



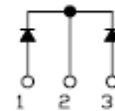
Technical Data
Data Sheet N1302, Rev. -

Green Products

SDURF30120CT(CTR) ULTRAFAST PLASTIC RECTIFIER

Applications:

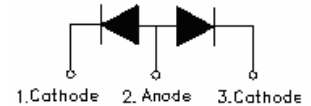
- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners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



SDURF30120CT

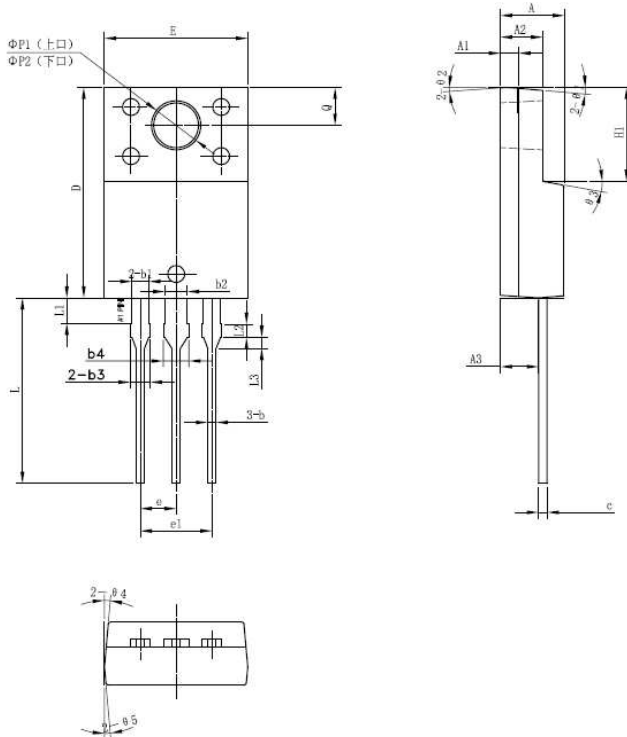
Features:

- 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



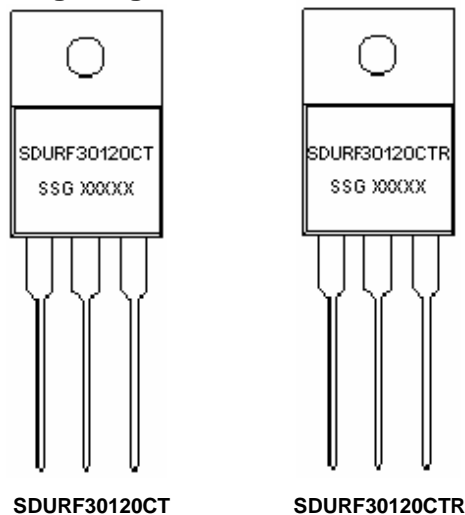
SDURF30120CTR

Mechanical Dimensions: In mm



| SYMBOL | MIN. | TYP. | MAX. |
|---------|-------|-------|-------|
| A | 4.30 | 4.50 | 4.70 |
| A1 | 1.10 | 1.30 | 1.50 |
| A2 | 2.80 | 3.00 | 3.20 |
| A3 | 2.50 | 2.70 | 2.90 |
| b | 0.50 | 0.60 | 0.75 |
| b1 | 1.10 | 1.20 | 1.35 |
| b2 | 1.50 | 1.60 | 1.75 |
| b3 | 1.20 | 1.30 | 1.45 |
| b4 | 1.60 | 1.70 | 1.85 |
| c | 0.55 | 0.60 | 0.75 |
| D | 14.80 | 15.00 | 15.20 |
| E | 9.96 | 10.16 | 10.36 |
| e | | 2.55 | |
| e1 | | 5.10 | |
| H1 | 6.50 | 6.70 | 6.90 |
| L | 12.70 | 13.20 | 13.70 |
| L1 | 1.60 | 1.80 | 2.00 |
| L2 | 0.80 | 1.00 | 1.20 |
| L3 | 0.60 | 0.80 | 1.00 |
| ΦP1(上口) | 3.30 | 3.50 | 3.70 |
| ΦP2(下口) | 2.99 | 3.19 | 3.39 |
| Q | 2.50 | 2.70 | 2.90 |
| Θ1 | | 5° | |
| Θ2 | | 4° | |
| Θ3 | | 10° | |
| Θ4 | | 5° | |
| Θ5 | | 5° | |

ITO-220AB

Technical Data
Data Sheet N1302, Rev. -
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Marking Diagram:


Where XXXXX is YYWWL

| | |
|--------|---------------------------|
| SDUR | = Device Type |
| F | = Package Type |
| 30 | = Forward Current (30A) |
| 120 | = Reverse Voltage (1200V) |
| CT/CTR | = Configuration |
| SSG | = SSG |
| YY | = Year |
| WW | = Week |
| L | = Lot Number |

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

Ordering Information:

| Device | Package | Shipping |
|------------------|------------------------|--------------|
| SDURF30120CT/CTR | ITO-220AB (Pb-Free) | 50pcs / 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} | - | 1200 | V |
| Average Rectified Forward Current | $I_{F(AV)}$ | Rated Vr , @Tc=125°C | 30 | A |
| Max. Peak One Cycle Non-Repetitive Surge Current (Per leg) | I_{FSM} | 8.3ms, Half Sine pulse | 90 | A |

Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|----------------------------|----------|---|------|---------------|
| Max. Forward Voltage Drop* | V_{F1} | @ 15A, Pulse, $T_J = 25^\circ\text{C}$ | 2.75 | V |
| | V_{F2} | @ 15A, Pulse, $T_J = 150^\circ\text{C}$ | 1.79 | V |
| Max. Reverse Current* | I_{R1} | @ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$ | 100 | μA |
| | I_{R2} | @ $V_R = \text{rated } V_R$ $T_J = 150^\circ\text{C}$ | 0.5 | mA |
| Max. Reverse Recovery Time | t_{rr} | $I_F = 1\text{A}$, $-di/dt = 100\text{A}/\mu\text{s}$, $V_R = 30\text{V}$, and $T_J = 25^\circ\text{C}$ | 50 | ns |

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

Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units |
|---|-----------------|--------------|---------------|---------------------------|
| Max. Junction Temperature | T_J | - | -55 to +175 | $^\circ\text{C}$ |
| Max. Storage Temperature | T_{stg} | - | -55 to +150 | $^\circ\text{C}$ |
| Maximum Thermal Resistance Junction to Case | $R_{\theta JC}$ | DC operation | 5.0 | $^\circ\text{C}/\text{W}$ |
| Approximate Weight | wt | - | 2 | g |
| Case Style | ITO-220AB | | | |

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