


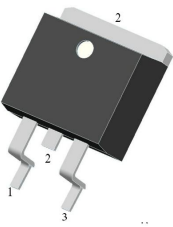
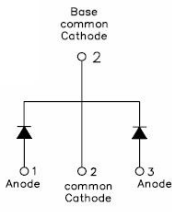
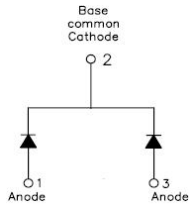
SDUR3040CT SDURB3040CT ULTRAFAST RECTIFIER

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

Features

- Ultra-Fast Switching
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-0
- Terminals finish: Tin Lead-free plated
- “-A” is an AEC-Q101 qualified device
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

<p>SDUR3040CT</p> 	<p>SDURB3040CT</p> 
	
TO-220AB	D ² PAK

Maximum Ratings (at 25 °C unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V_{RRM}	-	400	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
Average Rectified Forward Current In DC	$I_F (AV)$	$T_c=107^{\circ}C$	15(Per Leg) 30(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I_{FSM}	8.3ms, Half Sine pulse	200	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V_{F1}	@15A, Pulse, $T_J = 25^\circ\text{C}$	1.02	1.25	V
	V_{F2}	@15A, Pulse, $T_J = 125^\circ\text{C}$	0.91	1.15	V
Reverse Current(Per Leg)*	I_{R1}	@ $V_R = \text{rated } V_R, T_J = 25^\circ\text{C}$	0.2	10	μA
	I_{R2}	@ $V_R = \text{rated } V_R, T_J = 125^\circ\text{C}$	0.2	1.0	mA
Reverse Recovery Time(Per Leg)	t_{rr}	$I_F=500\text{mA}, I_R=1\text{A}, \text{and } I_m=250\text{mA}$	40	45	ns

* Pulse width < 300 μs , 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	2.3	$^\circ\text{C/W}$
Case Style	TO-220AB/ D ² PAK			

Ratings and Characteristics Curves

Figure 1 Typical Forward Characteristics

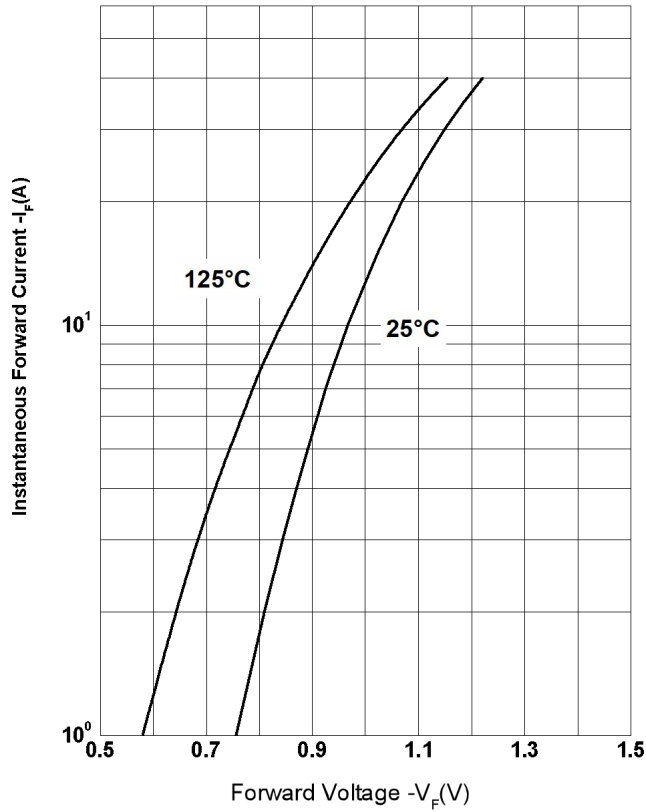


Figure 2 Typical Reverse Characteristics

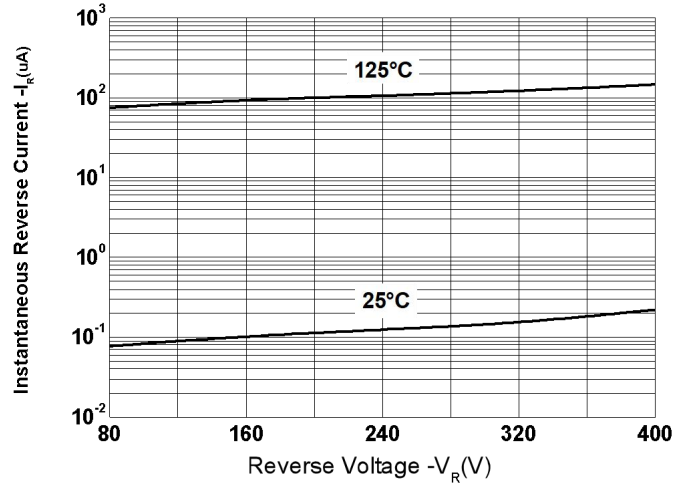
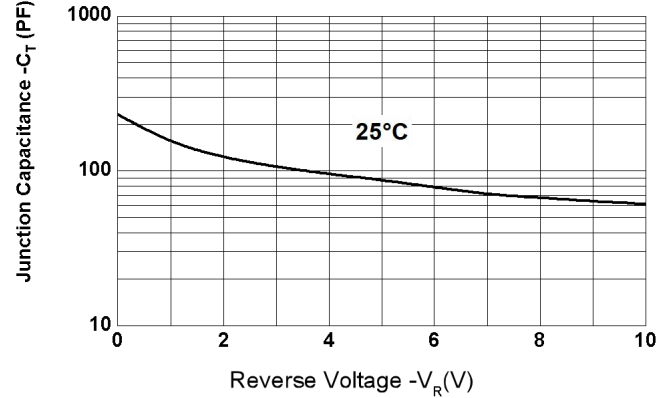


Figure 3 Typical Junction Capacitance

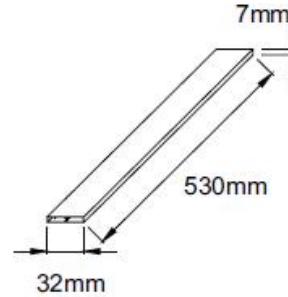


Tube Specification

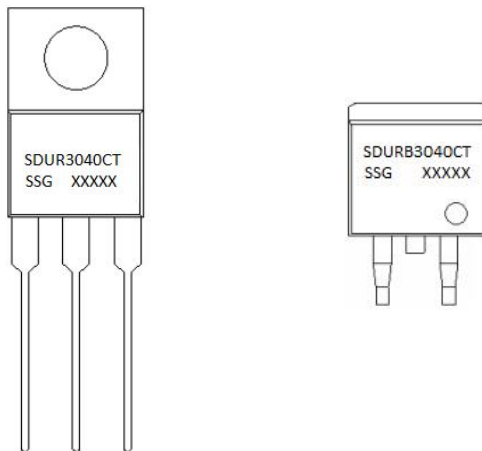
Device	wt	Package	Shipping
SDUR3040CT	2.0g	TO-220AB	50pcs / tube
SDURB3040CT	1.85g	D ² PAK	800pcs / reel
SDURB3040CTTR	1.85g	D ² PAK	800pcs / reel

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

Tube Specification(TO-220AB)



Marking Diagram

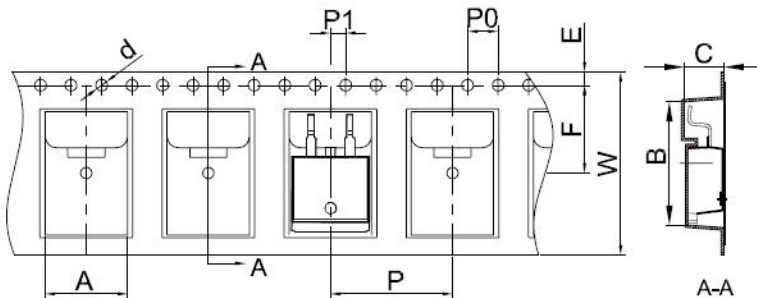


Where XXXXX is YYWWL

- SDUR = Device Type
- B = Package type
- 30 = Forward Current (30A)
- 40 = Reverse Voltage (400V)
- CT = Configuration
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

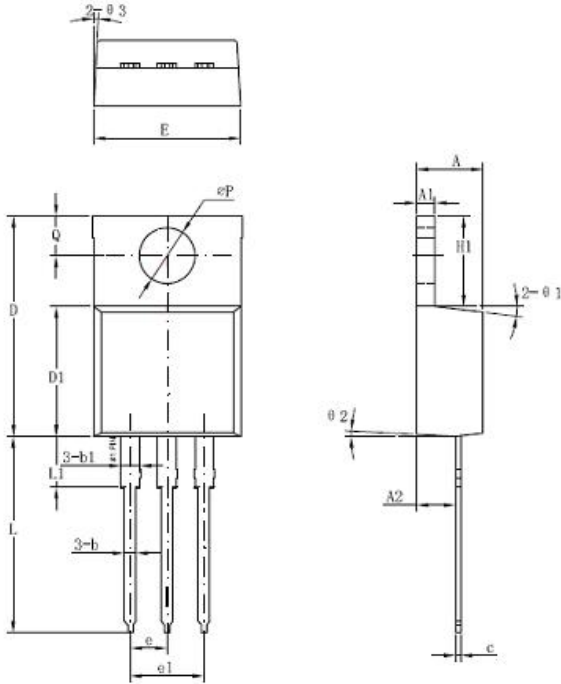
Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification D2PAK



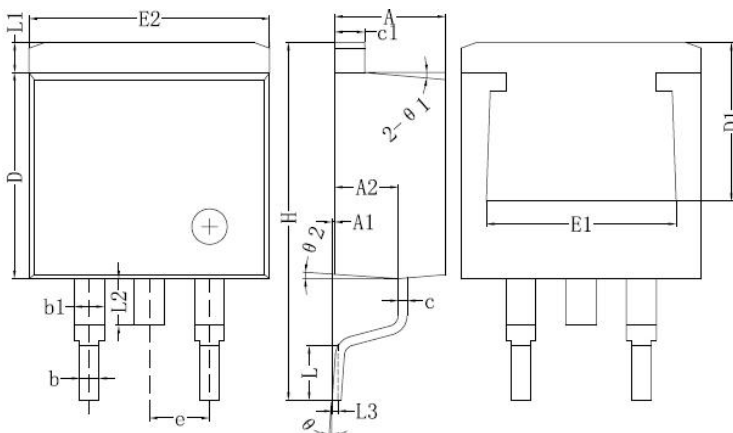
SYMBOL	Millimeters	
	Min.	Max.
A	10.70	10.90
B	16.03	16.23
C	5.11	5.31
d	1.45	1.65
E	1.65	1.85
F	11.40	11.60
P0	3.90	4.10
P	15.90	16.10
P1	1.90	2.10
W	23.90	24.30

Mechanical Dimensions TO-220AB



Symbol	Dimensions in millimeters		
	Min	Typical	Max
A	3.56	-	4.83
A1	0.51	-	1.40
A2	2.03	-	2.92
b	0.38	-	1.02
b1	1.14	-	1.78
c	0.31	-	0.61
D	14.22	-	16.51
D1	8.38	-	9.42
E	9.65	-	10.67
e	-	2.54	-
e1	-	5.08	-
H1	5.84	-	6.86
L	12.70	-	14.73
L1	-	-	6.35
ΦP	-	3.56	-
Q	2.54	-	3.43

Mechanical Dimensions D²PAK



Symbol	Dimensions in millimeters	
	Min.	Max.
A	4.06	4.83
A1	0	0.26
b	0.51	0.99
b1	1.14	1.78
c	0.31	0.74
c1	1.14	1.65
D	8.38	8.65
D1	6.86	
E1	6.22	
E2	9.65	10.67
e	2.54BSC	
H	14.60	15.88
L	1.78	2.80
L1	-	1.68
L2	-	2.2
L3	0.255BSC	
θ	0	8°

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