



E502650

Features

- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- High Forward Surge Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C (Unless Otherwise Specified)

| Parameter | Symbol | Value | | | | | | | Unit |
|--|--------------------|--------|--------|--------|--------|--------|--------|--------|------------------|
| | | DB 101 | DB 102 | DB 103 | DB 104 | DB 105 | DB 106 | DB 107 | |
| Peak Repetitive Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Working Peak Reverse Voltage | V _{RWM} | | | | | | | | |
| DC Blocking Voltage | V _R | | | | | | | | |
| RMS Reverse Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Forward Current @ T _A =40°C | I _{F(AV)} | 1 | | | | | | | A |
| Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave | I _{FSM} | 30 | | | | | | | A |
| Non-Repetitive Peak Surge Current @ 1ms Square Wave | | 60 | | | | | | | |
| Current Squared Time @1ms≤t≤8.3ms | I ² t | 3.735 | | | | | | | A ² s |

Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| DB101 | DB101 |
| DB102 | DB102 |
| DB103 | DB103 |
| DB104 | DB104 |
| DB105 | DB105 |
| DB106 | DB106 |
| DB107 | DB107 |

Internal Structure

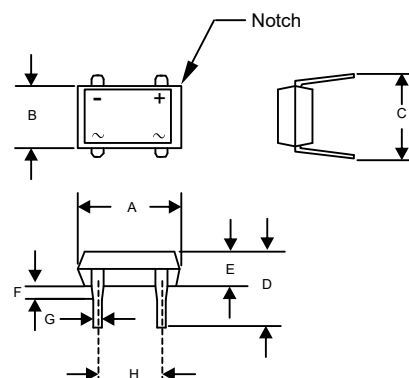
| Simplified Outline | Graphic Symbol |
|-----------------------------|----------------|
| <p>XXXXX = Marking Code</p> | |

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. High temperature solder exemption applied, see EU directive annex 7a.

1 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

DB-1



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.316 | 0.335 | 8.05 | 8.51 | |
| B | 0.245 | 0.255 | 6.20 | 6.50 | |
| C | 0.300 | 0.350 | 7.60 | 8.90 | |
| D | 0.236 | 0.299 | 6.01 | 7.60 | |
| E | 0.102 | 0.130 | 2.60 | 3.30 | |
| F | 0.060 | | 1.50 | | Typ |
| G | 0.016 | 0.022 | 0.41 | 0.56 | Typ |
| H | 0.195 | 0.205 | 5.00 | 5.20 | |

Thermal characteristics

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---------------|---|------------|-----|-----|-----|------|
| T_J | Operating Junction Temperature Range | | -55 | | 150 | °C |
| T_{stg} | Storage Temperature Range | | -55 | | 150 | °C |
| $R_{th(J-L)}$ | Thermal Resistance from Junction to Lead | Note 1 | | 15 | | °C/W |
| $R_{th(J-A)}$ | Thermal Resistance from Junction to Ambient | Note 1 | | 40 | | °C/W |

Note:

1. Device mounted on P.C.B with 35mm*25mm*1.7mm.

Electrical Characteristics @ 25°C Unless Otherwise Specified(Per Diode)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|----------------------|--------|---|-----|-----|----------|---------|
| Forward Voltage | V_F | $I_F=0.5A; T_J=25^{\circ}C$ | | | 1.0 | V |
| Reverse Current | I_R | at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$ | | | 5 100 | μA |
| Junction Capacitance | C_J | $V_R=4V; f=1MHz; T_J=25^{\circ}C$ | | 12 | | pF |

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

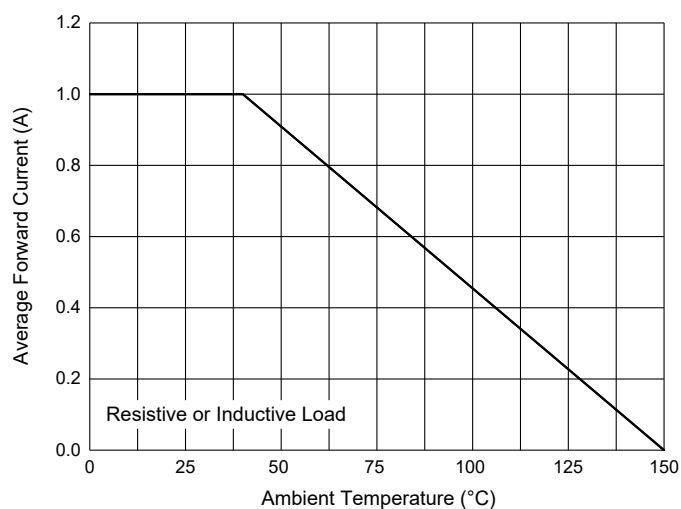


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

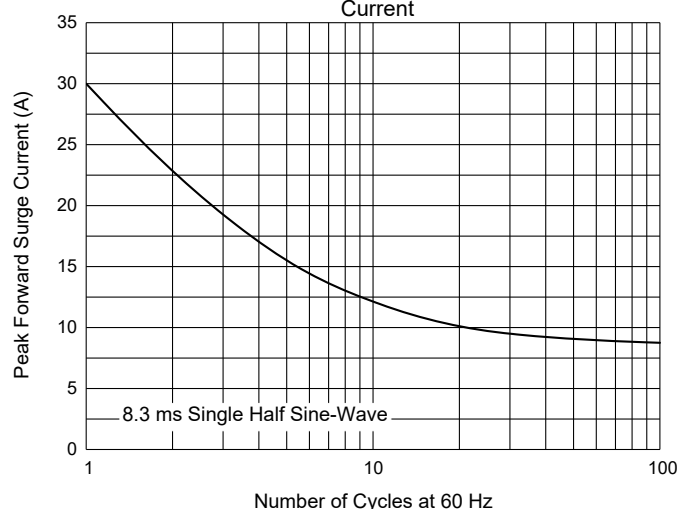


Fig. 3 - Typical Forward Characteristics

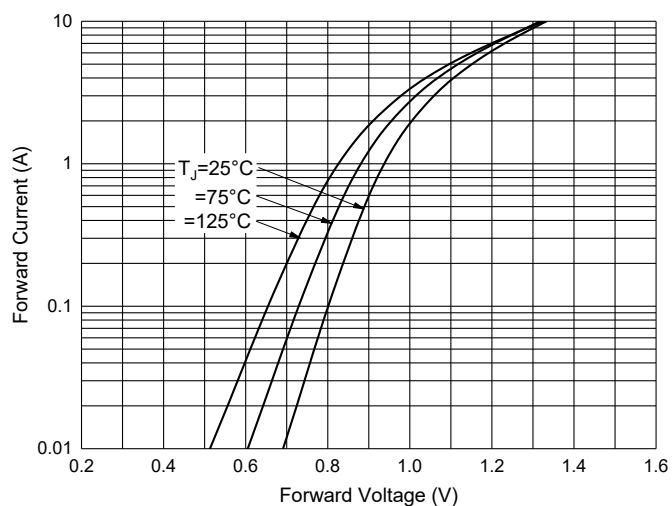


Fig. 4 - Typical Reverse Leakage Characteristics

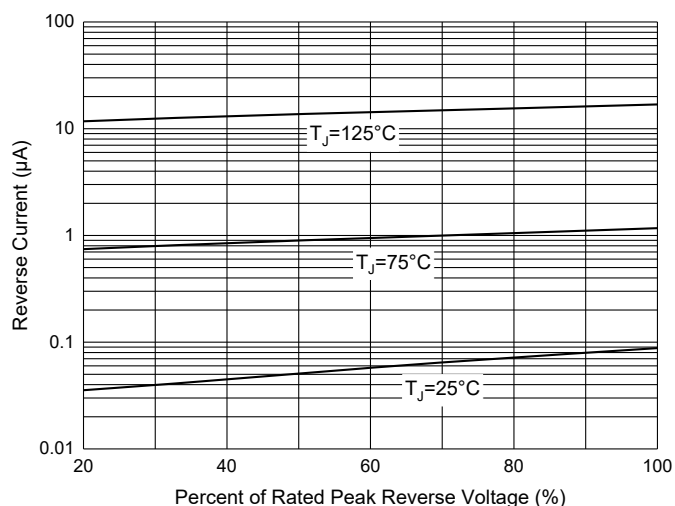
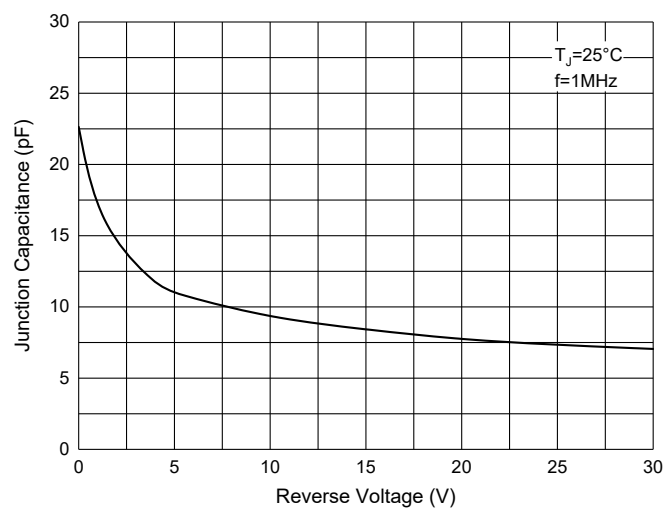


Fig. 5 - Typical Capacitance Characteristics



Ordering Information

| Device | Packing |
|----------------|---|
| Part Number-BP | Bulk:50pcs/Tube,2500pcs/Box,10Kpcs/Carton |

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