

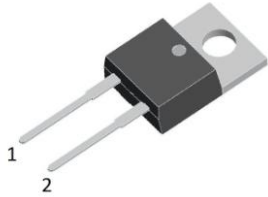
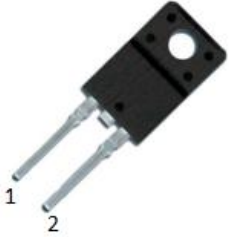
SDUR1040/SDURF1040 ULTRAFAST RECTIFIER

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

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

SDUR1040	SDURF1040
	
	
TO-220AC	ITO-220AC

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	400	V
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_c=105^\circ\text{C}$, rectangular wave form	10	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse	125	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 10A, Pulse, $T_J = 25^\circ\text{C}$	1.06	1.3	V
	V_{F2}	@ 10A, Pulse, $T_J = 125^\circ\text{C}$	0.98	1.2	V
Reverse Current*	I_{R1}	@ $V_R = \text{rated } V_R, T_J = 25^\circ\text{C}$	0.05	10	μA
	I_{R2}	@ $V_R = \text{rated } V_R, T_J = 125^\circ\text{C}$	7	500	μA
Reverse Recovery Time	t_{rr}	$I_F=500\text{mA}, I_R=1\text{A}, \text{and } I_{rm}=250\text{mA}$	27	45	ns

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

Thermal-Mechanical Specifications:

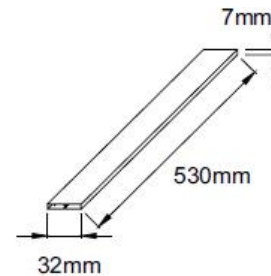
Characteristics	Symbol	SDUR1040	SDURF1040	Units
Junction Temperature	T_J	-55 to +150		$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150		$^\circ\text{C}$
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	2.3	4.2	$^\circ\text{C/W}$
Case Style		TO-220AC/ ITO-220AC		

Tube Specification

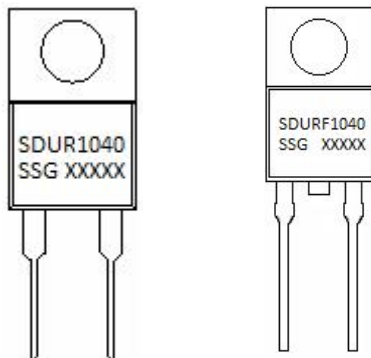
Device	Package	Weight	Shipping
SDUR1040	TO-220AC	1.6g	50pcs / tube
SDURF1040	ITO-220AC	1.6g	50pcs / tube

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

Tube Specification(TO-220AC/ITO-220AC)



Marking Diagram

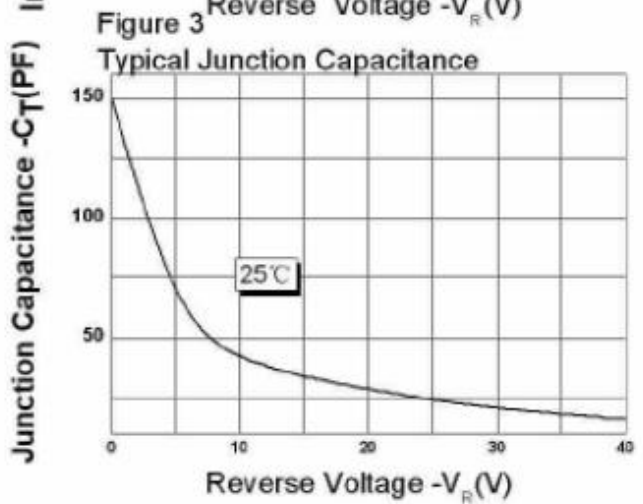
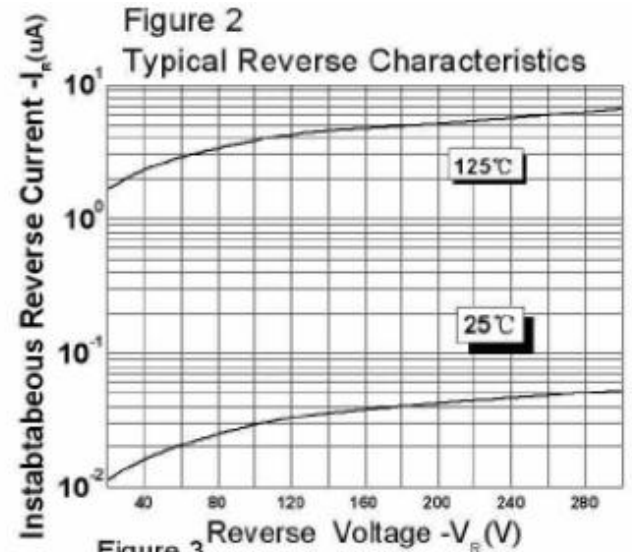
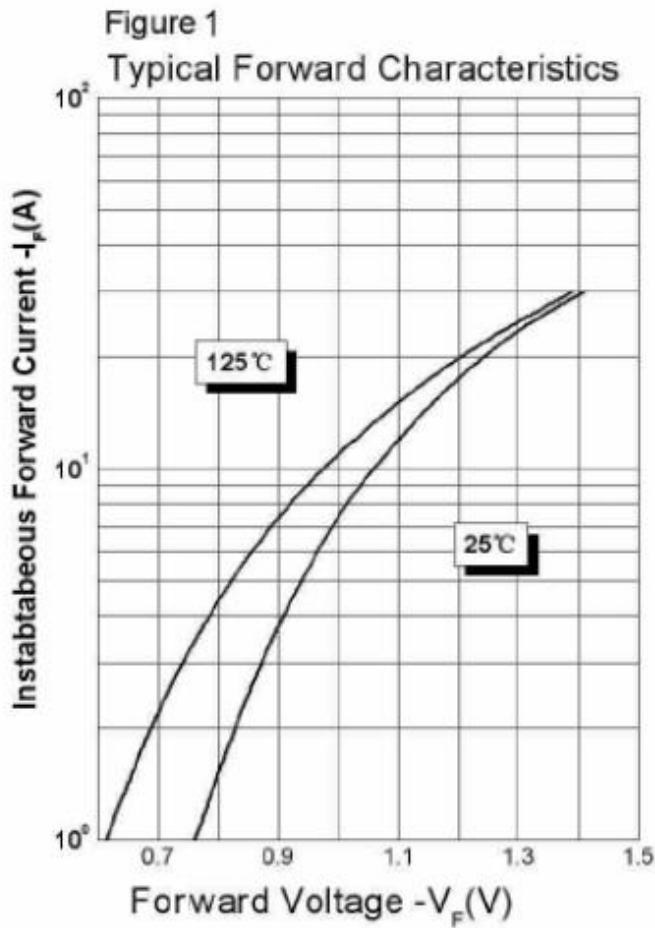


Where XXXXX is YYWWL

SDUR = Device Type
F = Package type
10 = Forward Current (10A)
40 = Reverse Voltage (400V)
SSG = SSG
YY = Year
WW = Week
L = Lot Number

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

Ratings and Characteristics Curves





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