




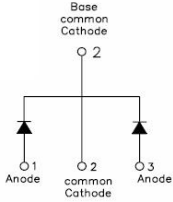
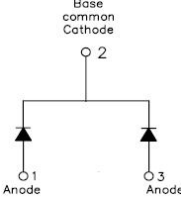
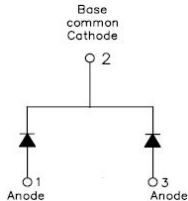
**SDUR1530CT SDURB1530CT SDURD1530CT**  
**ULTRAFast RECTIFIER**

**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
- “-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

SDUR1530CT	SDURB1530CT	SDURD1530CT
		
		
TO-220AB	D <sup>2</sup> PAK	DPAK

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	$V_{RRM}$	-	300	V
Working Peak Reverse Voltage	$V_{RWM}$			
DC Blocking Voltage	$V_R$			
Average Rectified Forward Current	$I_F (AV)$	50% duty cycle @ $T_c=105^\circ C$ , rectangular wave form	8(Per Leg) 15(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	$I_{FSM}$	8.3ms, Half Sine pulse, $T_J = 25^\circ C$	80	A

### Electrical Characteristics:

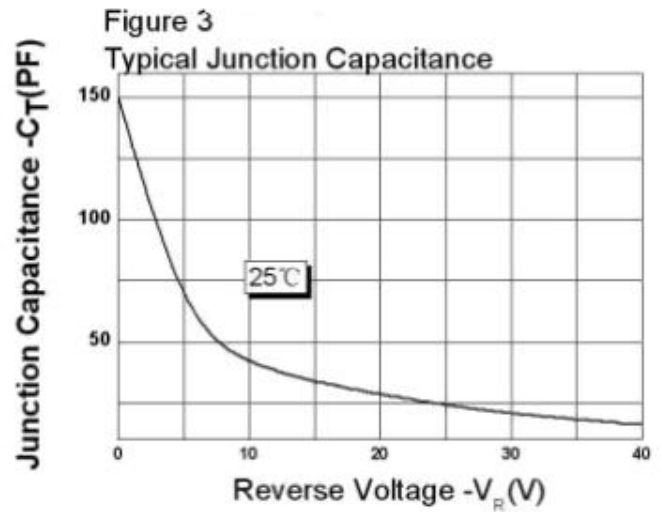
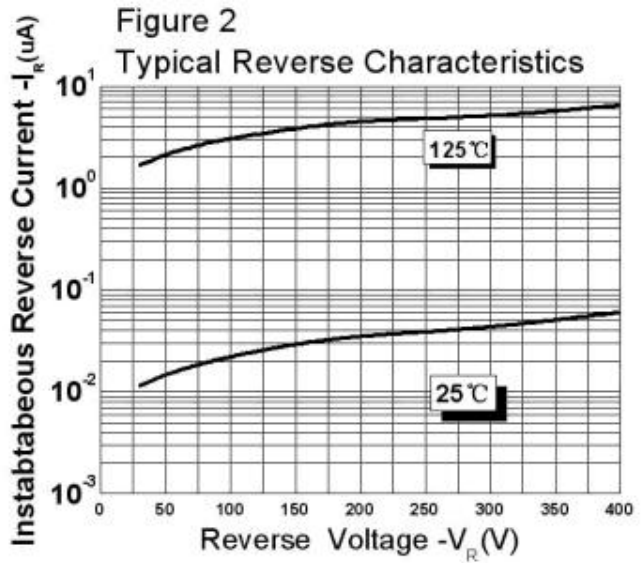
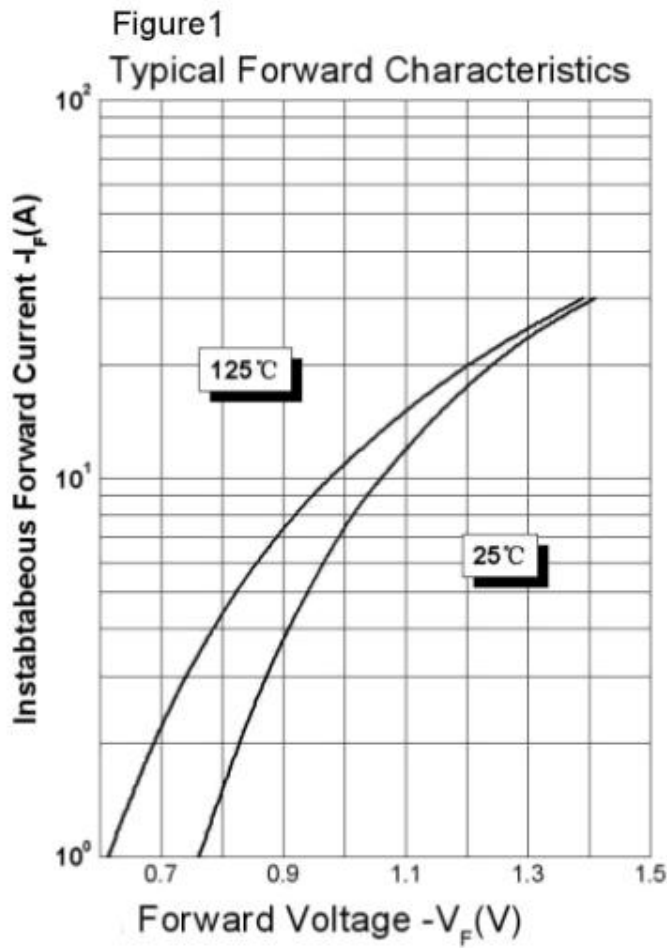
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V <sub>F1</sub>	@8A, Pulse, T <sub>J</sub> = 25°C	1.01	1.30	V
	V <sub>F2</sub>	@8A, Pulse, T <sub>J</sub> = 125°C	0.91	1.20	V
Reverse Current(Per Leg)*	I <sub>R1</sub>	@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 25°C	0.1	10	μA
	I <sub>R2</sub>	@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 125°C	6	500	uA
Reverse Recovery Time(Per Leg)	t <sub>rr</sub>	I <sub>F</sub> =500mA, I <sub>R</sub> =1A, and I <sub>m</sub> =250mA	30	45	ns

\* Pulse width < 300 μs, duty cycle < 2%

### Thermal-Mechanical Specifications:

Characteristics	Symbol	SDUR1530CT	SDURB1530CT	SDURD1530CT	Units
Junction Temperature	T <sub>J</sub>	-55 to +150			°C
Storage Temperature	T <sub>stg</sub>	-55 to +150			°C
Typical Thermal Resistance Junction to Case	R <sub>θJC</sub>	2.3	2.3	1.7	K/W
Approximate Weight	wt	2.0	1.85	0.39	g
Case Style		TO-220AB/ D <sup>2</sup> PAK/ DPAK			

**Ratings and Characteristics Curves**

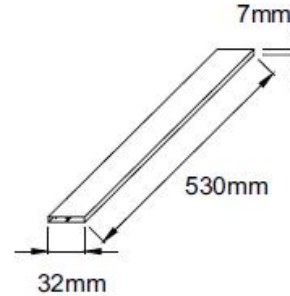


**Tube Specification**

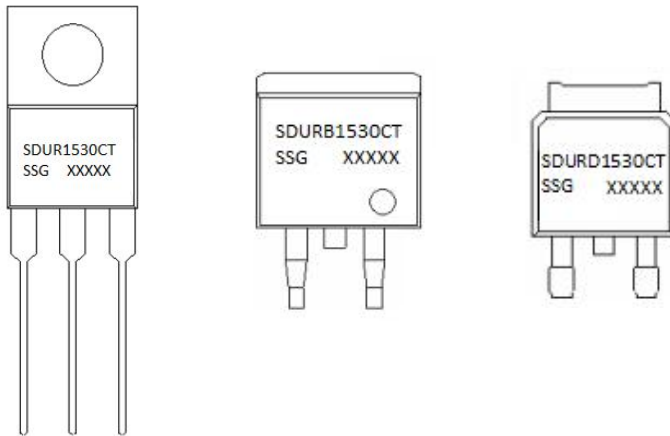
Device	Package	Shipping
SDUR1530CT	TO-220AB	50pcs / tube
SDURB1530CT	D <sup>2</sup> PAK	800pcs / reel
SDURB1530CTTR	D <sup>2</sup> PAK	800pcs / reel
SDURD1530CT	DDPAK	2500pcs / reel
SDURD1530CTTR	DDPAK	2500pcs / reel

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**

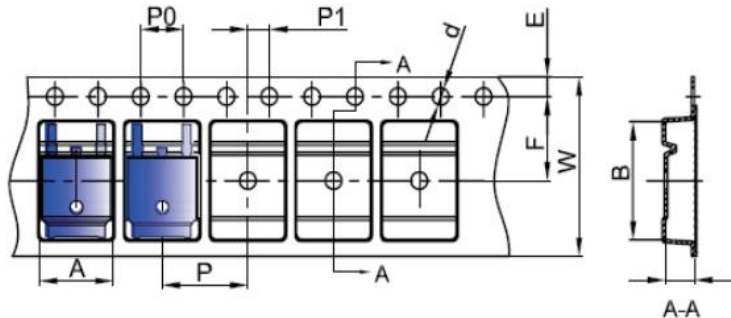


Where XXXXX is YYWWL

- SDUR = Device Type
- B/D = Package type
- 15 = Forward Current (15A)
- 300 = Reverse Voltage (300V)
- CT = Configuration
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

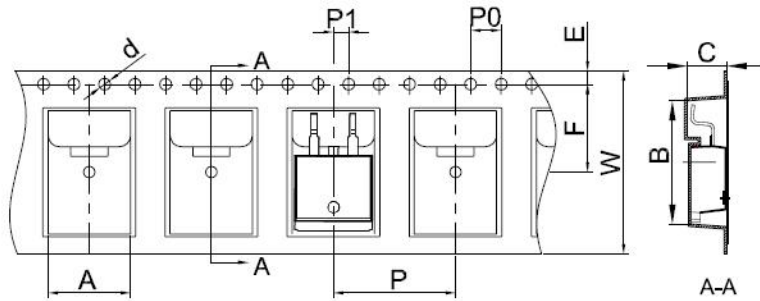
**Cautions:** Molding resin  
 Epoxy resin UL:94V-0

**Carrier Tape Specification DPAK**



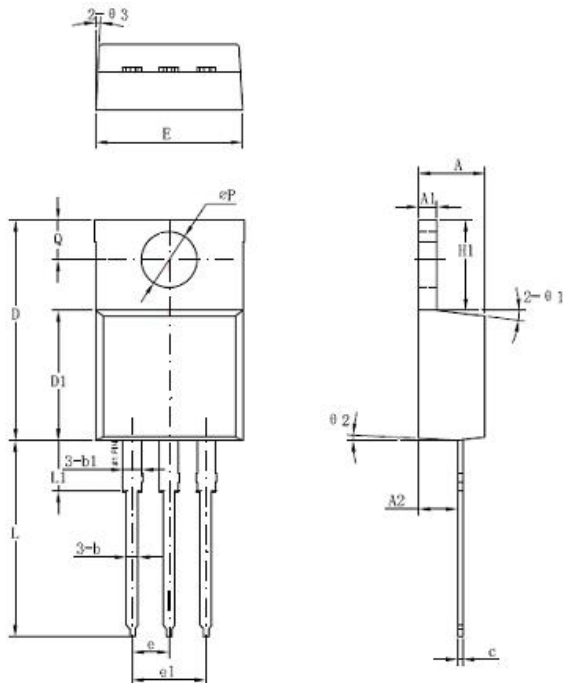
SYMBOL	Millimeters	
	Min.	Max.
A	6.80	7.00
B	10.40	10.60
C	2.60	2.80
d	Φ1.45	Φ1.65
E	1.65	1.85
F	7.40	7.60
P0	3.90	4.10
P	7.90	8.10
P1	1.90	2.10
W	15.90	16.30

### Carrier Tape Specification D2PAK



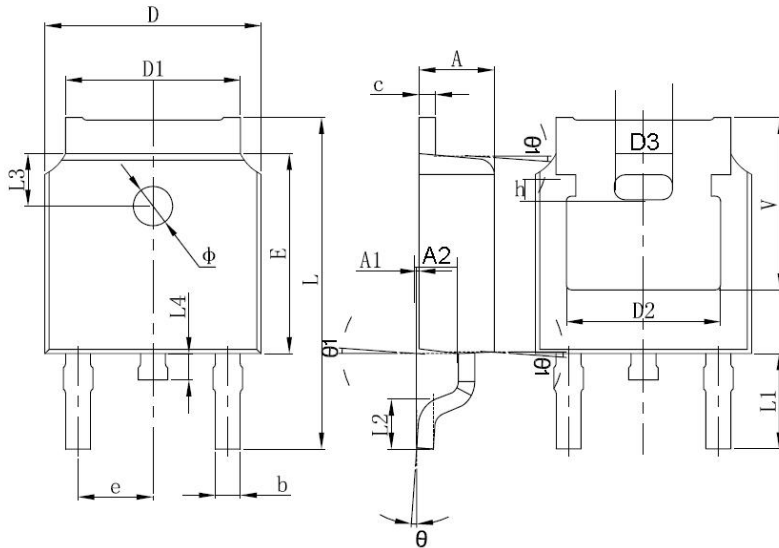
SYMBOL	Millimeters	
	Min.	Max.
A	10.70	10.90
B	16.03	16.23
C	5.11	5.31
d	1.45	1.65
E	1.65	1.85
F	11.40	11.60
P0	3.90	4.10
P	15.90	16.10
P1	1.90	2.10
W	23.90	24.30

### Mechanical Dimensions TO-220AB



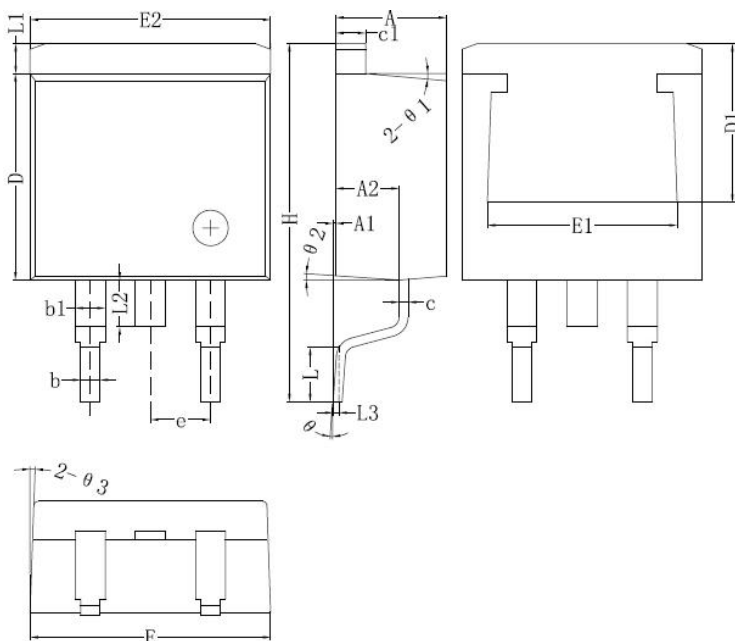
Symbol	Dimensions in millimeters		
	Min	Typical	Max
A	3.56	-	4.83
A1	0.51	-	1.40
A2	2.03	-	2.92
b	0.38	-	1.02
b1	1.14	-	1.78
c	0.31	-	0.61
D	14.22	-	16.51
D1	8.38	-	9.42
E	9.65	-	10.67
e	-	2.54	-
e1	-	5.08	-
H1	5.84	-	6.86
L	12.70	-	14.73
L1	-	-	6.35
ΦP	-	3.56	-
Q	2.54	-	3.43

**Mechanical Dimensions DPAK**



SYMBOL	Dimensions in millimeters		
	Min.	Typ.	Max.
A	2.18	-	2.39
A1	-	-	0.13
b	0.64	-	0.89
c	0.46	-	0.89
D	6.35	-	6.73
D2	4.32	-	-
E	5.97	6.10	6.22
e	2.29BSC		
L	9.40	-	10.41
L2	1.40	1.52	1.78
L4	-	-	1.02
$\theta$	0°	-	10°
V	5.21	-	-

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



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	-	1.78
L3	0.255BSC	
$\theta$	0	8°



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