**Technical Data**
**Data Sheet N0334, Rev. -**

***Green Products***

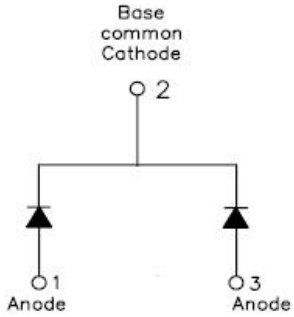
# MURD620CT ULTRAFAST RECTIFIER

## Applications:

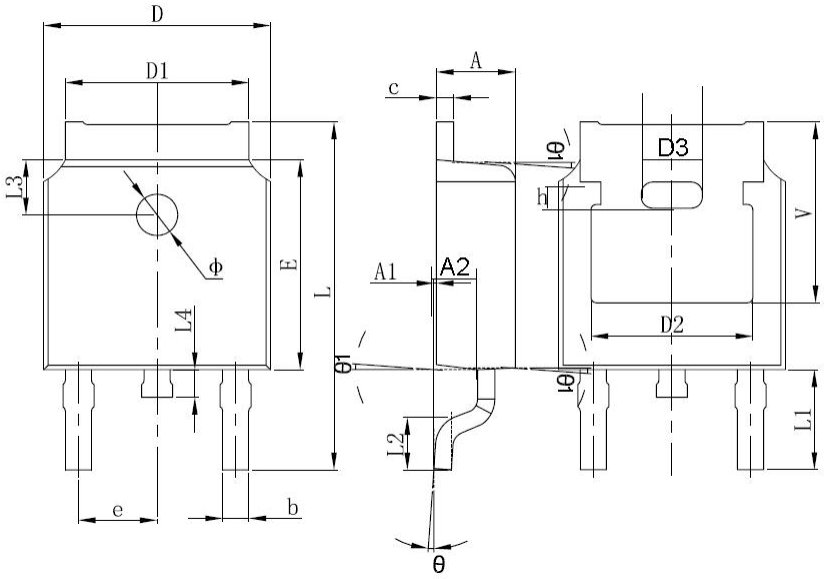
- **Switching Power Supply**
- **Power Switching Circuits**
- **General Purpose**

## Features:

- **Ultra-Fast Switching**
- **High Current Capability**
- **Low Reverse Leakage Current**
- **High Surge Current Capability**
- **Plastic Material has UL Flammability Classification 94V-O**
- **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/Inches):




| 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 | 1.778REF. | | 0.070REF. | |
| h | 0.762REF. | | 0.030REF. | |
| θ1 | 7° | | 7° | |

**DPAK**

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## Marking Diagram:


Where XXXXX is YYWWL

| | |
|---|---|
| MUR | = Device Type |
| D | = Package type |
| 6 | = Forward Current (6A) |
| 20 | = Reverse Voltage (200V) |
| CT | = Configuration |
| SSG | = SSG |
| YY | = Year |
| WW | = Week |
| L | = Lot Number |

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

## Ordering Information:

| Device | Package | Shipping |
|---|---|---|
| MURD620CT | DPAK<br>(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 Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | - | 200 | V |
| Average Forward Current<br>(Per device) | $I_{F(AV)}$ | 50% duty cycle @Tc=90°C,<br>rectangular wave form | 6 | A |
| Peak One Cycle Non-Repetitive Surge Current<br>(Per leg) | $I_{FSM}$ | 8.3ms, Half Sine pulse | 80 | A |

## Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|---|---|---|---|---|
| Forward Voltage Drop (Per leg)* | $V_F$ | @ $I_F$=3A, Pulse, $T_J$ = 25℃ | 1.2 | V |
| Reverse Current (Per leg)* | $I_{R1}$ | @$V_R$ = rated $V_R$ $T_J$ = 25℃ | 5 | μA |
| | $I_{R2}$ | @$V_R$ = rated $V_R$ $T_J$ = 125℃ | 500 | μA |
| Reverse Recovery Time (Per leg) | $t_{rr}$ | $I_F$=500mA, $I_R$=1A,and $I_{rm}$=250mA | 35 | ns |

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

## Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units |
|---|---|---|---|---|
| Junction Temperature | $T_J$ | - | -55 to +150 | ℃ |
| Storage Temperature | $T_{stg}$ | - | -55 to +150 | ℃ |
| Typical Thermal Resistance Junction to Case | $R_{\theta JC}$ | DC operation | 3.5 | ℃/W |
| Approximate Weight | wt | - | 0.39 | g |
| Case Style | DPAK | | | |

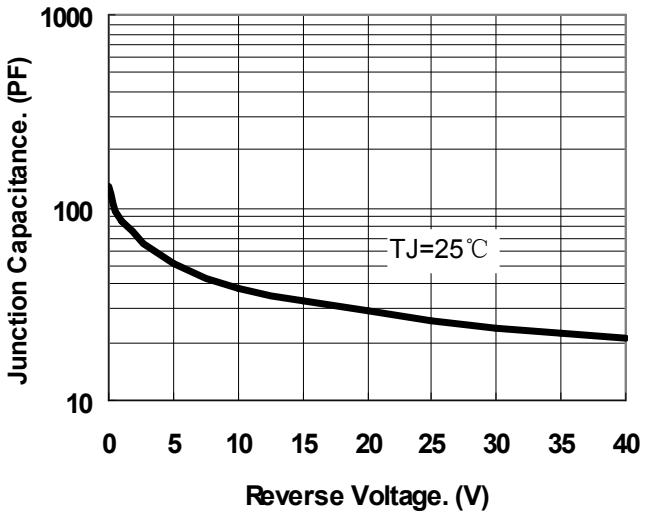


Fig.1-Typical Junction Capacitance

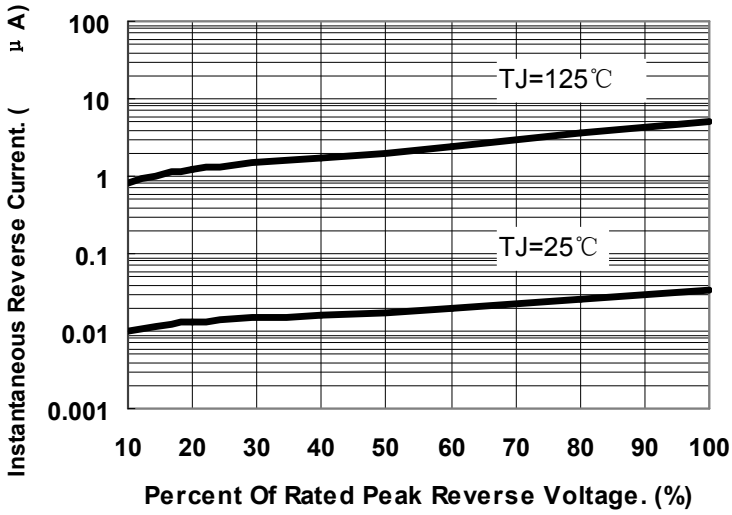


Fig.2-Typical Reverse Characteristics

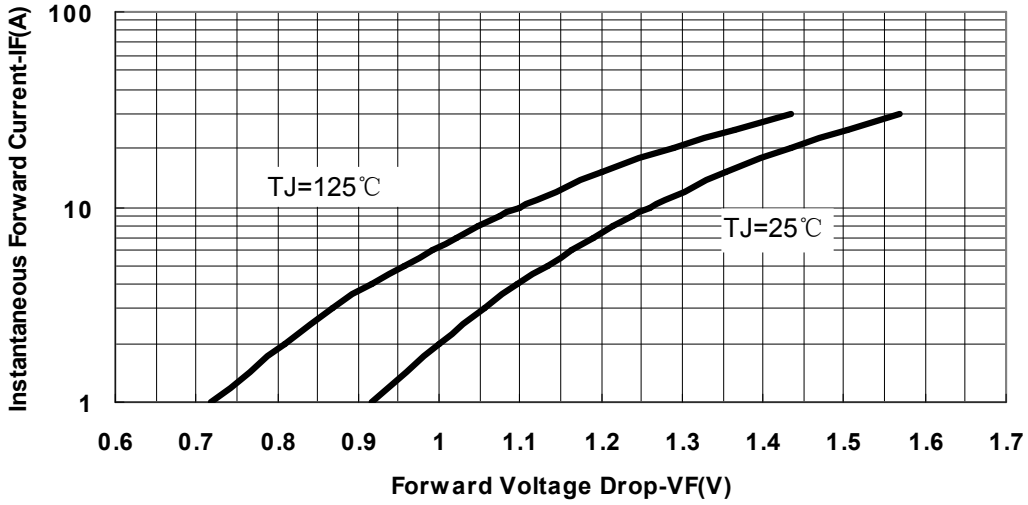


Fig.3-Typical Forward Voltage Drop Characteristics

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