

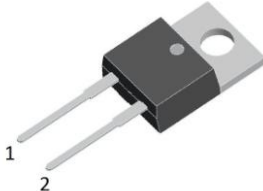
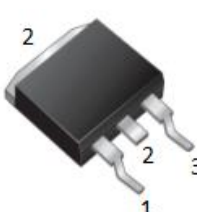
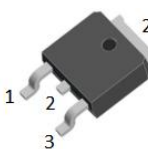

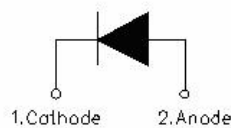
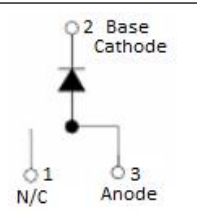
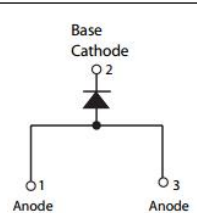
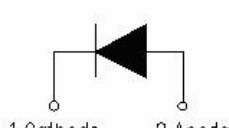
SDUR1530/SDURB1530/SDURD1530/SDURF1530 ULTRAFAST RECTIFIER

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

SDUR1530	SDURB1530	SDURD1530	SDURF1530
			
			
TO-220AC	D ² PAK	DPAK	ITO-220AC

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 @ $T_c=75^\circ\text{C}$, rectangular wave form	15	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse	240	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 15A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.93	1.26	V
	V_{F2}	@ 15A, Pulse, $T_J = 150\text{ }^\circ\text{C}$	-	1.01	V
Reverse Current*	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$	0.04	10	μA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 150\text{ }^\circ\text{C}$	-	500	μA
Reverse Recovery Time	t_{rr}	$I_F=500\text{mA}$, $I_R=1\text{A}$, and $I_{rm}=250\text{mA}$	42	45	ns

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

Thermal-Mechanical Specifications:

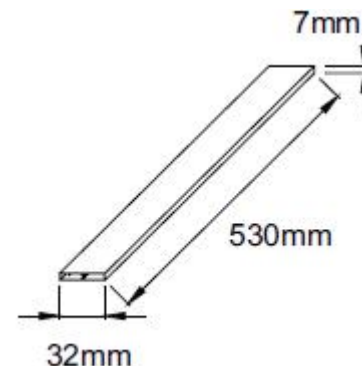
Characteristics	Symbol	SDUR1530	SDURB1530	SDURD1530	SDURF1530	Units
Junction Temperature	T_J	-55 to +150				$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150				$^\circ\text{C}$
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	2.3	2.3	1.7	4.2	$^\circ\text{C/W}$
Case Style		TO-220AC/ D ² PAK/ DPAK/ ITO-220AC				

Tube Specification

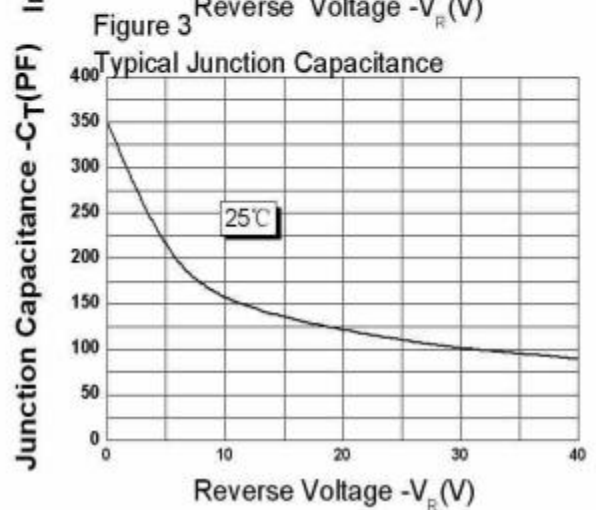
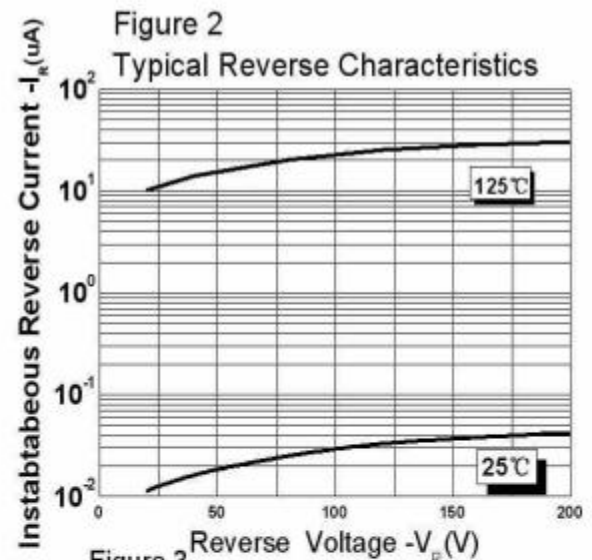
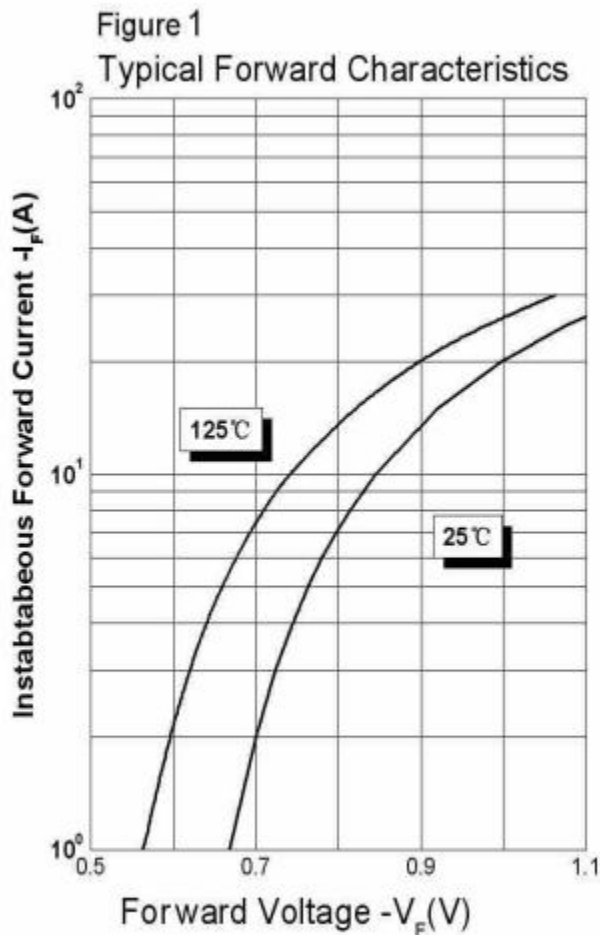
Device	Package	Weight	Shipping
SDUR1530	TO-220AC	1.6g	50pcs / tube
SDURB1530	D ² PAK	1.85g	800pcs / reel
SDURB1530TR	D ² PAK	1.85g	800pcs / reel
SDURD1530	DPAK	0.39g	2500pcs / reel
SDURD1530TR	DPAK	0.39g	2500pcs / reel
SDURF1530	ITO-220AC	1.6g	50pcs / tube

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

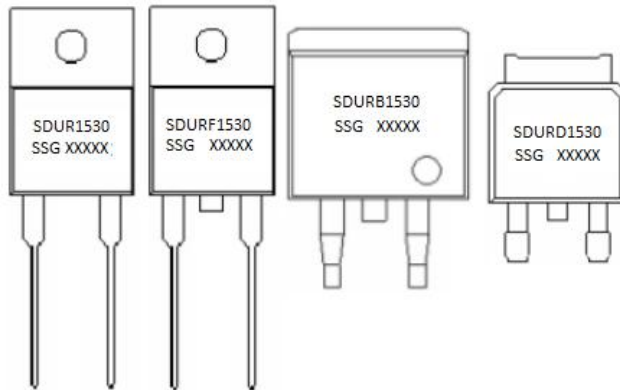
Tube Specification(TO-220AC/ITO-220AC)



Ratings and Characteristics Curves



Marking Diagram

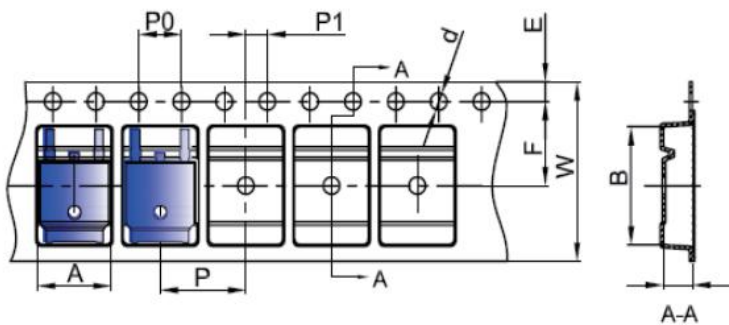


Where XXXXX is YYWWL

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

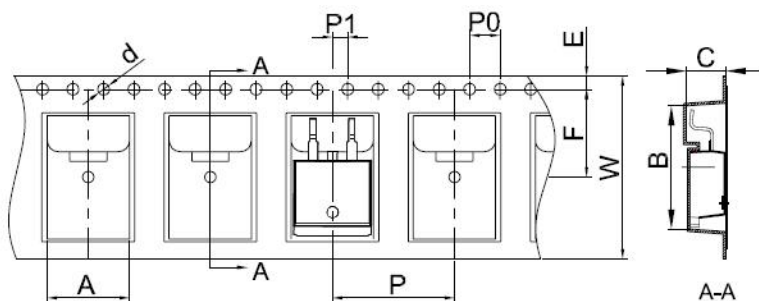
Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape & Reel Specification DPAK



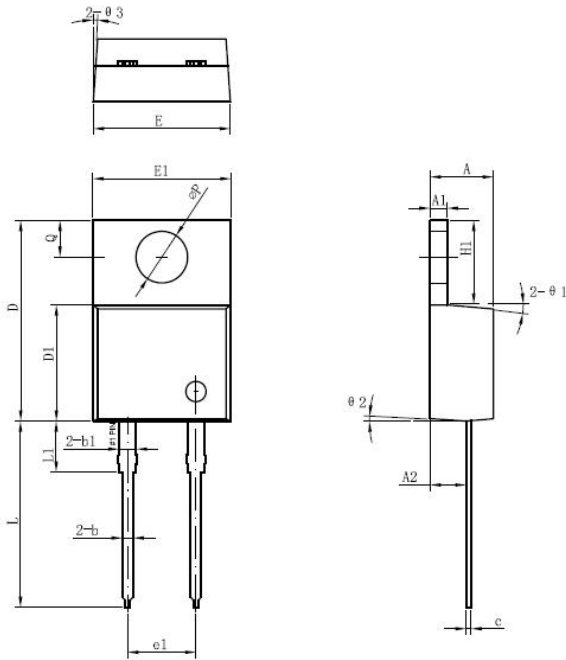
SYMBOL	Millimeters	
	Min.	Max.
A	6.80	7.00
B	10.40	10.60
C	2.60	2.80
d	Φ1.45	Φ1.65
E	1.65	1.85
F	7.40	7.60
P0	3.90	4.10
P	7.90	8.10
P1	1.90	2.10
W	15.90	16.30

Carrier Tape & Reel Specification D²PAK



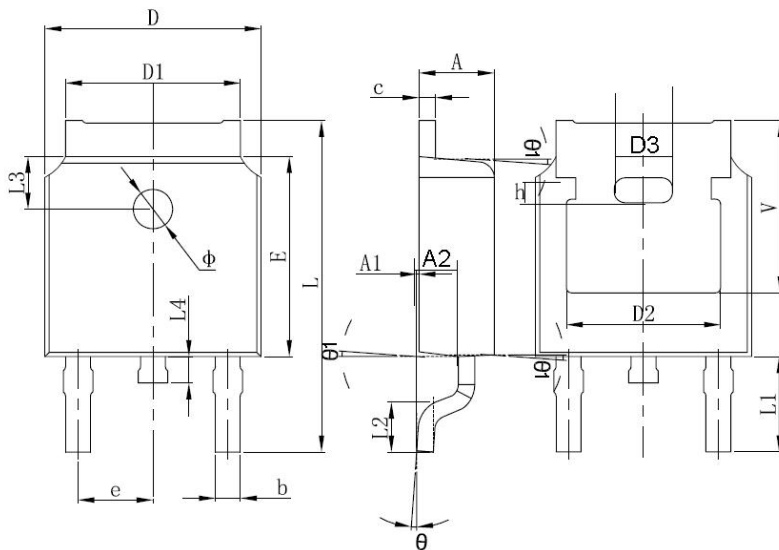
SYMBOL	Millimeters	
	Min.	Max.
A	10.70	10.90
B	16.03	16.23
C	5.11	5.31
d	1.45	1.65
E	1.65	1.85
F	11.40	11.60
P0	3.90	4.10
P	15.90	16.10
P1	1.90	2.10
W	23.90	24.30

Mechanical Dimensions TO-220AC



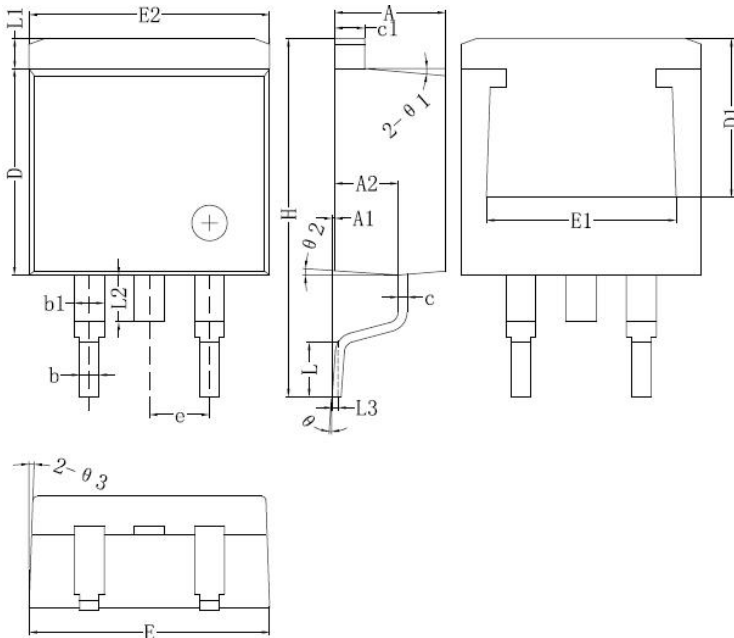
Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	4.47	4.70	4.85
A1	1.17	1.27	1.37
A2	2.52	2.69	2.89
b	0.71	0.81	0.96
b1	1.17	1.27	1.37
c	0.31	0.38	0.61
D	14.64	14.94	15.24
D1	8.50	8.07	8.90
E	10.01	10.16	10.31
E1	9.98	10.18	10.38
e1	4.98	5.08	5.18
H1	6.04	6.24	6.44
L	13.00	13.86	14.08
L1	3.56	3.80	3.96
Φ P	3.74	3.84	4.04
Q	2.54	2.74	2.94
$\Theta 1$		5°	
$\Theta 2$		4°	
$\Theta 3$		4°	

Mechanical Dimensions DPAK



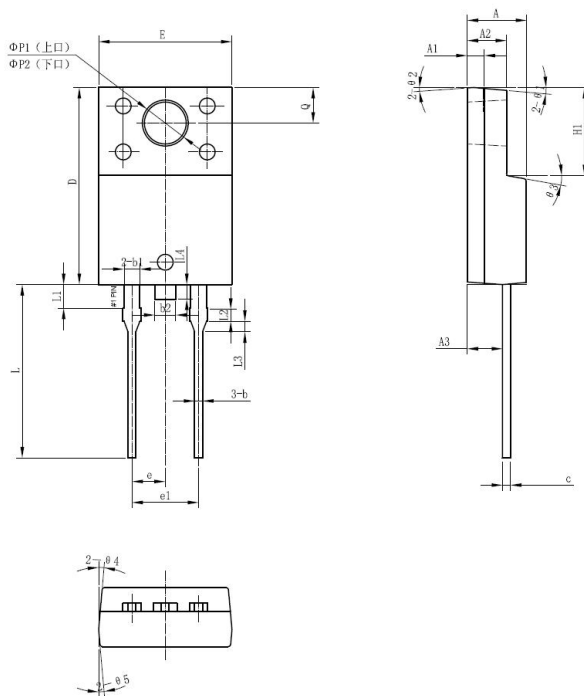
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.40	0.087	0.094
A1	0.00	0.127	0.000	0.005
b	0.66	0.86	0.026	0.034
c	0.46	0.60	0.018	0.024
D	6.50	6.70	0.256	0.264
D1	5.13	5.46	0.202	0.215
D2	4.83 REF.		0.190 REF.	
E	6.00	6.20	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.70	10.40	0.381	0.409
L1	2.90 REF.		0.144 REF.	
L2	1.40	1.70	0.055	0.067
L3	1.60 REF.		0.063 REF.	
L4	0.60	1.00	0.024	0.039
Φ	1.10	1.30	0.043	0.051
Θ	0°	8°	0°	8°
h	0.00	0.30	0.000	0.012
V	5.35 REF.		0.211 REF.	

Mechanical Dimensions D²PAK



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°	

Mechanical Dimensions ITO-220AC



SYMBOL	Millimeters		
	MIN.	TYP.	MAX.
A	4.30	4.50	4.70
A1	1.10	1.30	1.50
A2	2.80	3.00	3.20
A3	2.50	2.70	2.90
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
b2	1.50	1.60	1.75
c	0.50	0.60	0.75
D	14.80	15.00	15.20
E	9.96	10.16	10.36
e	-	2.55	-
e1	5.00	5.10	5.16
H1	6.50	6.70	6.90
L	12.70	13.20	13.70
L1	1.60	1.80	2.00
L2	0.80	1.00	1.20
L3	0.60	0.80	1.00
L4	-	1.10	1.50
ΦP1(上口)	3.30	3.50	3.70
ΦP2(下口)	2.99	3.19	3.39
Q	2.50	2.70	2.90
Θ1		5°	
Θ2		4°	
Θ3		10°	
Θ4		5°	
Θ5		5°	



SDUR1530
SDURB1530
SDURD1530
SDURF1530

Technical Data
Data Sheet N1265, Rev. A



DISCLAIMER:

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC Diode Solutions sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall SMC Diode Solutions be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC Diode Solution assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall SMC Diode Solutions be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC Diode Solutions.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC Diode Solutions.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Diodes - General Purpose, Power, Switching category:](#)

Click to view products by [SMC Diode manufacturer:](#)

Other Similar products are found below :

[MMBD3004S-13-F](#) [1N3611](#) [NTE156A](#) [NTE6244](#) [1SS400CST2RA](#) [SDAA13](#) [SHN2D02FUTW1T1G](#) [1N4449](#) [1N456A](#) [1N914BTR](#)
[D291S45T](#) [BAS 16-02L E6327](#) [BAS 16-02V H6327](#) [BAS 21U E6327](#) [BAS 28 E6327](#) [BAW56DWQ-7-F](#) [BAW75-TAP](#) [MM230L-CAA](#)
[IDW40E65D1](#) [JAN1N3600](#) [JAN1N4454UR-1](#) [SMMSD4148T3G](#) [BYW95B/A52A](#) [NSVDAN222T1G](#) [CDSZC01100-HF](#) [BAV70HDW-7](#)
[BAS28-7](#) [JANTX1N6640](#) [BAW56HDW-13](#) [BAS28 TR](#) [VS-HFA04SD60STR-M3](#) [1SS388-TP](#) [BAV99TQ-13-F](#) [BAV99HDW-13](#) [1N4004](#)
[MMDB30-E28X](#) [LS4148](#) [IDV15E65D2](#) [W0503RH200S0L](#) [M0268SJ200NLF](#) [M0268RJ200NLF](#) [S3MBF](#) [US1J](#) [DAN217U-TP](#) [SHV-06JNS-](#)
[Q](#) [IDW30C65D1](#) [IDW80C65D1](#) [VS-HFA30TA60CSR-M3](#) [M1MA152WAT1](#) [MMSD71RKT1G](#)