



Technical Data
Data Sheet N0408, Rev. -

Green Products

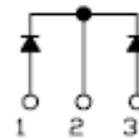
SDURF2020CT/CTR ULTRAFAST PLASTIC RECTIFIER

Applications:

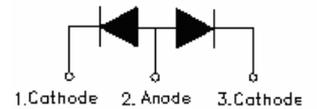
- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners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

Features:

- Fully Molded Isolation
- Ultra-Fast Recovery
- Low Forward Voltage Drop
- High Surge Capability
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

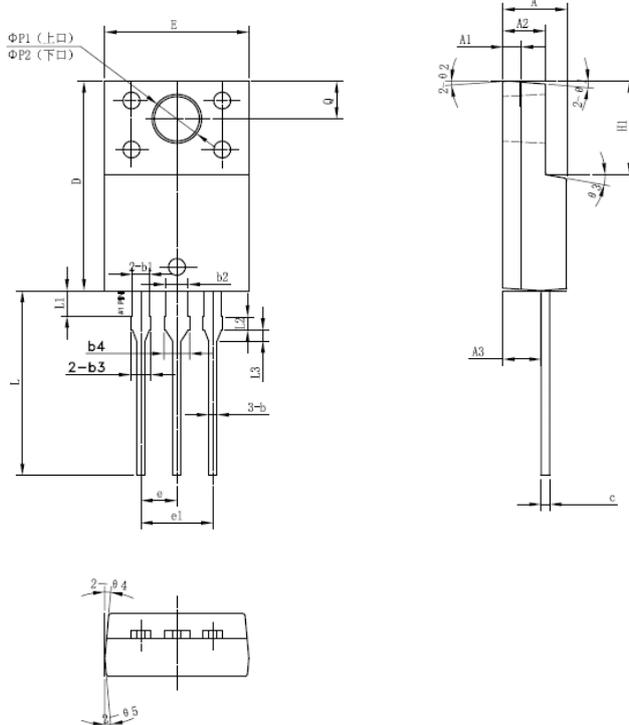


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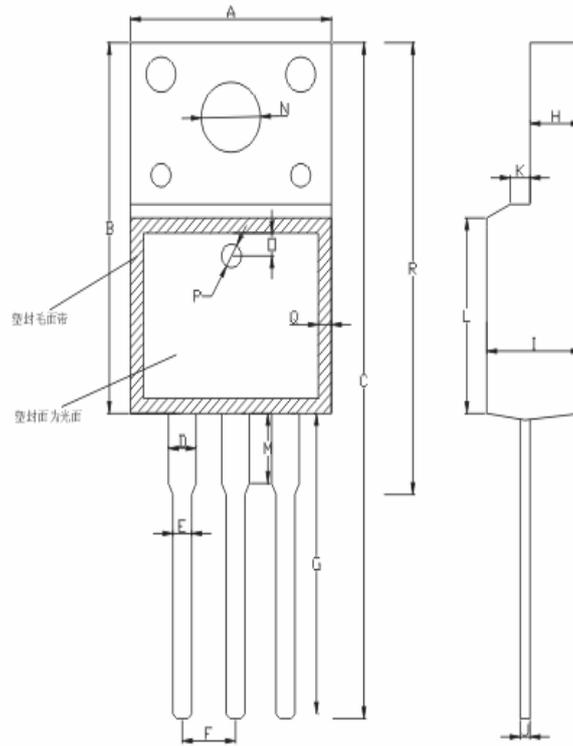
SDURF2020CTR

Mechanical Dimensions: In mm



OPTION 1

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
b3	1.20	1.30	1.45
b4	1.60	1.70	1.85
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
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°	

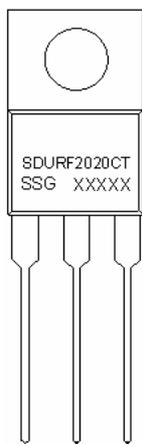


A:10.20 ± 0.50	B:15.90 ± 0.50	C:29.00 ± 1.00	D:1.24 ± 0.10
E:0.80 ± 0.10	F:2.54 ± 0.10	G:13.10 ± 1.0	H:2.55 ± 0.05
I:4.70 ± 0.05	J:0.50 ± 0.05	K:1.20 ± 0.20	L:8.00 ± 0.50
M:3.00 ± 0.50	N:3.20 ± 0.20	O:1.25 ± 0.05	P:1.5 ± 0.05
Q:1.0 ± 0.20	R: 19.2 ± 1.0		

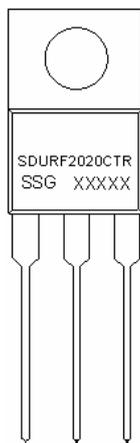
OPTION 2(SR)

ITO-220AB

Marking Diagram:



SDURF2020CT



SDURF2020CTR

Where XXXXX is YYWWL

SDUR = Device Type
F = Package Type
20 = Forward Current (20A)
20 = Reverse Voltage (200V)
CT/CTR = Configuration
SSG = SSG
YY = Year
WW = Week
L = Lot Number

Ordering Information:

Device	Package	Shipping
SDURF2020CT/CTR	ITO-220AB (Pb-Free)	50pcs / 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}	-	200	V
Average rectified forward current	$I_{F(AV)}$	50% duty cycle @Tc=100°C, rectangular wave form	20	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse	125	A



Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop (Per leg)	V_F	@ $I_F = 10A$, Pulse, $T_J = 25^\circ C$	1.15	V
Reverse Current	I_R	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ C$	15	μA
	I_R	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ C$	250	μA
Junction Capacitance	C_T	BAIS=5V, 1MHZ	60	PF
Reverse Recovery Time	t_{rr}	$I_F = 500mA$, $I_R = 1A$, and $I_{rm} = 250mA$	35	ns

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

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	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	$R_{\theta JC}$	DC operation	3.5	$^\circ C / W$
Maximum Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation	50	$^\circ C / W$
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			

Figure 1
Typical Forward Characteristics

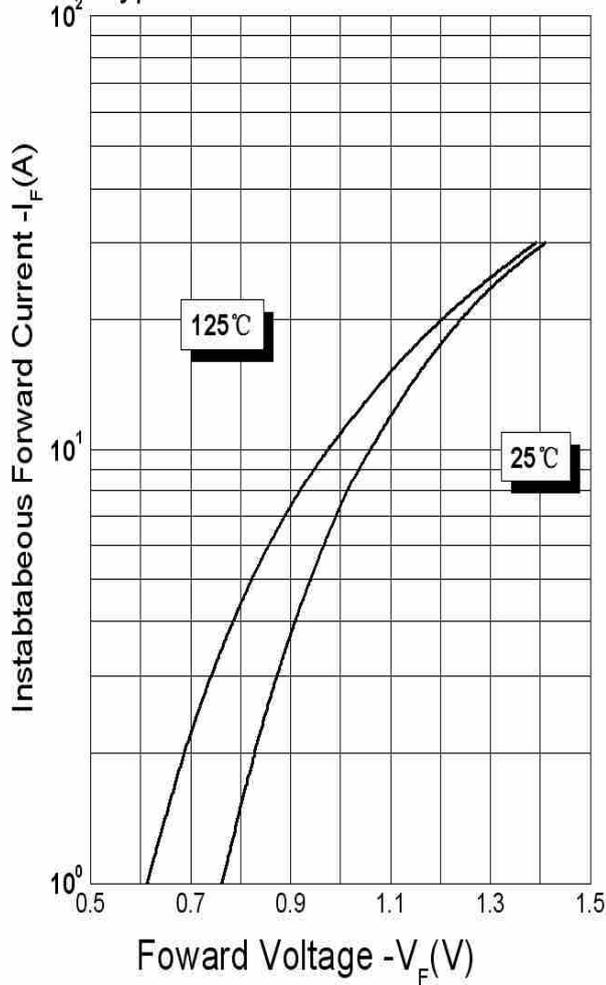


Figure 2
Typical Reverse Characteristics

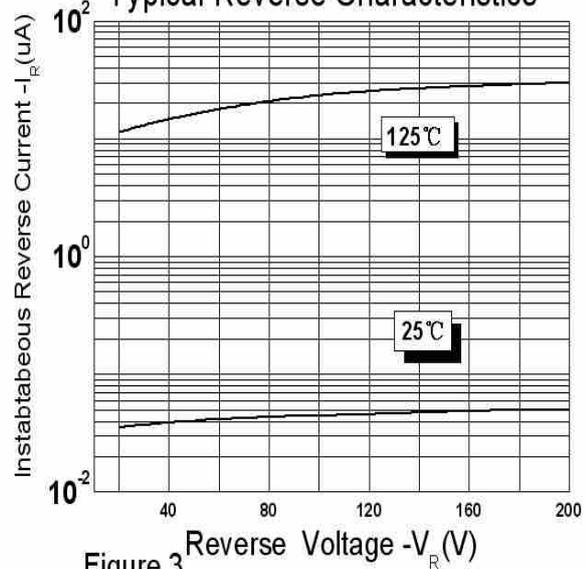
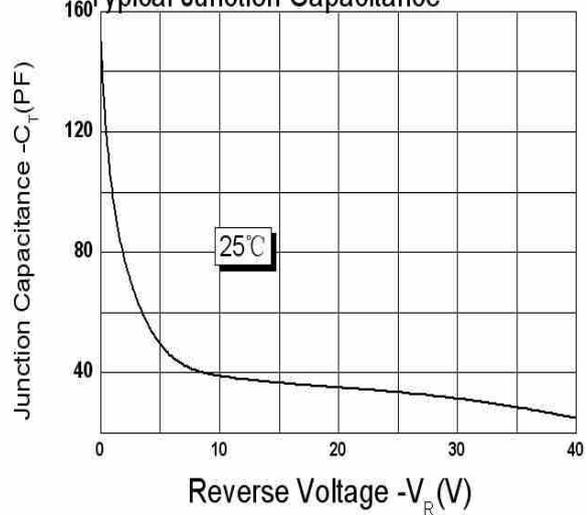


Figure 3
Typical Junction Capacitance



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