Technical Data
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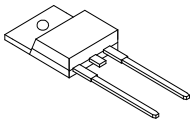
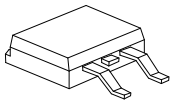
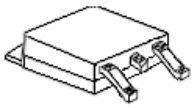
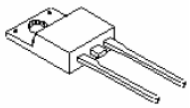
SDUR15120/SDURB15120/SDURD15120/SDURF15120
ULTRAFAST PLASTIC RECTIFIER

Applications:

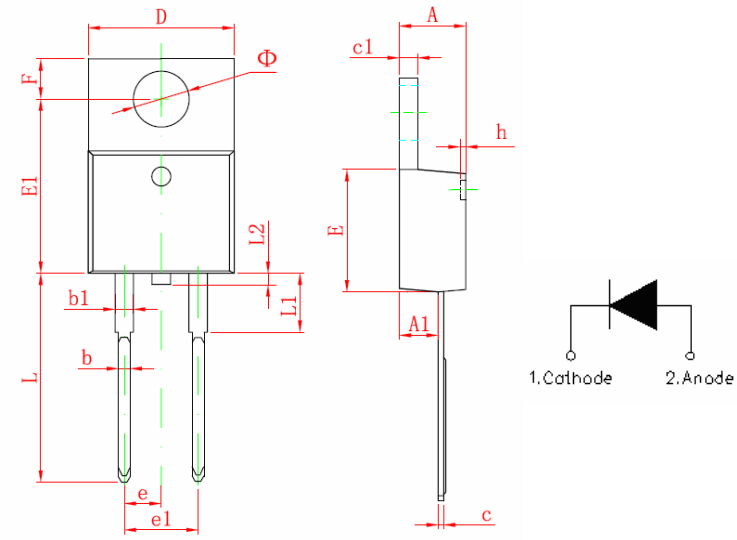
- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners 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
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

SDUR15120	SDURB15120	SDURD15120	SDURF15120
			
TO-220AC	D²PAK	DPAK	ITO-220AC

Mechanical Dimensions: In mm/Inches



Symbol	Dimensions In Millimeters	
	Min	Max
A	4.470	4.670
A1	2.520	2.820
b	0.710	0.910
b1	1.170	1.370
c	0.310	0.530
c1	1.170	1.370
D	10.010	10.310
E	8.500	8.900
E1	12.060	12.460
e	2.540 TYP	
e1	4.980	5.180
F	2.590	2.890
h	0.000	0.300
L	13.400	13.800
L1	3.560	3.960
L2		1.000
Φ	3.735	3.935

TO-220AC

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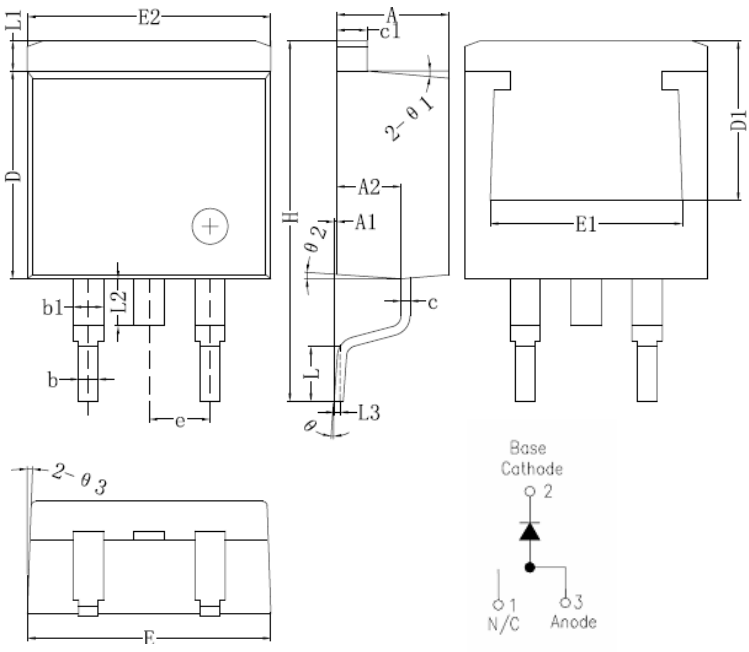
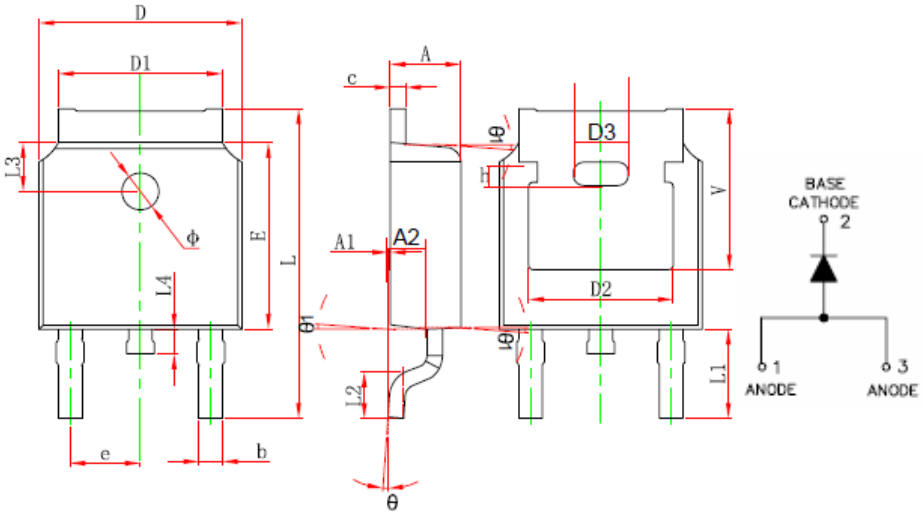


Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	4.55	4.70	4.85
A1	0	0.10	0.25
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1		1.27	
c	0.36	0.38	0.61
c1	1.17	1.27	1.37
D	8.55	8.70	8.85
D1	6.40		
E	10.01	10.16	10.31
E1	7.6		
E2	9.98	10.08	10.18
e		2.54	
H	14.6	15.1	15.6
L	2.00	2.30	2.70
L1	1.17	1.27	1.40
L2			2.20
L3		0.25BSC	
e	0	-	8°
e1		5°	
e2		4°	
e3		4°	

D^2 PAK



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.380	0.087	0.094
A10.000	0.000	0.100	0.000	0.004
b	0.710	0.810	0.028	0.032
c	0.460	0.560	0.018	0.022
D	6.500	6.700	0.256	0.264
D1	5.130	5.460	0.202	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.800	10.400	0.386	0.409
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	1.600 REF.		0.063 REF.	
L4	0.600	1.000	0.024	0.039
Φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
A2	0.910	1.110	0.036	0.044
V	5.350 REF.		0.211 REF.	
D3	1.778REF.		0.070REF.	
h	0.762REF.		0.030REF.	
θ1	7°		7°	

DPAK

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• FAX (86) 25-87123900 • World Wide Web Site - http://www.sangdest.com.cn • E-Mail Address - sales@ sangdest.com.cn •

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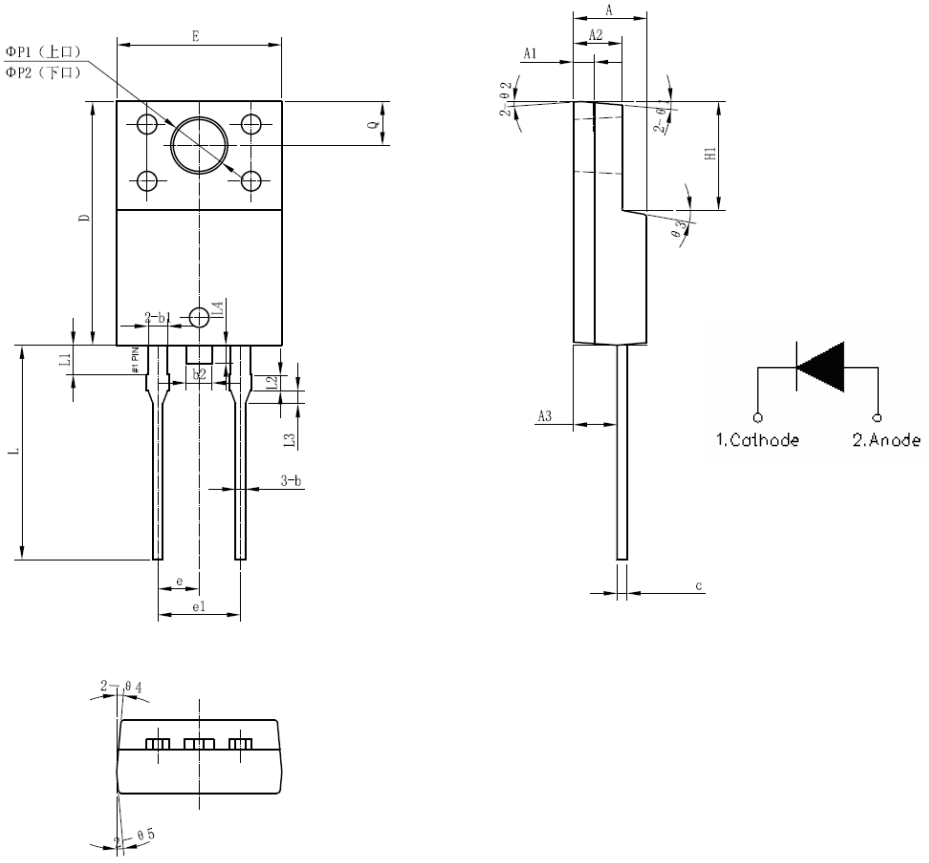

SYMBOL	MIN.	TYP.	MAX.
A	4.30	4.50	4.70
A1	1.10	1.30	1.50
A2	2.80	3.00	3.20
A3	2.50	2.70	2.90
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
b2	1.50	1.60	1.75
c	0.55	0.60	0.75
D	14.80	15.00	15.20
E	9.96	10.16	10.36
e	-	2.55	-
e1	-	5.10	-
H1	6.50	6.70	6.90
L	12.70	13.20	13.70
L1	1.60	1.80	2.00
L2	0.80	1.00	1.20
L3	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°	

ITO-220AC(HD)

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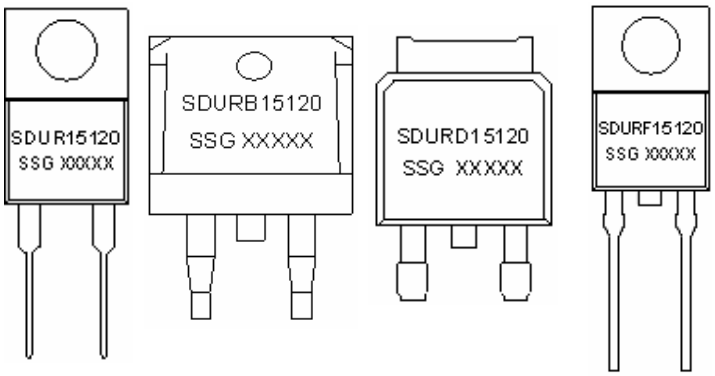
Marking Diagram:



Where XXXXX is YYWWL

SDUR = Device Type
B/D/F = Package type
15 = Forward Current (15A)
120 = Reverse Voltage (1200V)
SSG = SSG
YY = Year
WW = Week
L = Lot Number

SDUR15120 SDURB15120 SDURD15120 SDURF15120

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

Ordering Information:

Device	Package	Shipping
SDUR15120	TO-220AC (Pb-Free)	50pcs / tube
SDURB15120	D^2 PAK (Pb-Free)	800pcs / reel
SDURD15120	DPAK (Pb-Free)	2500pcs / reel
SDURF15120	ITO-220AC (Pb-Free)	50 pcs / tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	1200	V
Max. Average Forward Current	$Io_{(AV)}$	50% duty cycle @Tc=125℃, rectangular wave form	15	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse	90	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop(Per leg)*	V_{F1}	@15A, Pulse, T_J = 25°C	2.75	V
	V_{F2}	@15A, Pulse, T_J = 150°C	1.79	V
Max. Reverse Current*	I_{R1}	@V_R = rated V_R T_J = 25°C	100	μA
	I_{R2}	@V_R = rated V_R T_J = 150°C	0.5	mA
Max. Reverse Recovery Time	t_{rr1}	I_F=1A, -di/dt=100A/us,V_R=30V, and T_J = 25°C	50	ns

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

Thermal-Mechanical Specifications:

Characteristics	Symbol	SDUR15120	SDURB15120	SDURD15120	SDURF15120	Units
Junction Temperature	T_J	-55 to +175				°C
Storage Temperature	T_{stg}	-55 to +175				°C
Maximum Thermal Resistance Junction to Case(per leg)*	$R_{\theta JC}$	2.3	2.3	1.7	4.2	K/W
Approximate Weight	wt	1.8	1.85	0.39	1.8	g
Case Style	TO-220AC/ D^2PAK/ DPAK/ ITO-220AC					

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