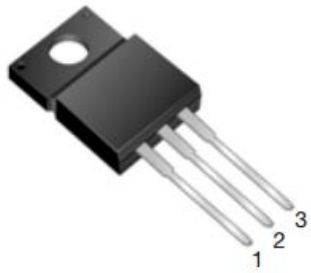
Technical Data
Data Sheet N1891, Rev. A

SDURL2060CT ULTRAFAST RECTIFIER

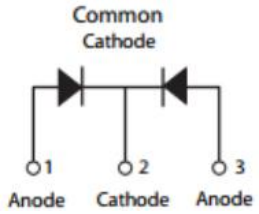


TO-220SF

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

Circuit Diagram



Features

- Ultra-Fast switching
- High current capability
- Low reverse leakage current
- High surge current capability
- This is a Pb − free device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	600	V
Average Rectified Forward Current	$I_{F\ (AV)}$	50% duty cycle @Tc=100°C, rectangular wave form	10(Per Leg) 20(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I_{FSM}	8.3ms, Half Sine pulse	100	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V_{F1}	@10A, Pulse, T_J = 25°C	1.33	2.2	V
	V_{F2}	@10A, Pulse, T_J = 125°C	1.27	2.0	V
Reverse Current(Per Leg)*	I_{R1}	@V_R = rated V_R , T_J = 25°C	0.3	10	μA
	I_{R2}	@V_R = rated V_R , T_J = 125°C	84	500	μA
Reverse Recovery Time(Per Leg)	t_{rr}	I_F=500mA, I_R=1A,and I_{rm}=250mA	42	50	ns

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

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Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	5	°C/W
Approximate Weight	wt	-	2	g
Case Style	TO-220SF			

Ratings and Characteristics Curves

Figure1
Typical Forward Characteristics

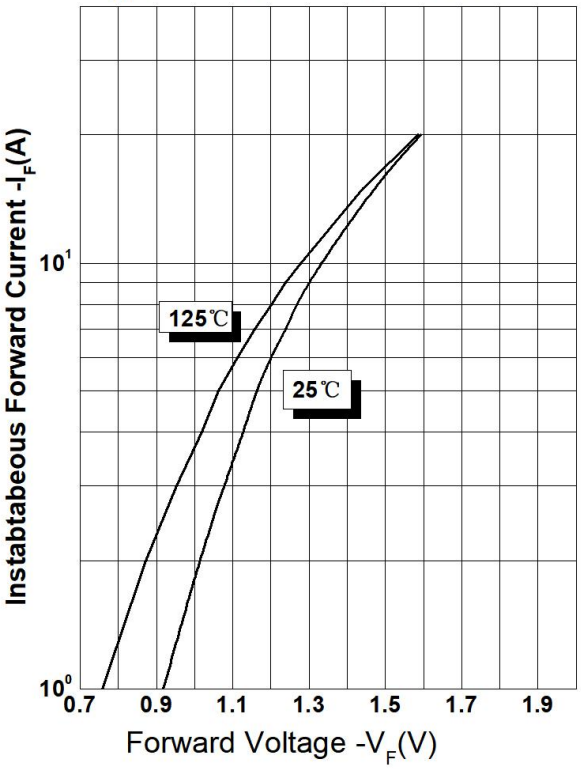


Figure 2
Typical Reverse Characteristics

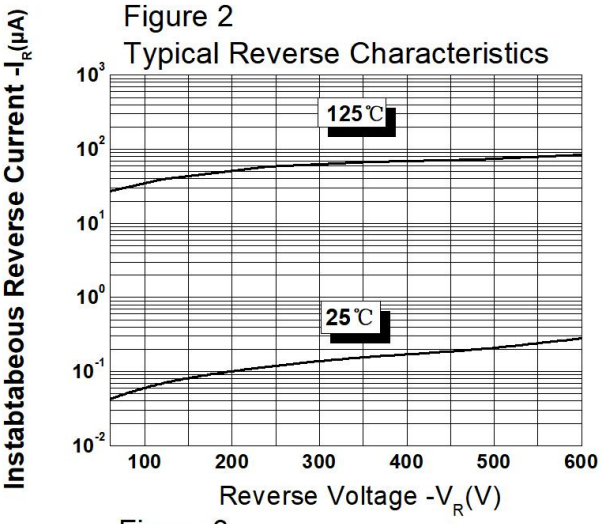
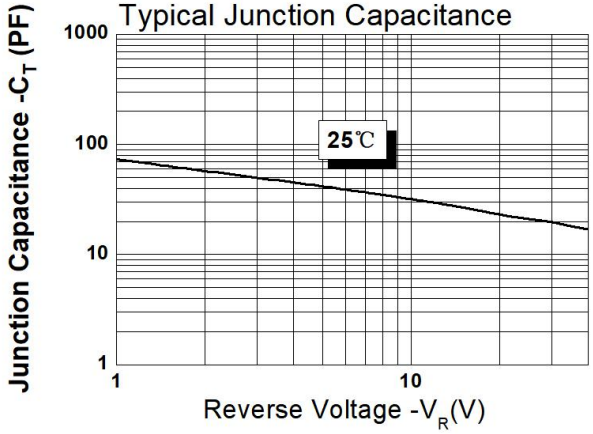


Figure 3
Typical Junction Capacitance



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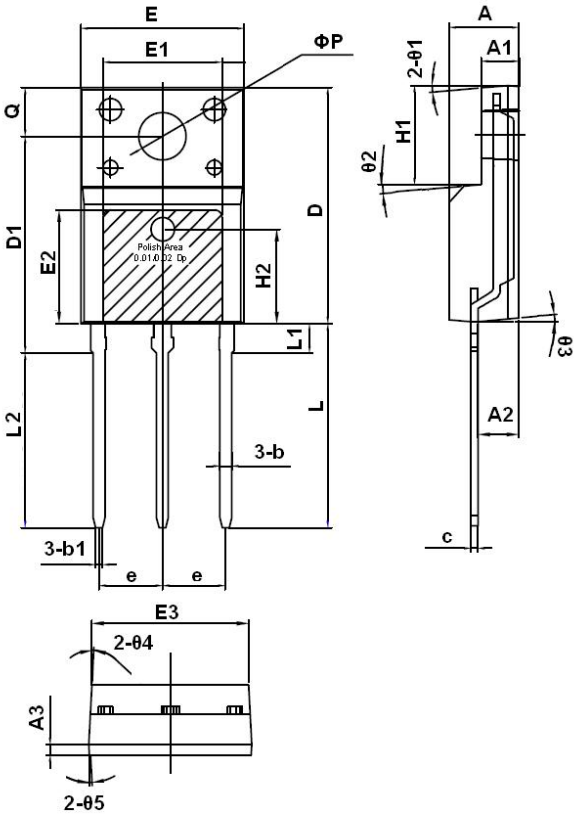
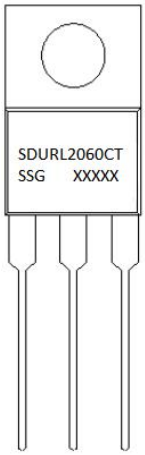
Mechanical Dimensions TO-220SF



SYMBOL	Millimeters		
	MIN.	TYP.	MAX.
A	4.50	4.70	4.90
A1	2.34	2.54	2.75
A2	2.65	-	-
b	0.70	0.80	0.90
b1	0.25	0.35	0.45
c	0.45	0.50	0.60
D	15.67	15.87	16.07
D1	14.37	14.57	14.77
E	10.80	11.00	11.20
E1	7.90	8.00	8.10
E2	7.55	7.65	7.75
E3	-	10.58	-
e	4.05	4.25	4.45
H1	6.48	6.68	6.88
H2	-	6.35	-
L	13.58	13.78	13.98
L1	1.80	2.00	2.20
L2	11.48	11.78	12.08
ΦP	3.08	3.18	3.28
Q	3.20	3.30	3.40
Θ1		5°	
Θ2		5°	
Θ3		5°	
Θ4		3°	
Θ5		3°	

Marking Diagram



Where XXXXX is YYWWL

SDUR	= Device Type
L	= Package type
20	= Forward Current (20A)
60	= Reverse Voltage (600V)
CT	= Configuration
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

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

Ordering Information

Device	Package	Shipping
SDURL2060CT	TO-220SF (Pb-Free)	45 pcs/ tube

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

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