



Technical Data  
Data Sheet N1506, Rev. -

*Green Products*

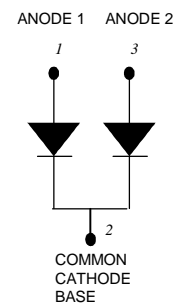
## SDUR20100PT ULTRAFAST PLASTIC RECTIFIER

### Applications:

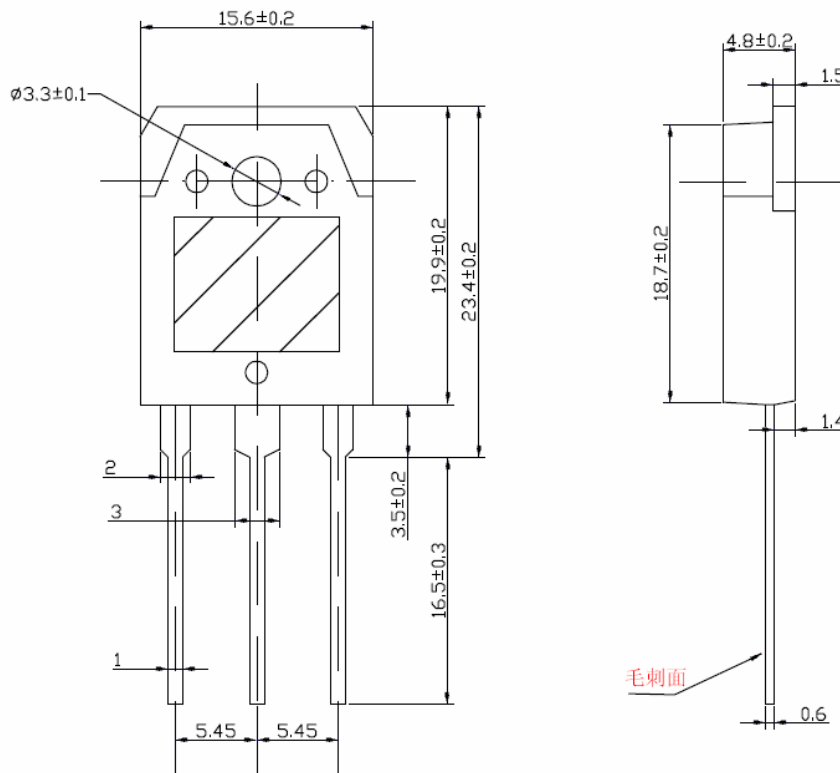
- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners 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



### Mechanical Dimensions: In mm



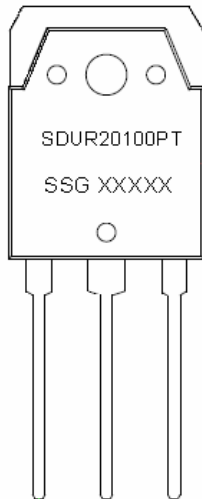
Remark: Not specified the tolerance requirement  $\pm 0.10\text{mm}$   
**TO-3P**



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**Marking Diagram:**



Where XXXXX is YYWWL

SDUR = Device Type  
20 = Forward Current (20A)  
100 = Reverse Voltage (1000V)  
PT = Configuration  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

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

**Ordering Information:**

Device	Package	Shipping
SDUR20100PT	TO-3P (Pb-Free)	30pcs / tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	1000	V
Average Forward Current	$I_F (AV)$	50% duty cycle @Tc=115°C, rectangular wave form	20	A
Peak One Cycle Non-Repetitive Surge Current (Per leg)	$I_{FSM}$	8.3ms, Half Sine pulse	100	A



**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop(Per leg)*	$V_{F1}$	@10A, Pulse, $T_J = 25^\circ\text{C}$	2.5	V
	$V_{F2}$	@10A, Pulse, $T_J = 125^\circ\text{C}$	2.0	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	50	$\mu\text{A}$
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$	6	mA
Reverse Recovery Time	$t_{rr1}$	$I_F=500\text{mA}$ , $I_R=1\text{A}$ , and $I_m=250\text{mA}$	100	ns

\* Pulse width < 300  $\mu\text{s}$ , 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	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	4.0	$^\circ\text{C/W}$
Approximate Weight	wt	-	6.7	g
Case Style	TO-3P			

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