



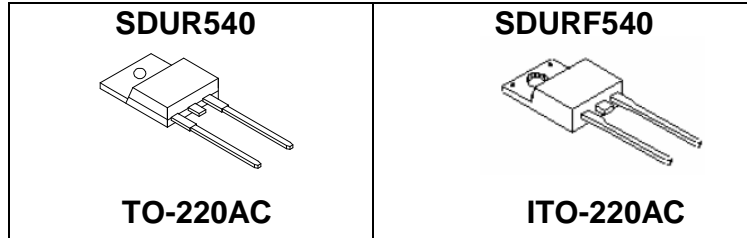
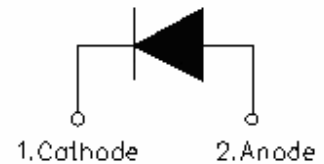
SDUR540/SDURF540 ULTRAFAST PLASTIC RECTIFIER

Applications:

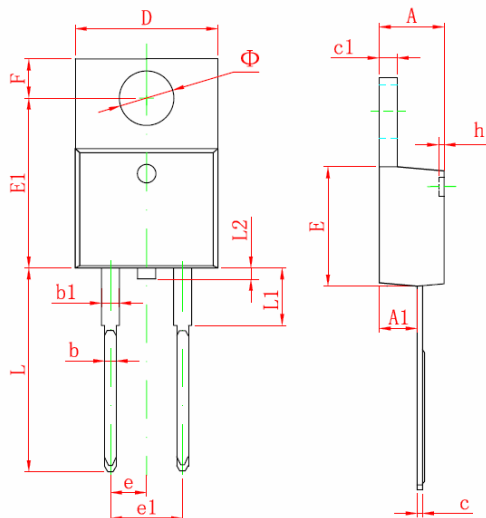
- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners and welders

Features:

- Ultra-Fast Switching
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-0
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

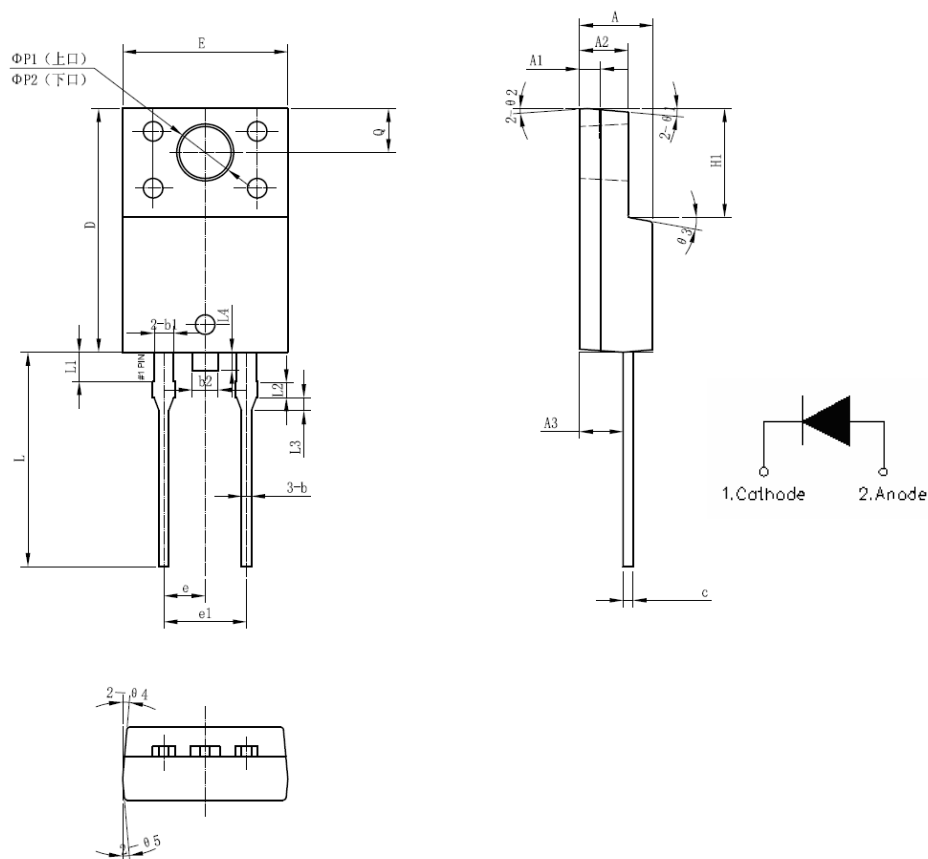


Mechanical Dimensions: In mm



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

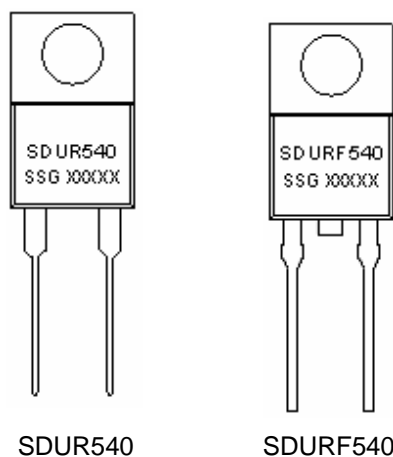
TO-220AC (CJ)



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)

Marking Diagram:



Where XXXXX is YYWWL

SDUR = Device Type
 F = Package type
 5 = Forward Current (5A)
 40 = Reverse Voltage (400V)
 SSG = SSG
 YY = Year
 WW = Week
 L = Lot Number

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

Ordering Information:

Device	Package	Shipping
SDUR540	TO-220AC (Pb-Free)	50 pcs / tube
SDURF540	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}	-	400	V
Max. Average Forward Current	$I_{O(AV)}$	50Hz, Sine wave, $T_C=105^{\circ}C$	5	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	50Hz, Half Sine wave	80	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_F	@ $I_F = 5A$, Pulse, $T_J = 25^\circ C$	1.3	V
Max. Reverse Current	I_R	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ C$	30	μA
Max. Reverse Recovery Time	t_{rr}	$I_F = 500mA$, $I_R = 1A$, and $I_{rm} = 250mA$	45	ns

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

Thermal-Mechanical Specifications:

Characteristics	Symbol	SDUR540	SDURF540	Units
Junction Temperature	T_J	-55 to +150		$^\circ C$
Storage Temperature	T_{stg}	-55 to +150		$^\circ C$
Maximum Thermal Resistance Junction to Case(per leg)*	$R_{\theta JC}$	2.3	4.2	K/W
Approximate Weight	wt	1.8	1.8	g
Case Style		TO-220AC/ITO-220AC		

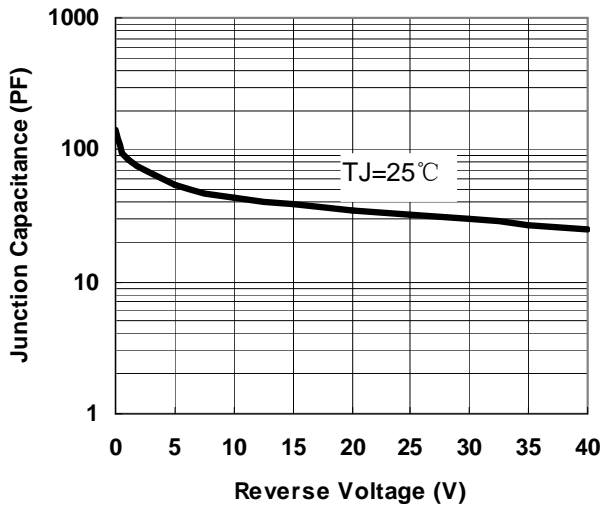


Fig.1-Typical Junction Capacitance

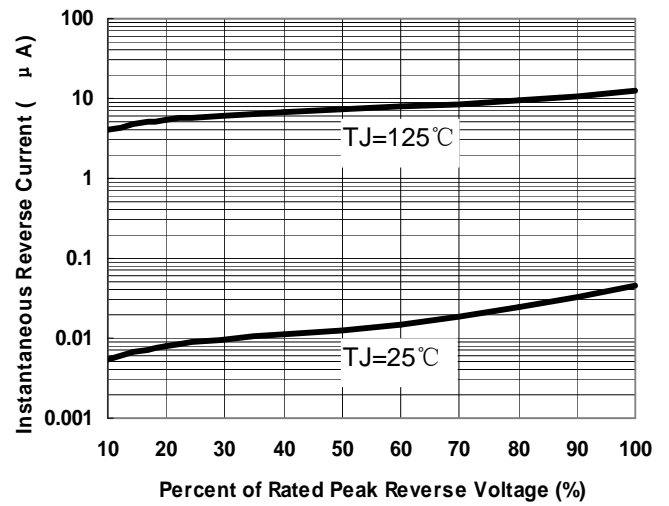


Fig.2-Typical Reverse Characteristics

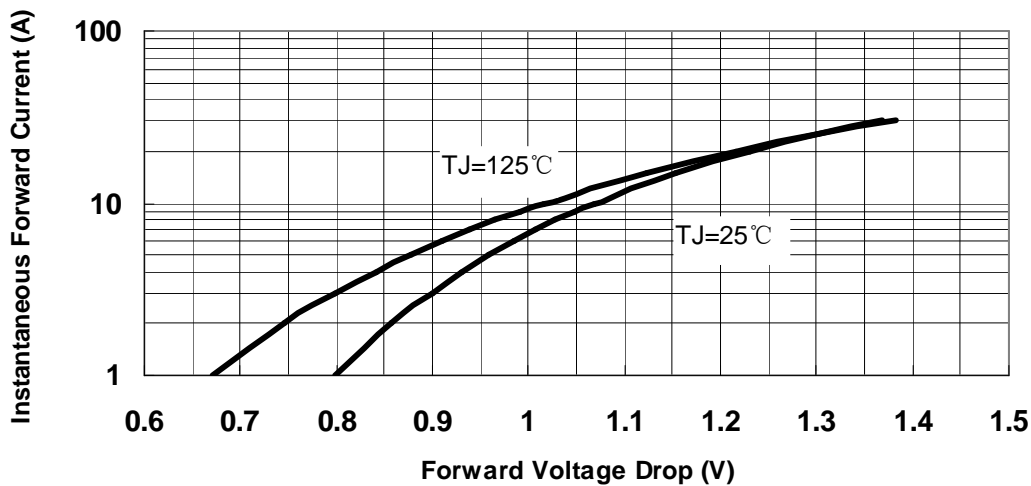


Fig.3-Typical Instantaneous Forward Voltage Characteristics

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