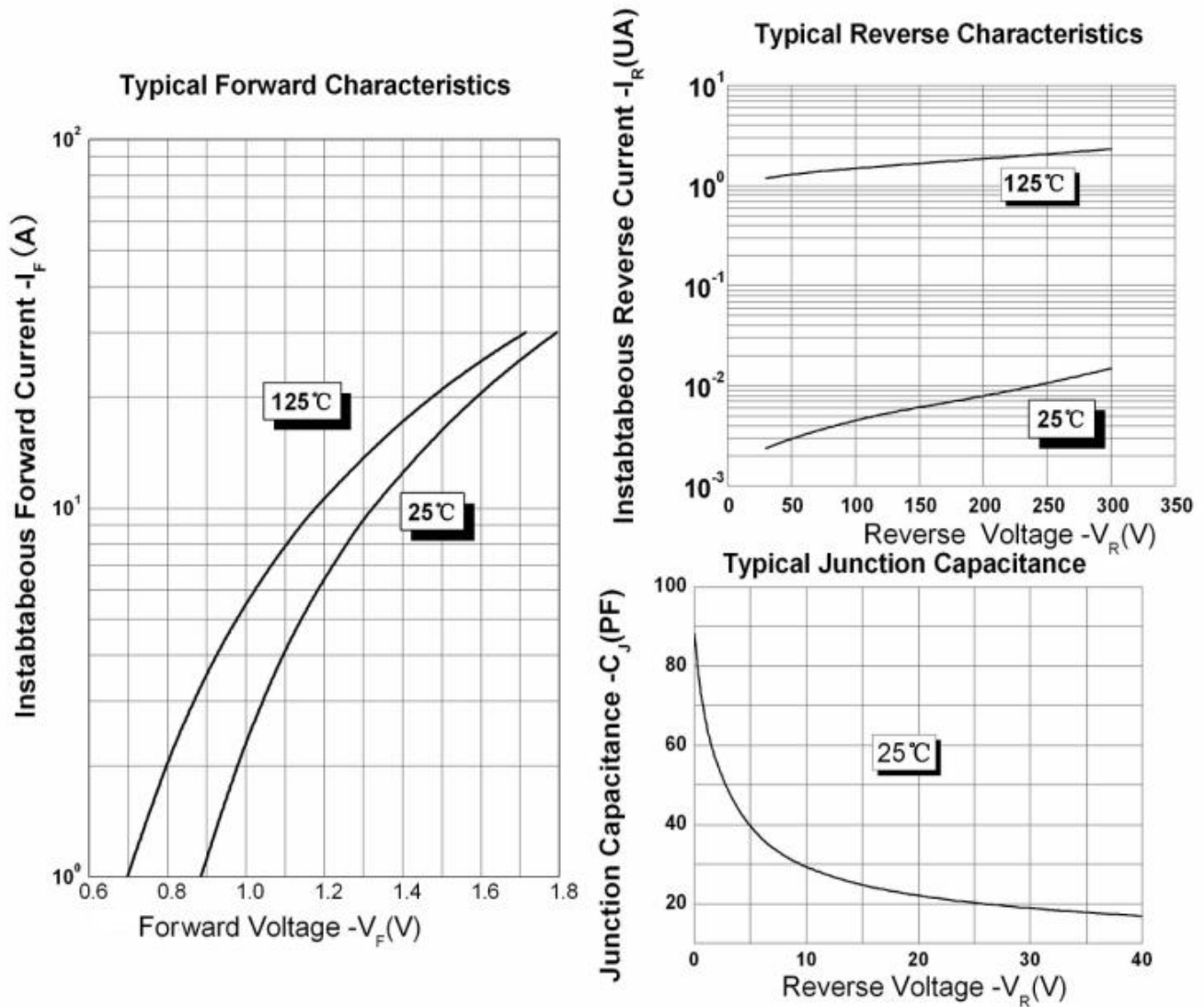
\* Pulse width < 300  $\mu s$ , duty cycle < 2%

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

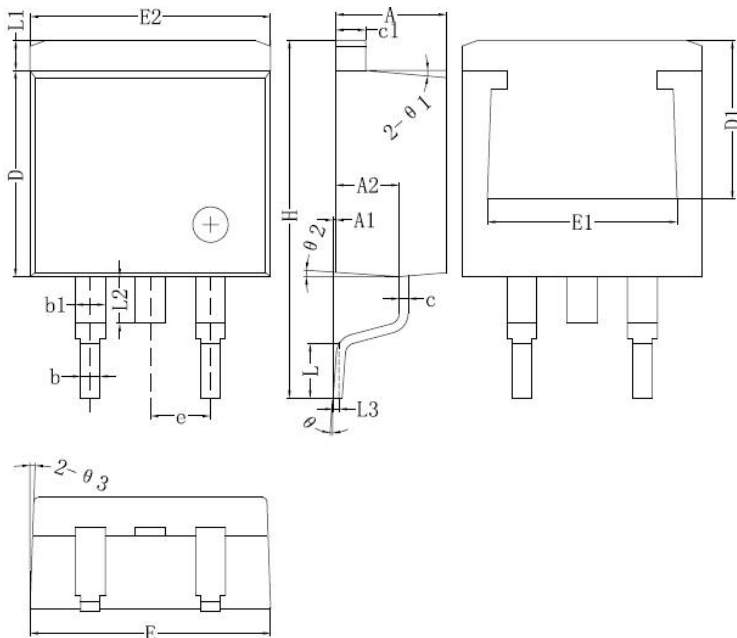
**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-55 to +150	$^{\circ}\text{C}$
Storage Temperature	$T_{\text{stg}}$	-	-55 to +150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation	2.3	$^{\circ}\text{C}/\text{W}$
Approximate Weight	wt	-	1.85	g
Case Style	D <sup>2</sup> PAK			

**Ratings and Characteristics Curves**



## Mechanical Dimensions D<sup>2</sup>PAK



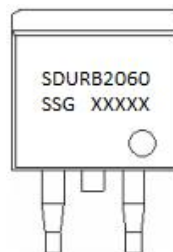
Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A**	4.47	4.70	4.85
A1	0	0.10	0.25
A2	2.59	2.69	2.89
b**	0.71	0.81	0.96
b1**	1.17	1.27	1.37
c	0.31	0.38	0.61
c1	1.17	1.27	1.37
D**	8.50	8.70	8.90
D1	6.40		
E**	10.01	10.16	10.31
E1	7.6		
E2**	9.98	10.08	10.31
e**		2.54	
H	14.6	15.1	15.6
L	2.00	2.30	2.74
L1	1.12	1.27	1.42
L2**	1.30		2.20
L3		0.25BSC	
e	0	-	8°
e1		5°	
e2		4°	
e3		4°	

## Ordering Information

Device	Package	Shipping
SDURB2060-A	D <sup>2</sup> PAK	800pcs / reel
SDURB2060-ATR	D <sup>2</sup> PAK	800pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

## Marking Diagram

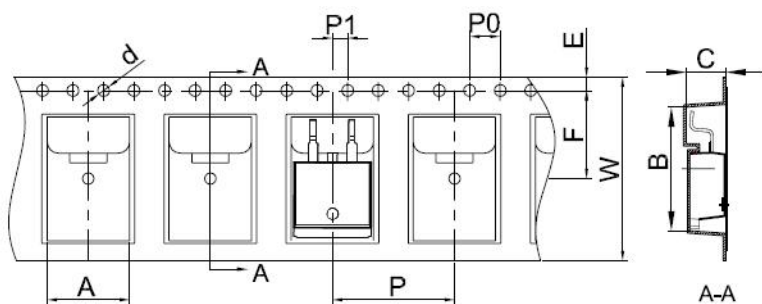


Where XXXXX is YYWWL

SDUR = Device Type  
B = Package type  
20 = Forward Current (20A)  
60 = Reverse Voltage (600V)  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

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

## Carrier Tape Specification D<sup>2</sup>PAK



SYMBOL	Millimeters	
	Min.	Max.
A	10.70	10.90
B	16.03	16.23
C	5.11	5.31
d	1.45	1.65
E	1.65	1.85
F	11.40	11.60
P0	3.90	4.10
P	15.90	16.10
P1	1.90	2.10
W	23.90	24.30



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