

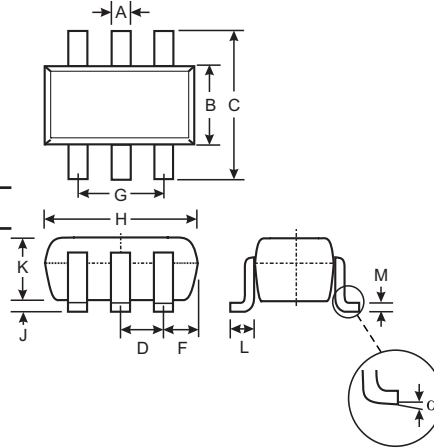
SURFACE MOUNT SCHOTTKY BARRIER DIODE ARRAYS

Features

- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- **Lead Free/RoHS Compliant (Note 3)**
- **Qualified to AEC-Q101 Standards for High Reliability**

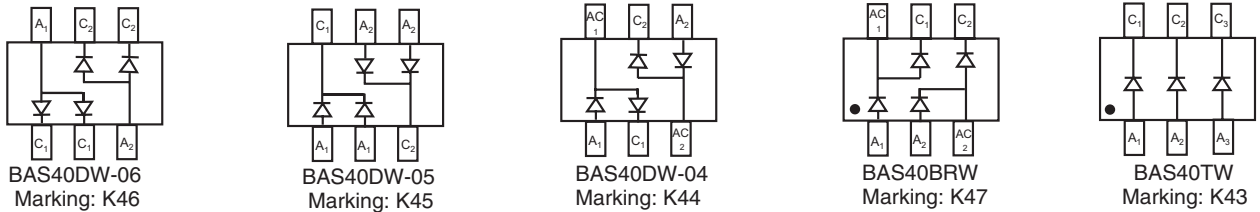
Mechanical Data

- Case: SOT-363
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: See Diagrams Below
- Marking: See Diagrams Below & Page 3
- Weight: 0.006 grams (approximate)



| SOT-363 | | |
|----------------------|--------------|------|
| Dim | Min | Max |
| A | 0.10 | 0.30 |
| B | 1.15 | 1.35 |
| C | 2.00 | 2.20 |
| D | 0.65 Nominal | |
| F | 0.30 | 0.40 |
| H | 1.80 | 2.20 |
| J | — | 0.10 |
| K | 0.90 | 1.00 |
| L | 0.25 | 0.40 |
| M | 0.10 | 0.25 |
| α | 0° | 8° |
| All Dimensions in mm | | |

TOP VIEW



Maximum Ratings @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|--|--|----------------------------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 40 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 28 | V |
| Forward Continuous Current (Note 1) | I _{FM} | 200 | mA |
| Non-Repetitive Peak Forward Surge Current @ t < 1.0s | I _{FSM} | 600 | mA |
| Power Dissipation (Note 1) | P _d | 200 | mW |
| Thermal Resistance Junction to Ambient Air (Note 1) | R _{θJA} | 625 | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +125 -65 to +125 | °C |

Electrical Characteristics @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Min | Max | Unit | Test Condition |
|------------------------------------|--------------------|-----|-------------|----------|---|
| Reverse Breakdown Voltage (Note 2) | V _{(BR)R} | 40 | — | V | I _R = 10μA |
| Forward Voltage | V _F | — | 380 1000 | mV mV | I _F = 1.0mA, t _p < 300μs I _F = 40mA, t _p < 300μs |
| Reverse Current (Note 2) | I _R | — | 200 | nA | V _R = 30V |
| Total Capacitance | C _T | — | 5.0 | pF | V _R = 0, f = 1.0MHz |
| Reverse Recovery Time | t _{rr} | — | 5.0 | ns | I _F = I _R = 10mA, I _{rr} = 0.1 x I _R , R _L = 100Ω |

Notes: 1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
2. Short duration test pulse used to minimize self-heating effect.
3. No purposefully added lead.

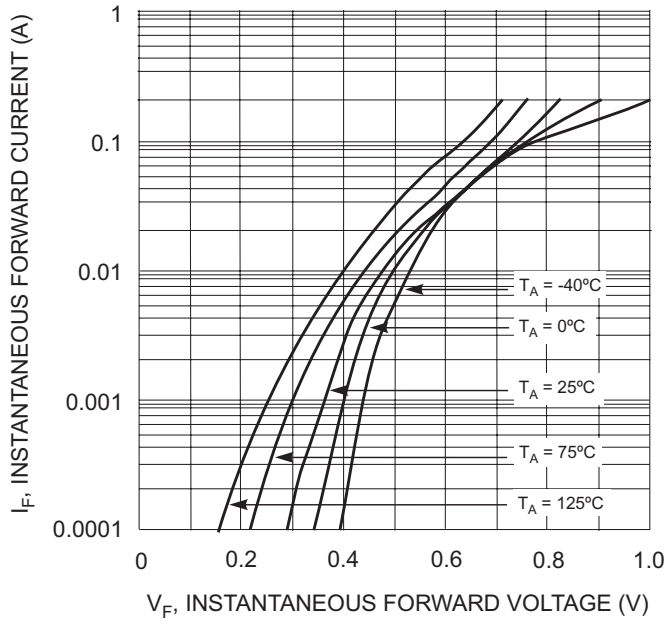


Fig. 1 Typical Forward Voltage

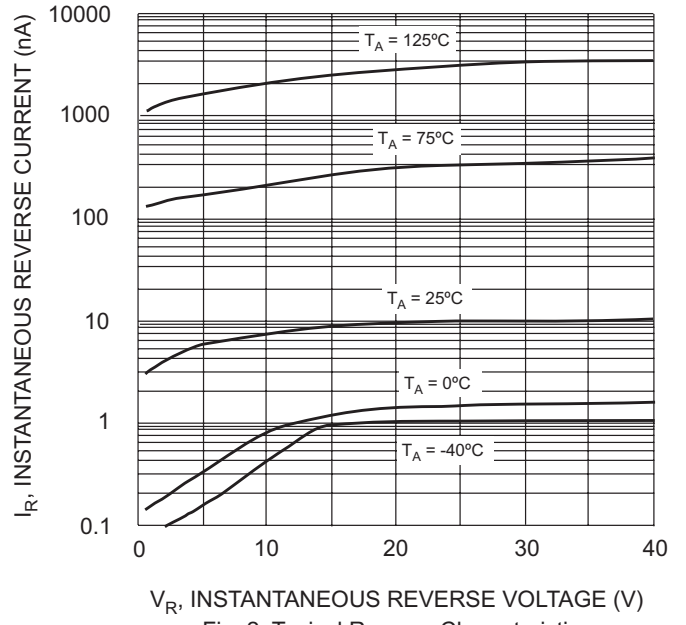


Fig. 2 Typical Reverse Characteristics

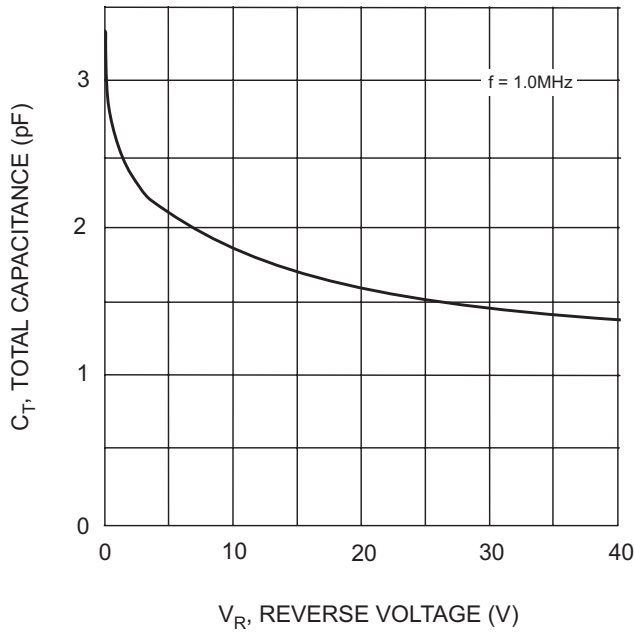


Fig. 3 Typical Capacitance

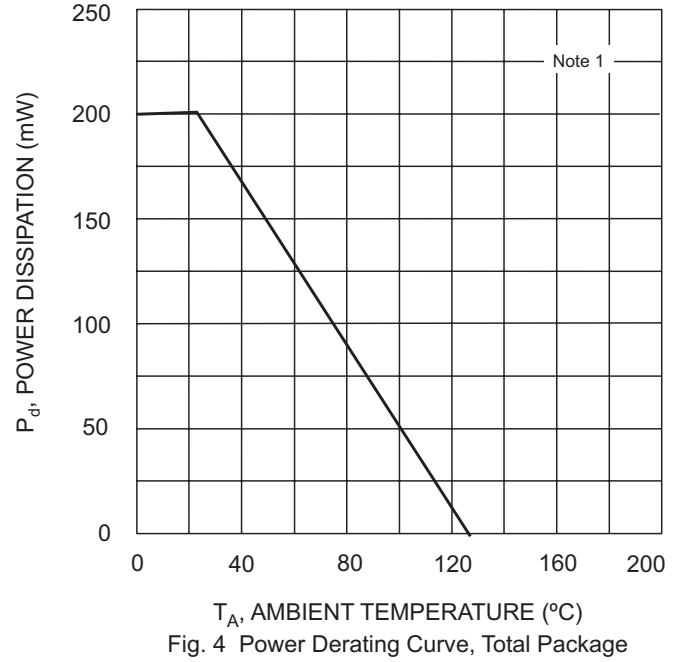


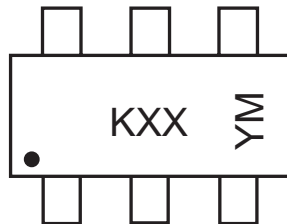
Fig. 4 Power Derating Curve, Total Package

Ordering Information (Note 4)

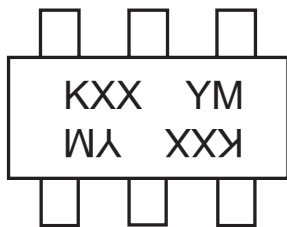
| Device | Packaging | Shipping |
|----------------|-----------|------------------|
| BAS40TW-7-F | SOT-363 | 3000/Tape & Reel |
| BAS40DW-04-7-F | SOT-363 | 3000/Tape & Reel |
| BAS40DW-05-7-F | SOT-363 | 3000/Tape & Reel |
| BAS40DW-06-7-F | SOT-363 | 3000/Tape & Reel |
| BAS40BRW-7-F | SOT-363 | 3000/Tape & Reel |

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



KXX = Product Type Marking Code (See Page 1)
 For Asymmetrical Configuration, orientation indicator as shown
 YM = Date Code Marking
 Y = Year ex: N = 2002
 M = Month ex: 9 = September



KXX = Product Type Marking Code (See Page 1)
 For Symmetrical Configuration, no orientation indicator
 YM = Date Code Marking
 Y = Year ex: N = 2002
 M = Month ex: 9 = September

Date Code Key

| Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Code | L | M | N | P | R | S | T | U | V | W | X | Y | Z |

| Month | Jan | Feb | March | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------|-----|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | O | N | D |

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