

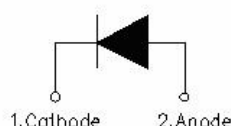
SDURK10Q60 ULTRAFAST RECTIFIER



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
- 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 @ $T_c=105^\circ\text{C}$, rectangular wave form	10	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse	100	A

Electrical Characteristics:

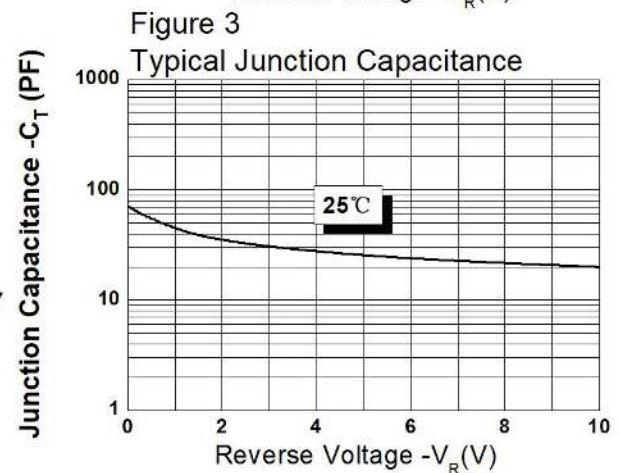
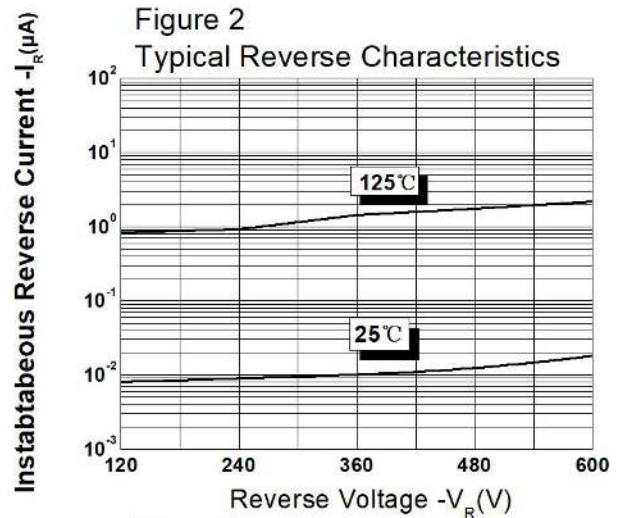
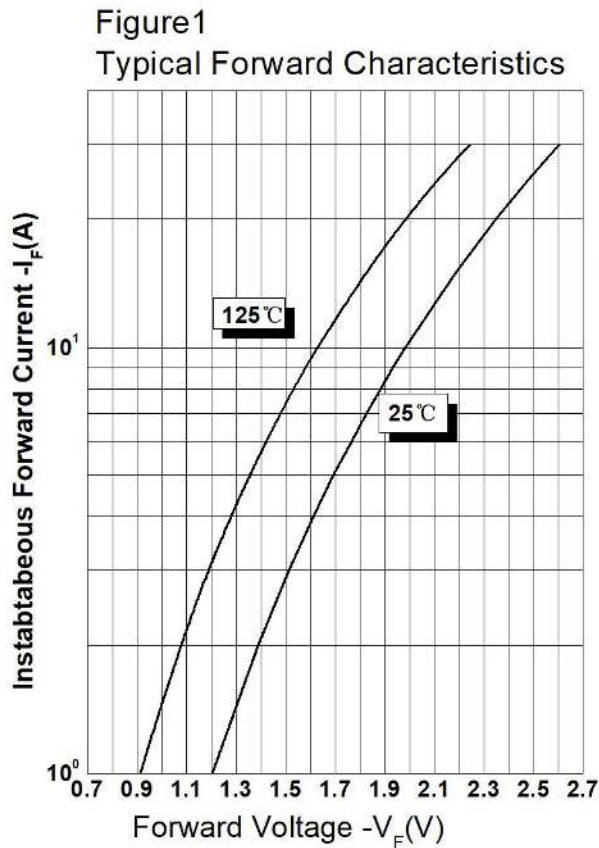
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop *	V_{F1}	@10A, Pulse, $T_J = 25^\circ\text{C}$	2.0	2.3	V
	V_{F2}	@10A, Pulse, $T_J = 125^\circ\text{C}$	1.63	2.0	V
Reverse Current *	I_{R1}	@ $V_R = \text{rated } V_R$, $T_J = 25^\circ\text{C}$	0.02	10	μA
	I_{R2}	@ $V_R = \text{rated } V_R$, $T_J = 125^\circ\text{C}$	2	500	μA
Reverse Recovery Time	t_{rr}	$I_F=500\text{mA}$, $I_R=1\text{A}$, and $I_m=250\text{mA}$	19	25	ns

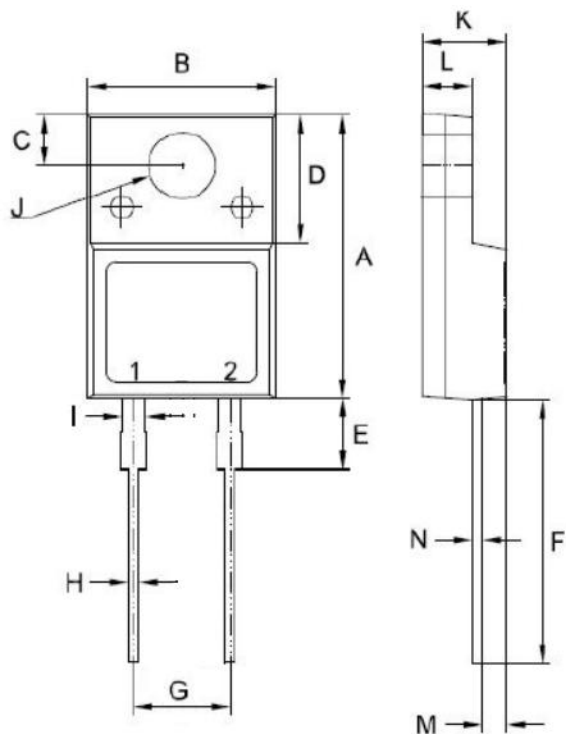
* Pulse width < 300 μs , duty cycle < 2%

Thermal-Mechanical Specifications:

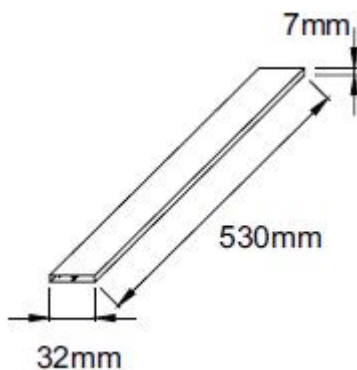
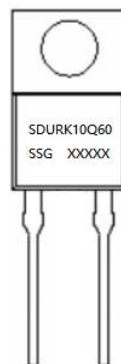
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Case	$R_{\theta\text{JC}}$	DC operation	2.0	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	1.6	g
Case Style		ITO-220AC-2L		

Ratings and Characteristics Curves



Mechanical Dimensions ITO-220AC-2L


SYMBOL	Millimeters		
	MIN.	TYP.	MAX.
A	14.50	15.30	16.00
B	9.50	10.00	10.50
C	2.50	3.00	3.5
D	6.30	6.80	7.30
E	3.10	3.70	4.30
F	13.00	13.5	14.00
G	4.90	5.10	5.30
H	0.30	0.60	0.90
I	0.90	1.2	1.50
J	3.20	3.50	3.80
K	4.24	4.54	4.84
L	2.30	2.61	2.92
M	1.09	1.29	1.49
N	0.42	0.53	0.63

Tube Specification

Marking Diagram


Where XXXXX is YYWWL

SDUR = Device Type
 K = Package type
 10 = Forward Current (10A)
 Q = Q
 60 = Reverse Voltage (600V)
 SSG = SSG
 YY = Year
 WW = Week
 L = Lot Number

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

Ordering Information:

Device	Package	Shipping
SDURK10Q60	ITO-220AC-2L (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.

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