



BAS116TW/BAV199S

SURFACE MOUNT, LOW LEAKAGE SWITCHING DIODES

VOLTAGE 100 Volt **POWER** 200mWatt

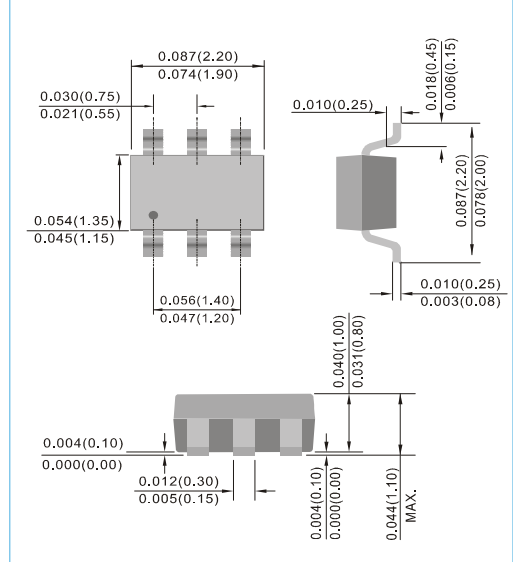
SOT-363 Unit : inch(mm)

FEATURES

- Surface mount package ideally suited for automatic insertion.
- Very low leakage current. 2nA typical at VR=75V.
- Low capacitance. 2pF max at VR=0V, f=1MHz
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: SOT-363 plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx weight: 0.0002 ounces, 0.006 grams
- Marking: BAS116TW :PA
BAV199S :PB



ABSOLUTE RATINGS (each diode)

| PARAMETER | Symbol | Value | Units |
|--|------------------|-------|-------|
| Reverse Voltage | V _R | 75 | V |
| Peak Reverse Voltage | V _{RM} | 100 | V |
| Continuous Forward Current | I _F | 0.2 | A |
| Non-repetitive Peak Forward Surge Current at t=1.0us | I _{FSM} | 2.0 | A |

THERMAL CHARACTERISTICS

| PARAMETER | Symbol | Value | Units |
|--|------------------|------------|-------|
| Power Dissipation (Note 1) | P _{TOT} | 200 | mW |
| Thermal Resistance, Junction to Ambient (Note 1) | R _{θJA} | 625 | °C/W |
| Junction Temperature | T _J | -55 to 150 | °C |
| Storage Temperature | T _{STG} | -55 to 150 | °C |

NOTE:

1. FR-4 Board = 70 x 60 x 1mm.

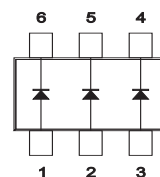


Fig.48
BAS116TW

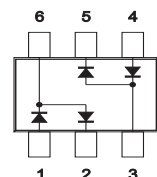


Fig.32
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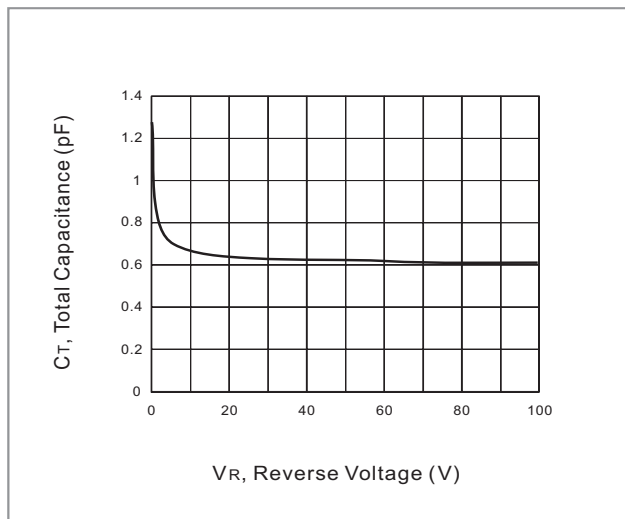
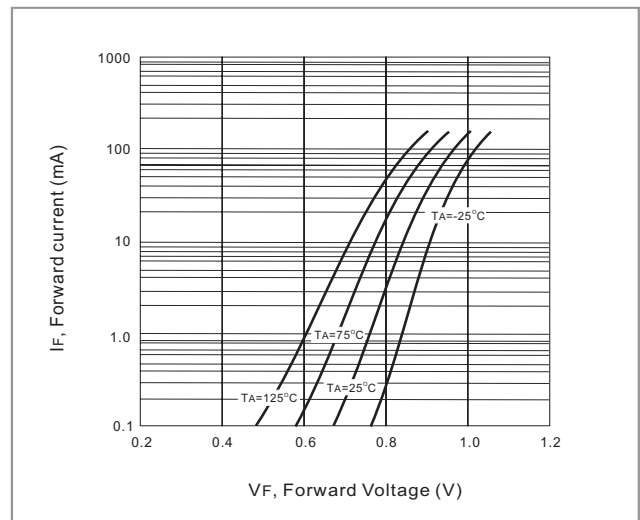
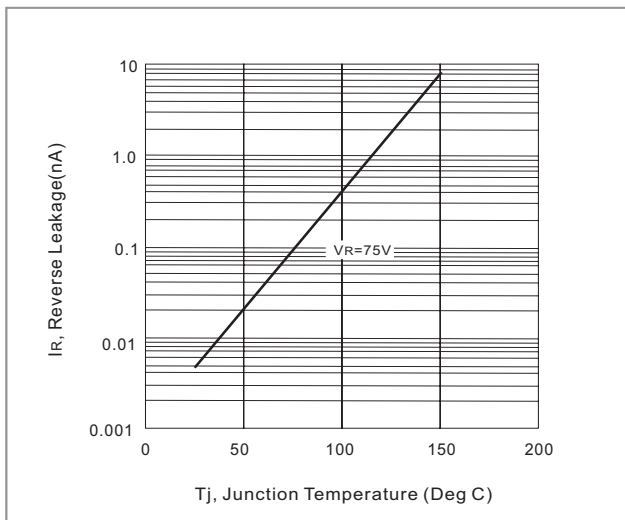


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ELECTRICAL CHARACTERISTICS (each diode) (TA=25°C, unless otherwise noted)

| PARAMETER | Symbol | Test Condition | MIN. | TYP. | MAX. | Units |
|---------------------------|------------|--|------|--------------|---------------------------|-------|
| Reverse Breakdown Voltage | $V_{(BR)}$ | $I_R=100 \mu A$ | 75 | | | V |
| Reverse Current | I_R | $V_R=75 V, T_J=150 \text{ }^\circ C$ | | 0.002 8.0 | 5 80 | nA |
| Forward Voltage | V_F | $I_F=1 mA$ $I_F=10 mA$ $I_F=50 mA$ $I_F=150 mA$ | | | 0.9 1.0 1.1 1.25 | V |
| Total Capacitance | C_T | $V_R=0 V, f=1 MHz$ | | | 2.0 | pF |
| Reverse Recovery Time | t_{rr} | $I_F=I_R=10 mA, R_L=100 \Omega$ | | | 3.0 | us |

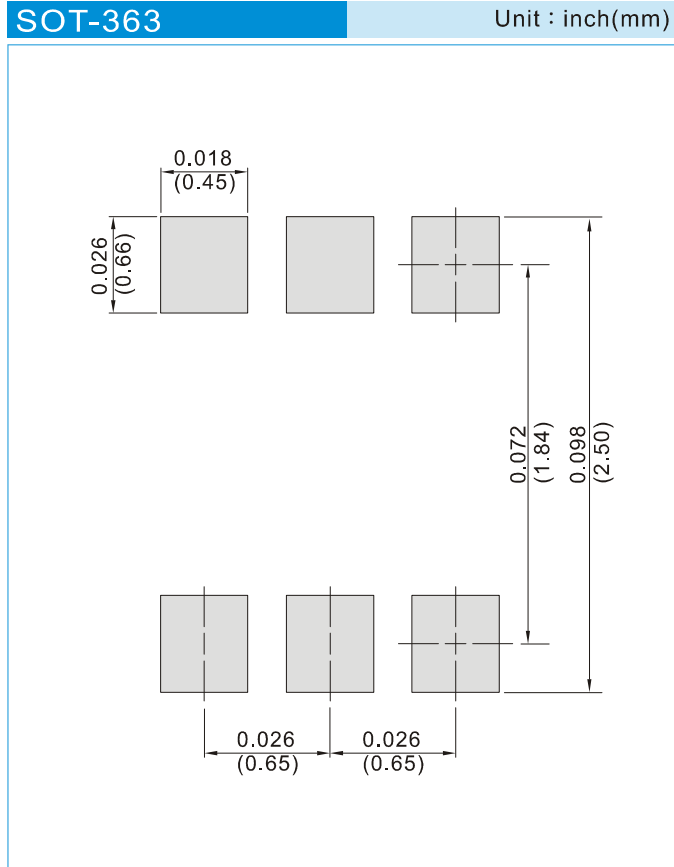
CHARACTERISTIC CURVES (each diode)





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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
T/R - 10K per 13" plastic Reel
T/R - 3K per 7" plastic Reel



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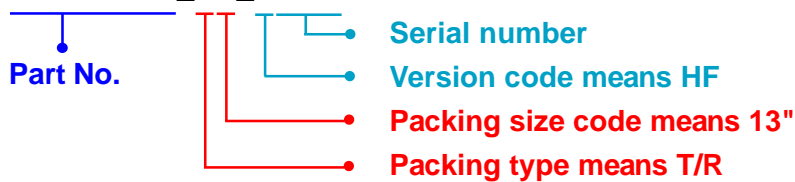
Part No_packing code_Version

BAS116TW_R1_00001

BAS116TW_R2_00001

For example :

RB500V-40_R2_00001



| Packing Code XX | | | | Version Code XXXXX | | |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd ~5 th Code |
| Tape and Ammunition Box (T/B) | A | N/A | 0 | HF | 0 | serial number |
| Tape and Reel (T/R) | R | 7" | 1 | RoHS | 1 | serial number |
| Bulk Packing (B/P) | B | 13" | 2 | | | |
| Tube Packing (T/P) | T | 26mm | X | | | |
| Tape and Reel (Right Oriented) (TRR) | S | 52mm | Y | | | |
| Tape and Reel (Left Oriented) (TRL) | L | PANASERT T/B CATHODE UP (PBCU) | U | | | |
| FORMING | F | PANASERT T/B CATHODE DOWN (PBCD) | D | | | |



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