

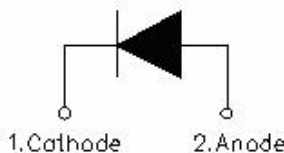
SDURK15U60 ULTRAFAST RECTIFIER



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
- Terminals finish: 100% Pure Tin
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Maximum Ratings@ $T_A=25^\circ\text{C}$ unless otherwise specified

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 @ $T_c=98^\circ\text{C}$, rectangular wave form	15	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse	100	A

Electrical Characteristics@T_A=25°C unless otherwise specified

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V _{F1}	@ 15A, Pulse, T _J = 25°C	1.70	2.2	V
	V _{F2}	@ 15A, Pulse, T _J = 125°C	1.60	2.0	V
Reverse Current*	I _{R1}	@V _R = rated V _R , T _J = 25°C	0.3	20	μA
	I _{R2}	@V _R = rated V _R , T _J = 125°C	0.05	1	mA
Reverse Recovery Time	t _{rr}	I _F =500mA, I _R =1A, and I _m =250mA, T _J = 25°C	24	25	ns

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

Thermal-Mechanical Specifications@T_A=25°C unless otherwise specified

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 _{θJC}	DC operation	1.6	°C/W
Approximate Weight	wt	-	1.6	g
Case Style	ITO-220AC-2L			

Ordering Information

Device	Package	Shipping
SDURK15U60	ITO-220AC-2L (Pb-Free)	50 pcs/ tube

Ratings and Characteristics Curves

Figure 1
Typical Forward Characteristics

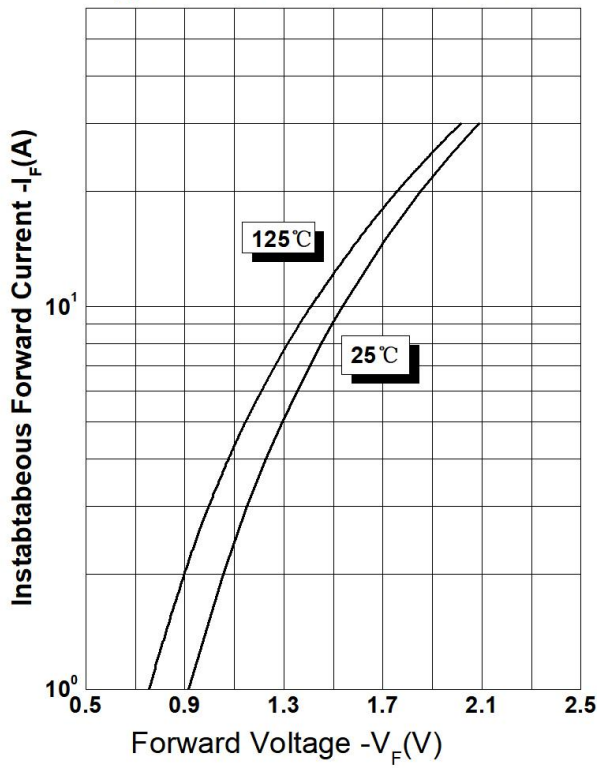


Figure 2
Typical Reverse Characteristics

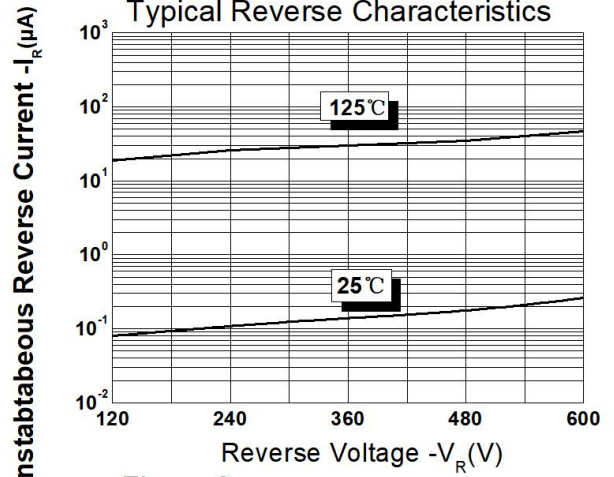
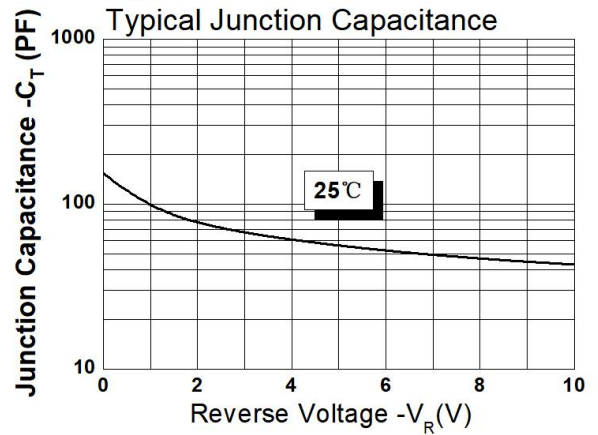
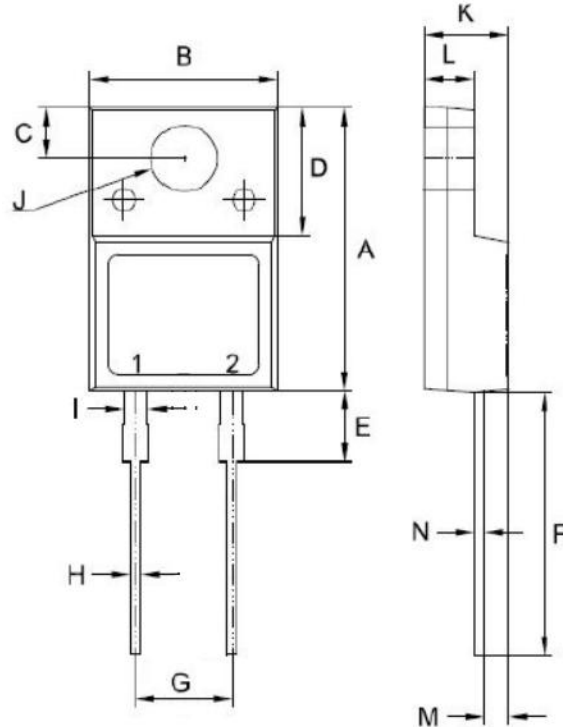


Figure 3
Typical Junction Capacitance

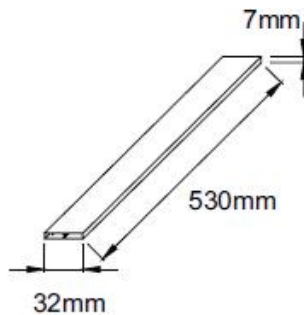


Mechanical Dimensions ITO-220AC-2L

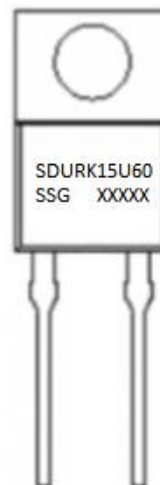


SYMBOL	Millimeters		
	MIN.	TYP.	MAX.
A	14.50	15.30	16.00
B	9.50	10.00	10.50
C	2.50	3.00	3.5
D	6.30	6.80	7.30
E	3.10	3.70	4.30
F	13.00	13.5	14.00
G	4.90	5.10	5.30
H	0.30	0.60	0.90
I	0.90	1.2	1.50
J	3.20	3.50	3.80
K	4.24	4.54	4.84
L	2.30	2.61	2.92
M	1.09	1.29	1.49
N	0.42	0.53	0.63

Tube Specification



Marking Diagram



Where XXXXX is YYWWL

- SDUR = Device Type
- K = Package type
- 15 = Forward Current (15A)
- U = U
- 60 = Reverse Voltage (600V)
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

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

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