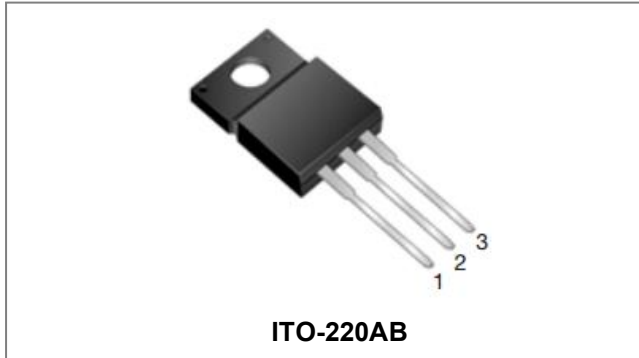


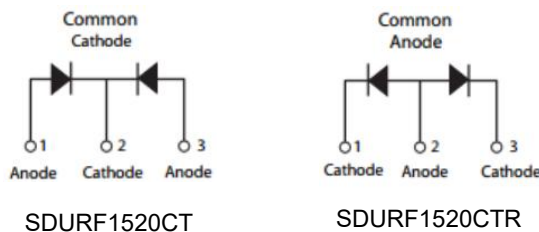
SDURF1520CT/CTR ULTRAFAST RECTIFIER



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

Circuit Diagram



Features

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

Maximum Ratings(limiting values, T_c =25°C unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V _{RRM}	-	200	V
Working Peak Reverse Voltage	V _{RWM}			
DC Blocking Voltage	V _R			
Average Rectified Forward Current	I _{F(AV)}	T _c =102°C, In DC	8(Per Leg) 15(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I _{FSM}	8.3ms, Half Sine pulse	80	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V _{F1}	@8A, Pulse, T _J = 25°C	0.90	1.2	V
	V _{F2}	@8A, Pulse, T _J = 150°C	-	1.1	V
Reverse Current(Per Leg)*	I _{R1}	@V _R = rated V _R , T _J = 25°C	0.06	5	μA
	I _{R2}	@V _R = rated V _R , T _J = 125°C	44	500	uA
Reverse Recovery Time(Per Leg)	t _{tr}	I _F =500mA, I _R =1A, and I _{tm} =250mA	28	35	ns

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

Thermal-Mechanical Specifications:

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

Ratings and Characteristics Curves

Figure 1 Typical Forward Characteristics

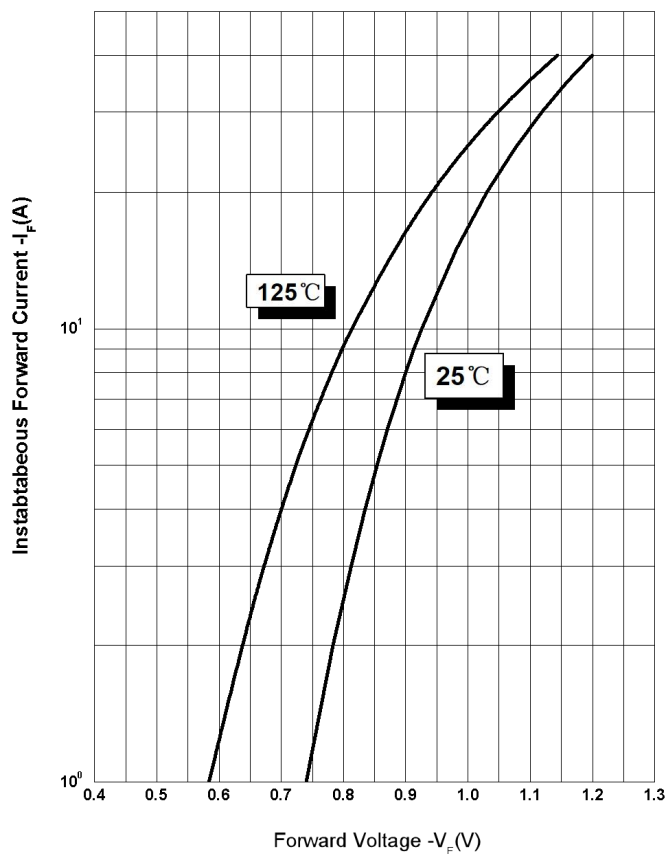


Figure 2 Typical Reverse Characteristics

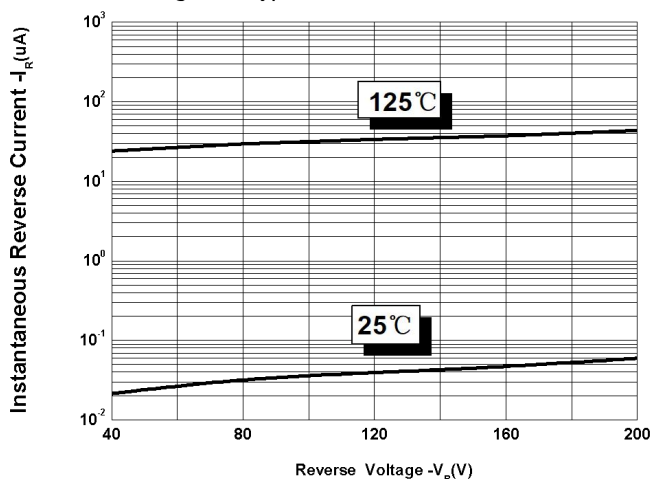
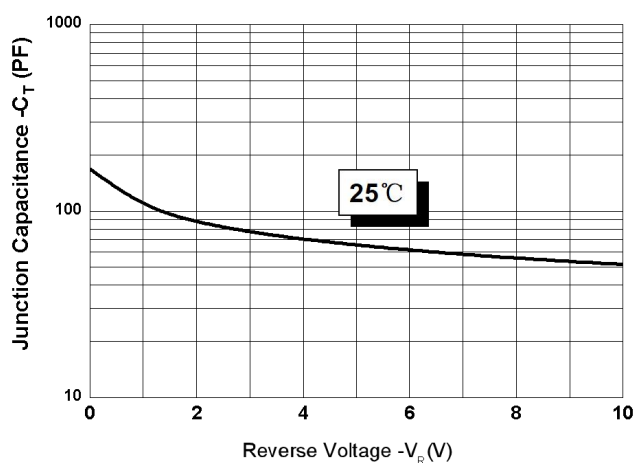


Figure 3 Typical Junction Capacitance





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