Technical Data
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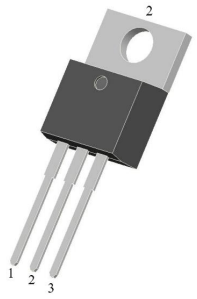
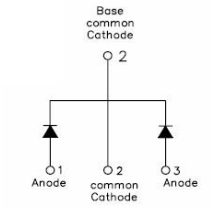
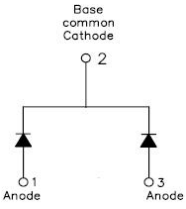
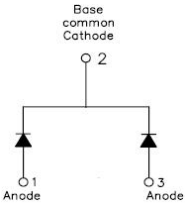
SDUR1540CT SDURB1540CT SDURD1540CT
ULTRAFAST RECTIFIER

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-O
- "-A" is an AEC-Q101 qualified device
- Terminals finish: Tin Lead-free plated
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

SDUR1540CT	SDURB1540CT	SDURD1540CT
		
		
TO-220AB	D^2PAK	DPAK

Maximum Ratings(at 25 °C unless otherwise specified)

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 Rectified Forward Current	$I_{F\ (AV)}$	Tc=126°C(TO-220AB, D2PAK) Tc=132°C(DPAK), In DC	8(Per Leg) 15(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I_{FSM}	8.3ms, Half Sine pulse	80	A

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Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V_{F1}	@8A, Pulse, T_J = 25°C	1.14	1.30	V
	V_{F2}	@8A, Pulse, T_J = 125°C	1.06	1.20	V
Reverse Current(Per Leg)*	I_{R1}	@V_R = rated V_R , T_J = 25°C	0.05	10	μA
	I_{R2}	@V_R = rated V_R , T_J = 125°C	36	500	uA
Reverse Recovery Time(Per Leg)	t_{rr}	I_F=500mA, I_R=1A,and I_{rm}=250mA, T_J = 25°C	38	45	ns

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

Thermal-Mechanical Specifications:

Characteristics	Symbol	SDUR1540CT	SDURB1540CT	SDURD1540CT	Units
Junction Temperature	T_J	-55 to +150			°C
Storage Temperature	T_{stg}	-55 to +150			°C
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	2.3	2.3	1.7	K/W
Approximate Weight	wt	2.0	1.85	0.39	g
Case Style	TO-220AB/ D^2PAK/ DPAK				

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Ratings and Characteristics Curves

Figure1 Typical Forward Characteristics

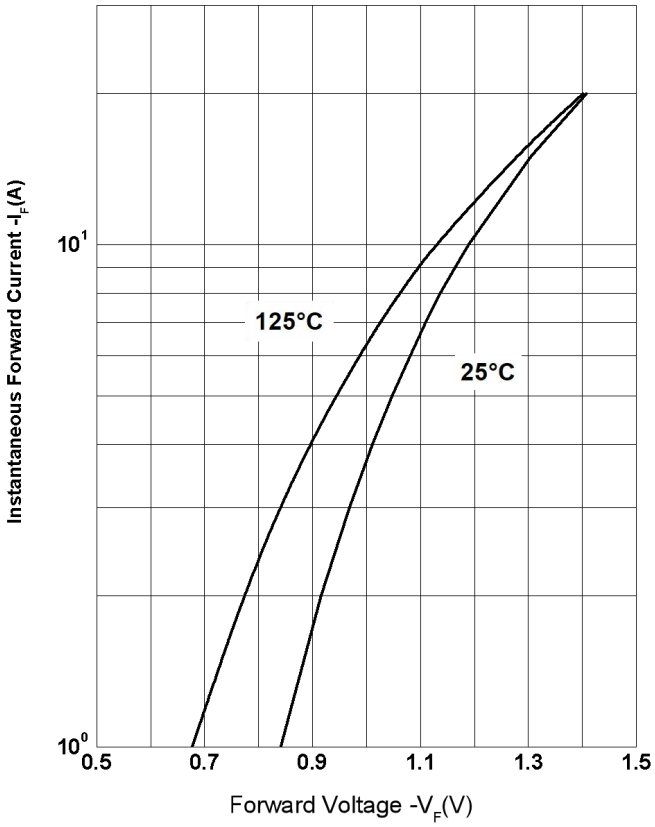


Figure 2 Typical Reverse Characteristics

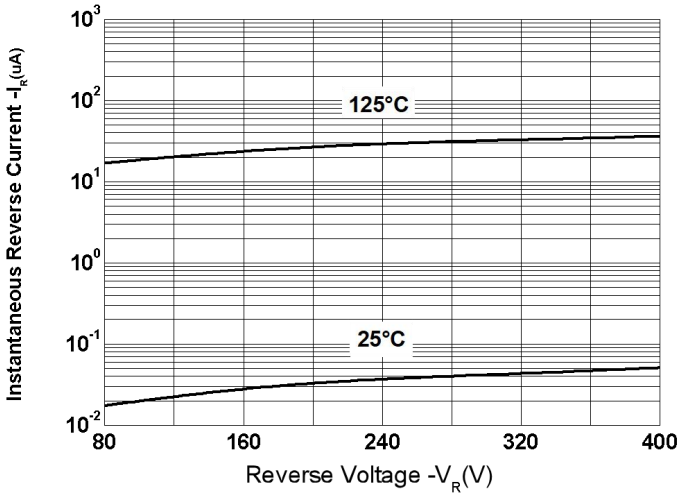
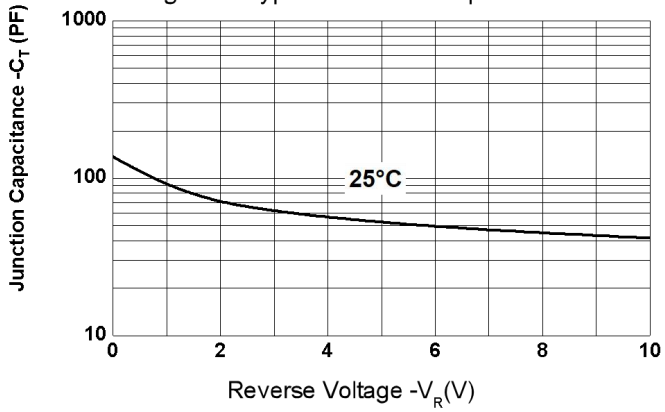


Figure 3 Typical Junction Capacitance



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SDURB1540CT
SDURD1540CT

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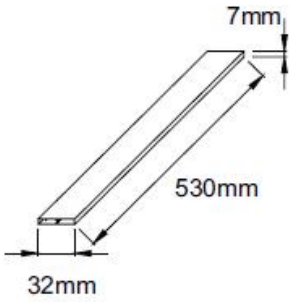
Tube Specification

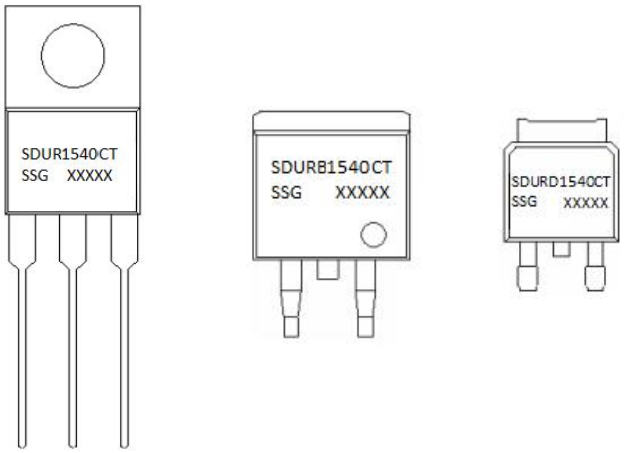
Device	Package	Shipping
SDUR1540CT	TO-220AB	50pcs / tube
SDURB1540CT	D^2 PAK	800pcs / reel
SDURB1540CTTR	D^2 PAK	800pcs / reel
SDURD1540CT	DPAK	2500pcs / reel
SDURD1540CTTR	DPAK	2500pcs / reel

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

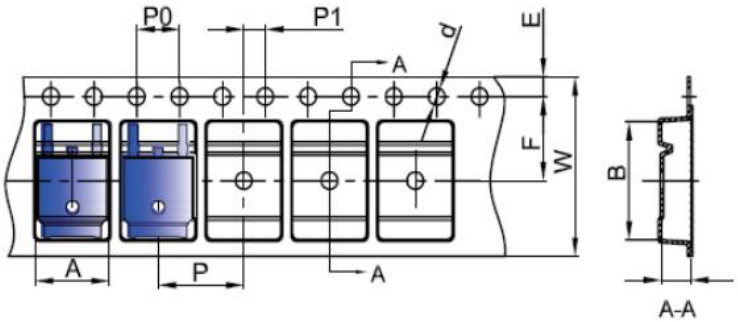


Where XXXXX is YYWWL

SDUR	= Device Type
B/D	= Package type
15	= Forward Current (15A)
400	= 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 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

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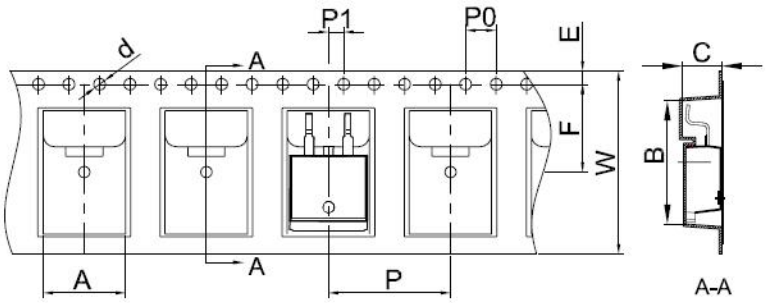
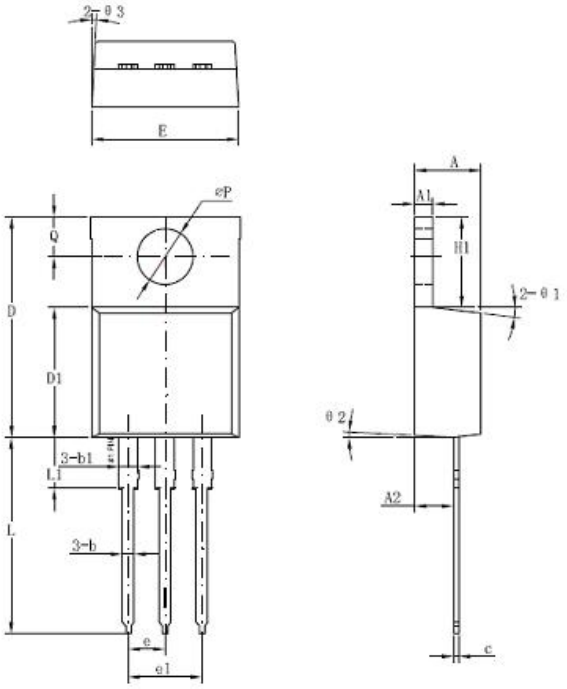
Carrier Tape Specification D2PAK



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

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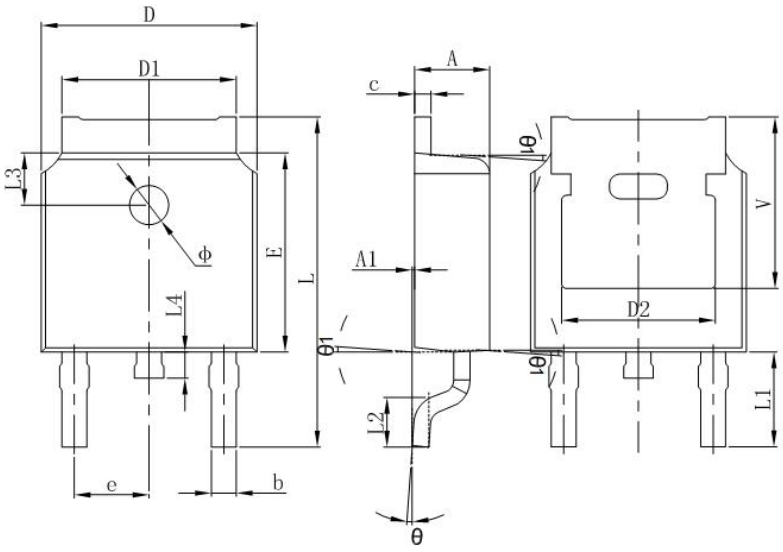
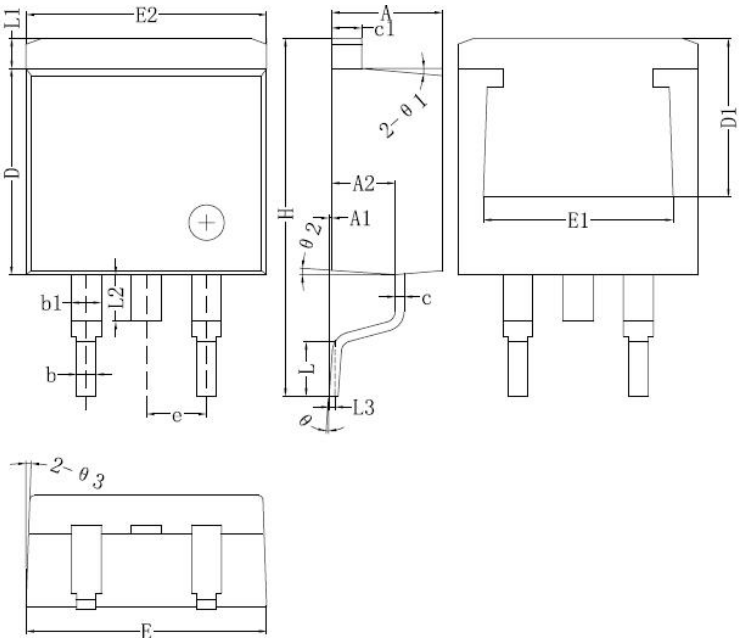
Mechanical Dimensions DPAK



The outline from different package houses may have slight differences. So the outline above is just schematic. The dimensions are controlled per specifications.

Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	2.18	-	2.39
A1	-	-	0.13
b	0.64	-	0.89
c	0.46	-	0.89
D	6.35	-	6.73
D1	4.95	-	5.46
D2	4.32	-	-
E	5.97	6.1	6.22
e	2.29BSC		
L	9.4	-	10.41
L1	2.90 REF.		
L2	1.4	1.52	1.78
L3	1.60 REF.		
L4	-	-	1.02
Φ	1.1	-	1.3
Θ	0°	-	10°
V	5.21	-	-

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	-	1.78
L3	0.255BSC	
Θ	0	8°

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