

BAV19W-BAV21W SURFACE MOUNT FAST SWITCHING DIODE



Features

- High Conductance
- Fast Switching
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Schematic & Pin Configuration



Mechanical Characteristics

- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams(approx)

Maximum Ratings@T_A=25°C unless otherwise specified

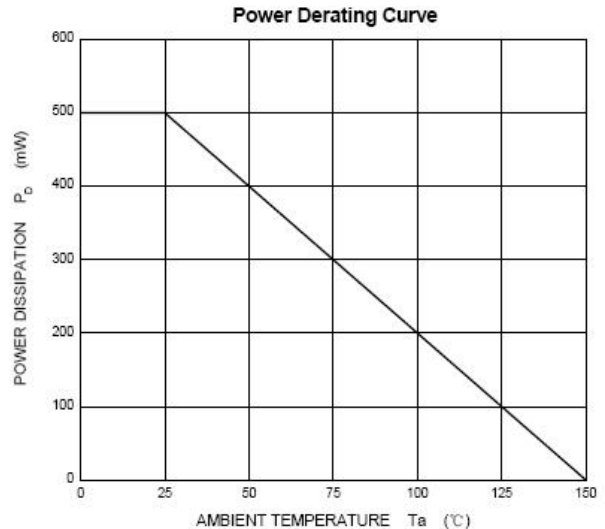
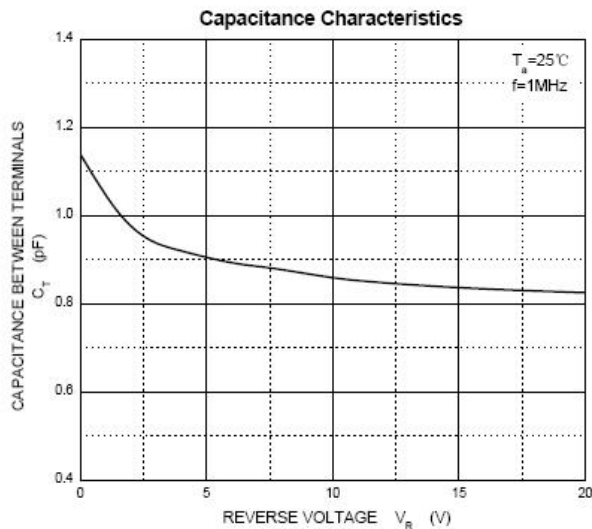
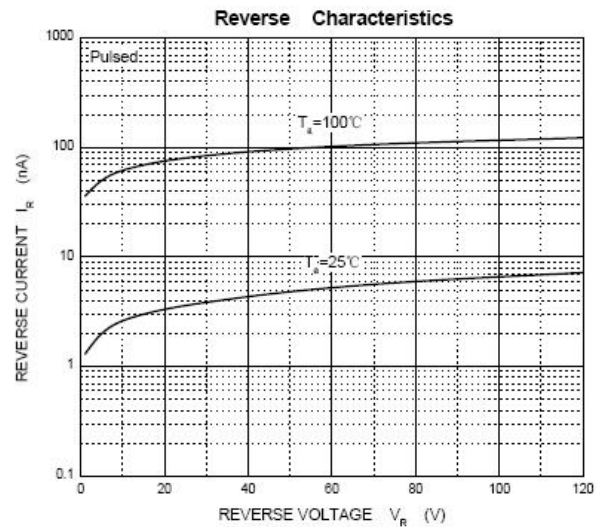
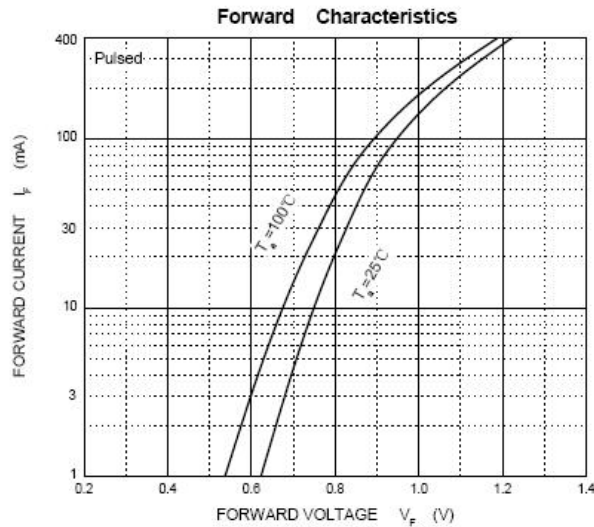
| Characteristic | Symbol | BAV19W | BAV20W | BAV21W | Units |
|--|-----------------------------|-------------|--------|--------|-------|
| Non-Repetitive Peak Reverse Voltage | V _{RM} | 120 | 200 | 250 | V |
| Peak Repetitive Peak Reverse Voltage | V _{R_{RM}} | 100 | 150 | 200 | V |
| Working Peak Reverse Voltage | V _{R_{WM}} | | | | |
| DC Blocking Voltage | V _R | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 71 | 106 | 141 | |
| Average Rectified Output Current | I _O | 200 | | | mA |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) @t=8.3ms | I _{FSM} | 2.0 | | | A |
| Power Dissipation | P _d | 500 | | | mW |
| Typical Thermal Resistance Junction to Ambient | R _{θJA} | 250 | | | °C/W |
| Junction Temperature Range | T _J | 150 | | | °C |
| Storage Temperature Range | T _{STG} | -65 to +150 | | | °C |

Electrical Characteristics@T_A=25°C unless otherwise specified

| Characteristic | Symbol | Test Condition | Min | Typ | Max | Units |
|--------------------------|-----------------|--|-----|-----|-------------------|-------|
| Forward Voltage* | V _F | I _F =100mA I _F =200mA | - | - | 1.0 1.25 | V |
| Reverse Leakage Current* | I _R | V _R =100V V _R =150V V _R =200V | - | - | 0.1 0.1 0.1 | μA |
| Diode capacitance | C _T | V _R =0V, f=1.0MHz | - | - | 5 | pF |
| Reverse recovery time | t _{rr} | I _F = I _R =30mA, I _{rr} =0.1×I _R , R _L =100 Ω | - | - | 50 | ns |

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

Ratings and Characteristics Curves



Ordering Information

| Device | Package | Shipping |
|-------------------|-------------------|----------------|
| BAV19W-BAV21W | SOD-123 (Pb-Free) | 3000pcs / reel |
| BAV19WTR-BAV21WTR | SOD-123 (Pb-Free) | 3000pcs / reel |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

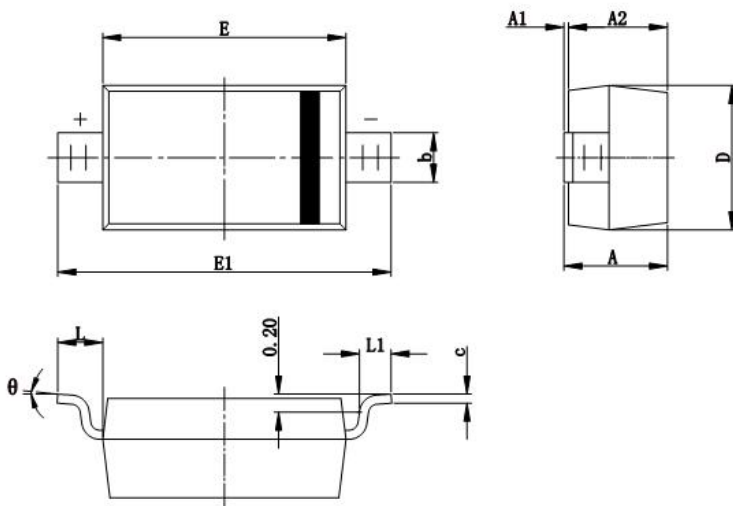
Marking before 16441(Date Code)

| Part Number | Device Marking Code |
|-------------|---------------------|
| BAV19W | A8 |
| BAV20W | A80 |
| BAV21W | A82 |

Marking from 16441(Date Code)

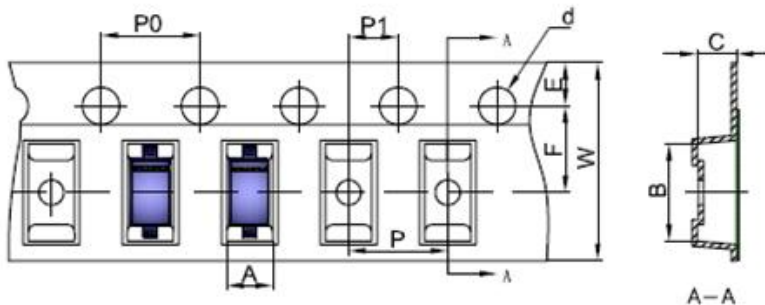
| Part Number | Device Marking Code |
|-------------|---------------------|
| BAV19W | A8 • |
| BAV20W | T2 • |
| BAV21W | T3 • |

Mechanical Dimensions SOD-123



| SYMBOL | Millimeters | | Inches | |
|--------|-------------|-------|------------|-------|
| | MIN. | MAX. | MIN. | MAX. |
| A | 1.050 | 1.250 | 0.041 | 0.049 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 1.050 | 1.150 | 0.041 | 0.045 |
| b | 0.450 | 0.650 | 0.018 | 0.026 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 1.500 | 1.700 | 0.059 | 0.067 |
| E | 2.600 | 2.800 | 0.102 | 0.110 |
| E1 | 3.550 | 3.850 | 0.140 | 0.152 |
| L | 0.500 REF. | | 0.020 REF. | |
| L1 | 0.250 | 0.450 | 0.010 | 0.018 |
| θ | 0° | 8° | 0° | 8° |

Carrier Tape Specification SOD-123



| SYMBOL | Millimeters | |
|--------|-------------|------|
| | Min. | Max. |
| A | 1.80 | 1.90 |
| B | 3.89 | 3.99 |
| C | 1.52 | 1.62 |
| d | 1.45 | 1.65 |
| E | 1.65 | 1.85 |
| F | 3.40 | 3.60 |
| P | 3.90 | 4.10 |
| P0 | 3.90 | 4.10 |
| P1 | 1.90 | 2.10 |
| W | 7.90 | 8.30 |

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