



Technical Data
Data Sheet N1286, Rev. -

Green Products

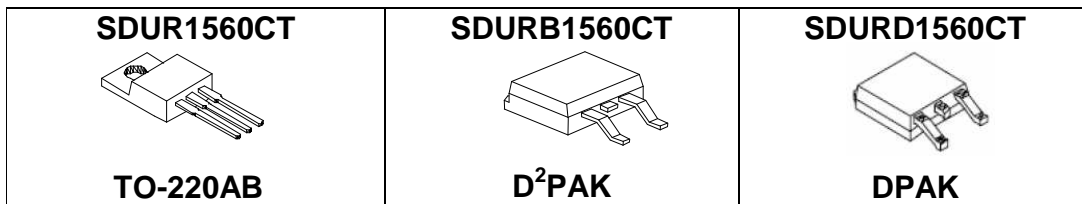
SDUR/B/D1560CT ULTRAFAST PLASTIC RECTIFIER

Applications:

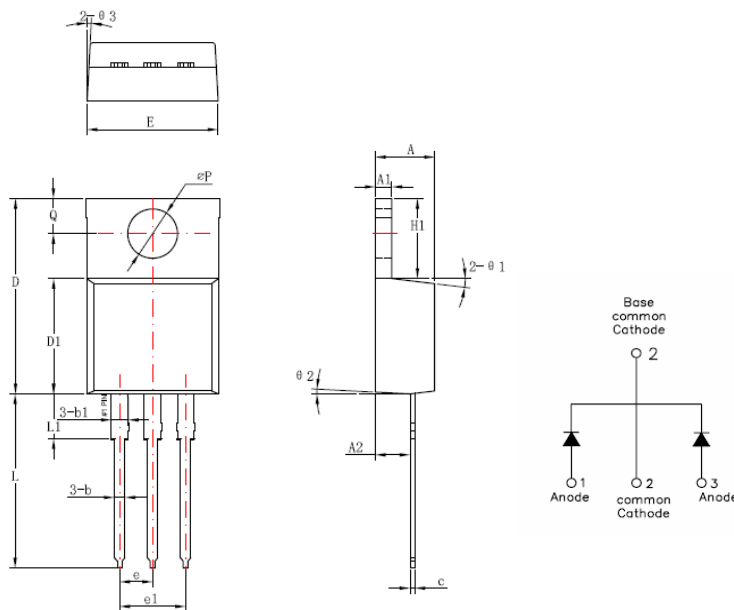
- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners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

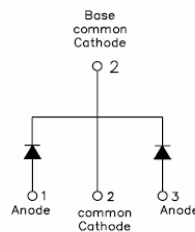


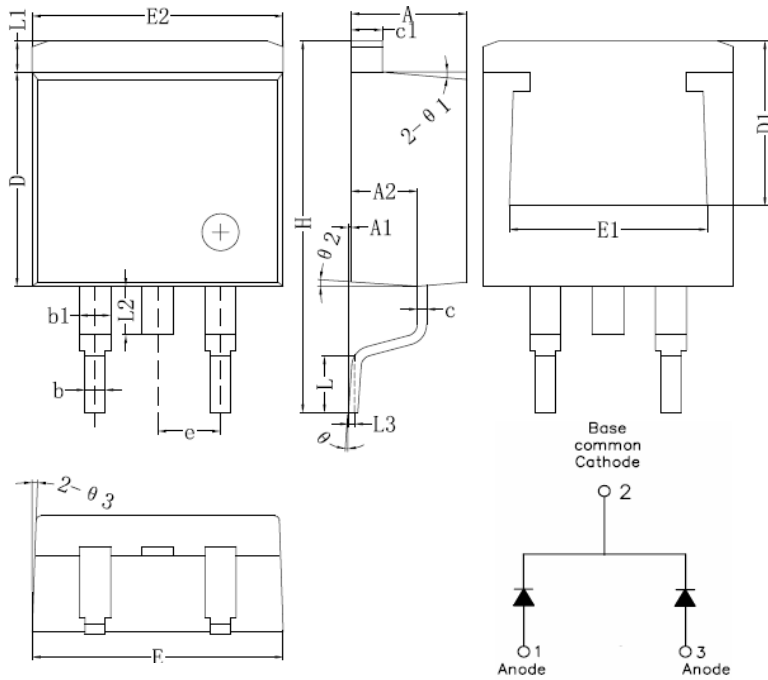
Mechanical Dimensions: In Inches / mm



TO-220AB

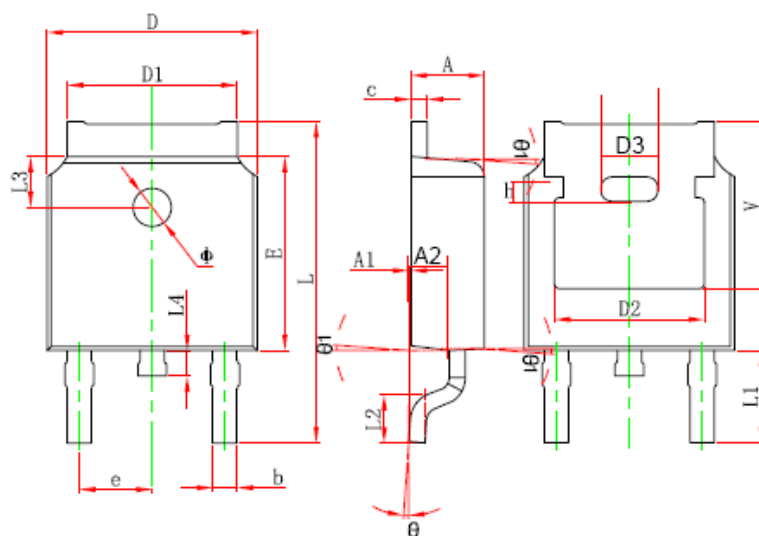
| Symbol | Dimensions in millimeters | | |
|--------|---------------------------|---------|-------|
| | Min | Typical | Max |
| A | 4.42 | 4.57 | 4.72 |
| A1 | 1.17 | 1.27 | 1.37 |
| A2 | 2.59 | 2.69 | 2.89 |
| b | 0.71 | 0.81 | 0.96 |
| b1 | | 1.27 | |
| c | 0.36 | 0.38 | 0.61 |
| D | 14.94 | 15.24 | 15.54 |
| D1 | 8.85 | 9.00 | 9.15 |
| E | 10.01 | 10.16 | 10.31 |
| e | | 2.54 | |
| e1 | | 5.06 | |
| H1 | 6.04 | 6.24 | 6.44 |
| L | 12.7 | 13.56 | 13.78 |
| L1 | | 3.5 | |
| ØP | 3.74 | 3.84 | 4.04 |
| Q | 2.54 | 2.74 | 2.94 |
| Ø1 | | 7° | |
| Ø2 | | 3° | |
| Ø3 | | 4° | |



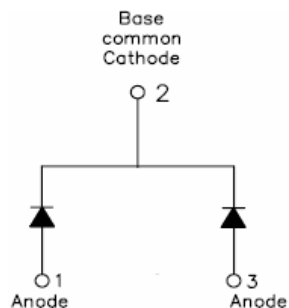


| Symbol | Dimensions in millimeters | | |
|--------|---------------------------|---------|-------|
| | Min. | Typical | Max. |
| A | 4.55 | 4.70 | 4.85 |
| A1 | 0 | 0.10 | 0.25 |
| A2 | 2.59 | 2.69 | 2.89 |
| b | 0.71 | 0.81 | 0.96 |
| b1 | | 1.27 | |
| c | 0.36 | 0.38 | 0.61 |
| c1 | 1.17 | 1.27 | 1.37 |
| D | 8.55 | 8.70 | 8.85 |
| D1 | 6.40 | | |
| E | 10.01 | 10.16 | 10.31 |
| E1 | 7.6 | | |
| E2 | 9.98 | 10.08 | 10.18 |
| e | | 2.54 | |
| H | 14.6 | 15.1 | 15.6 |
| L | 2.00 | 2.30 | 2.70 |
| L1 | 1.17 | 1.27 | 1.40 |
| L2 | | | 2.20 |
| L3 | | 0.25BSC | |
| e | 0 | - | 8° |
| e1 | | 5° | |
| e2 | | 4° | |
| e3 | | 4° | |

D² PAK



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|--------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 2.200 | 2.380 | 0.087 | 0.094 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| b | 0.710 | 0.810 | 0.028 | 0.032 |
| c | 0.460 | 0.560 | 0.018 | 0.022 |
| D | 6.500 | 6.700 | 0.256 | 0.264 |
| D1 | 5.130 | 5.460 | 0.202 | 0.215 |
| D2 | 4.830 REF. | | 0.190 REF. | |
| E | 6.000 | 6.200 | 0.236 | 0.244 |
| e | 2.186 | 2.386 | 0.086 | 0.094 |
| L | 9.800 | 10.400 | 0.386 | 0.409 |
| L1 | 2.900 REF. | | 0.114 REF. | |
| L2 | 1.400 | 1.700 | 0.055 | 0.067 |
| L3 | 1.600 REF. | | 0.063 REF. | |
| L4 | 0.600 | 1.000 | 0.024 | 0.039 |
| φ | 1.100 | 1.300 | 0.043 | 0.051 |
| θ | 0° | 8° | 0° | 8° |
| A2 | 0.910 | 1.110 | 0.036 | 0.044 |
| V | 5.350 REF. | | 0.211 REF. | |
| D3 | 1.778 REF. | | 0.070 REF. | |
| h | 0.762 REF. | | 0.030 REF. | |
| θ1 | 7° | | 7° | |

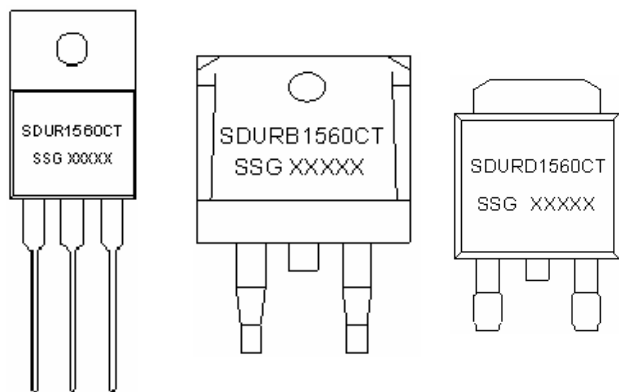


DPAK

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Marking Diagram:



Where XXXXX is YYWWL

SDUR = Device Type
 B/D = Package type
 15 = Forward Current (15A)
 60 = Reverse Voltage (600V)
 CT = Configuration
 SSG = SSG
 YY = Year
 WW = Week
 L = Lot Number

SDUR1560CT SDURB1560CT SDURD1560CT

Cautions: Molding resin
Epoxy resin UL:94V-

Ordering Information:

| Device | Package | Shipping |
|-------------|---------------------------------|---------------|
| SDUR1560CT | TO-220AB (Pb-Free) | 50pcs / tube |
| SDURB1560CT | D ² PAK (Pb-Free) | 800pcs/ reel |
| SDURD1560CT | DPAK (Pb-Free) | 2500pcs/ reel |

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} | - | 600 | V |
| Max. Average Forward | $I_{O(AV)}$ | 50Hz, Sine wave, $T_C=105^\circ\text{C}$ | 15 | A |
| Max. Peak One Cycle Non-Repetitive Surge Current | I_{FSM} | 8.3ms, Half Sine pulse | 110 | A |

Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|----------------------------|----------|--|------|---------------|
| Max. Forward Voltage Drop* | V_{F1} | @8A, Pulse, $T_J = 25^\circ\text{C}$ | 1.5 | V |
| | V_{F2} | @8A, Pulse, $T_J = 150^\circ\text{C}$ | 1.3 | V |
| Max. Reverse Current* | I_{R1} | @ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$ | 10 | μA |
| | I_{R2} | @ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$ | 1.5 | mA |
| Max. Reverse Recovery Time | t_{rr} | $I_F=500\text{mA}$, $I_R=1\text{A}$, and $I_{rm}=250\text{mA}$ | 50 | ns |

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

Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units |
|---|----------------------------------|--------------|---------------|-----------------------------|
| Max. Junction Temperature | T_J | - | -55 to +150 | $^\circ\text{C}$ |
| Max. Storage Temperature | T_{stg} | - | -55 to +150 | $^\circ\text{C}$ |
| Maximum Thermal Resistance Junction to Case | $R_{\theta JC}$ | DC operation | 5 | $^\circ\text{C} / \text{W}$ |
| Approximate Weight | wt | - | 2.0/1.85/0.39 | g |
| Case Style | TO-220AB/D ² PAK/DPAK | | | |



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