



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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SURFACE MOUNT SCHOTTKY BARRIER DIODE ARRAYS

Features

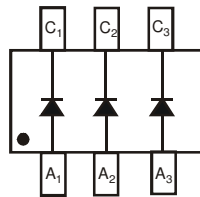
- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- **Lead Free/RoHS Compliant (Note 3)**
- **Qualified to AEC-Q101 Standards for High Reliability**
- **"Green" Device (Notes 4 and 5)**

Mechanical Data

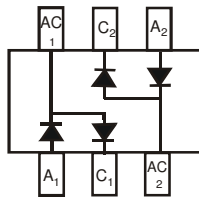
- Case: SOT-363
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: See Diagrams Below
- Marking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



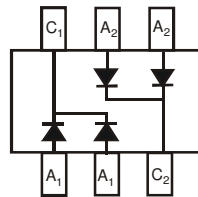
Top View



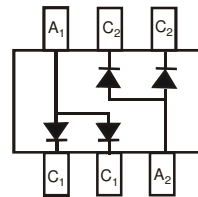
BAS40TW



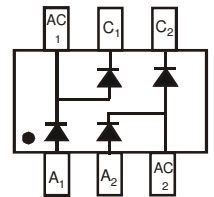
BAS40DW-04



BAS40DW-05



BAS40DW-06



BAS40BRW

Maximum Ratings @T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|--|---------------------|-------|------|
| Peak Repetitive Reverse Voltage | V _{RRM} | 40 | V |
| Working Peak Reverse Voltage | V _{RWM} | | |
| DC Blocking Voltage | V _R | | |
| 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 |

Thermal Characteristics

| Characteristic | Symbol | Value | Unit |
|---|------------------|-------------|------|
| Power Dissipation (Note 1) | P _D | 200 | mW |
| Thermal Resistance Junction to Ambient Air (Note 1) | R _{θJA} | 625 | °C/W |
| Operating Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{STG} | -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 | I _F = 1.0mA, 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 pulse test used to minimize self-heating effect.
 3. No purposefully added lead.
 4. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
 5. Product manufactured with Date Code UO (week 40, 2007) and newer are built with Green Molding Compound. Product manufactured prior to Date Code UO are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants

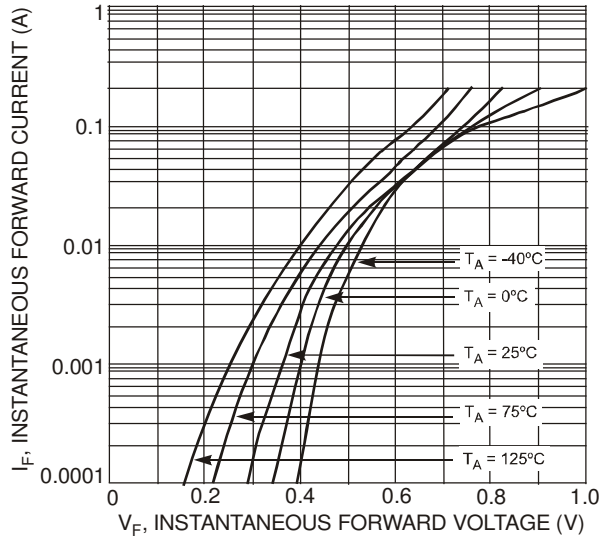


Fig. 1 Typical Forward Characteristics

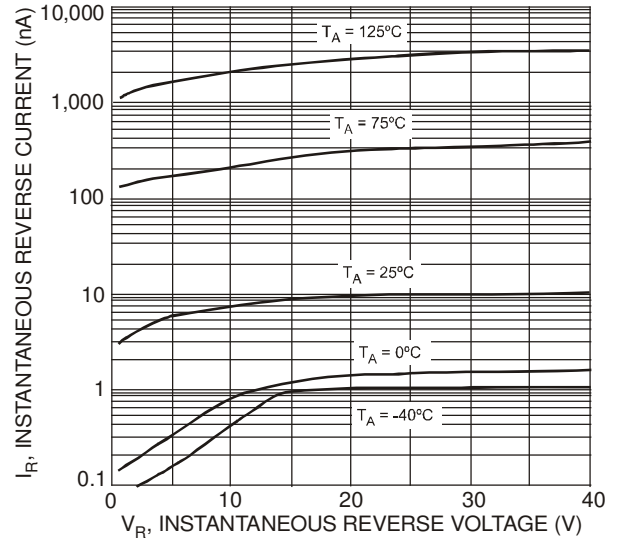


Fig. 2 Typical Reverse Characteristics

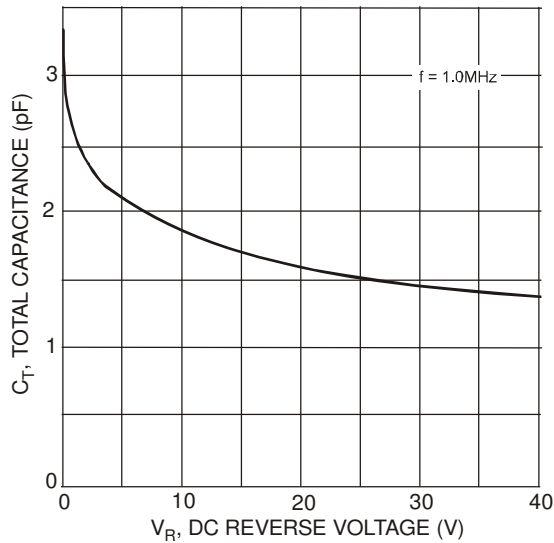


Fig. 3 Total Capacitance vs. Reverse Voltage

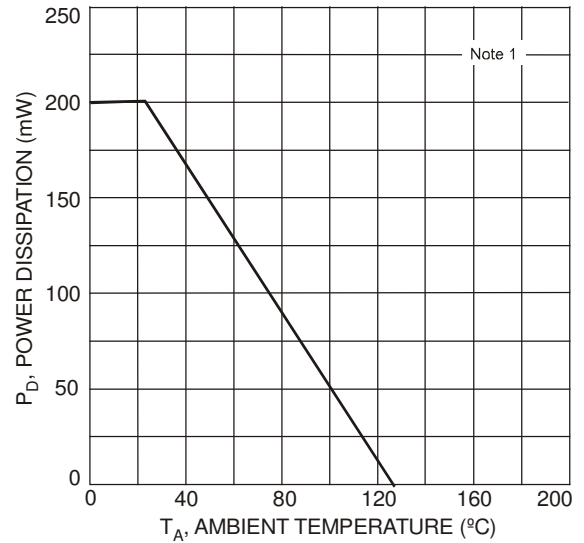


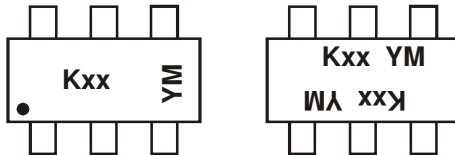
Fig. 4 Power Derating Curve, Total Package

Ordering Information (Note 6)

| Part Number | Case | Packaging |
|----------------|---------|------------------|
| 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: 6. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



Kxx = Product Type Marking Code

K43 = BAS40TW

K44 = BAS40DW-04

K45 = BAS40DW-05

K46 = BAS40DW-06

K47 = BAS40BRW

For Asymmetrical Configuration, orientation indicator as shown

For Symmetrical Configuration, no orientation indicator

YM = Date Code Marking

Y = Year (ex: N = 2002)

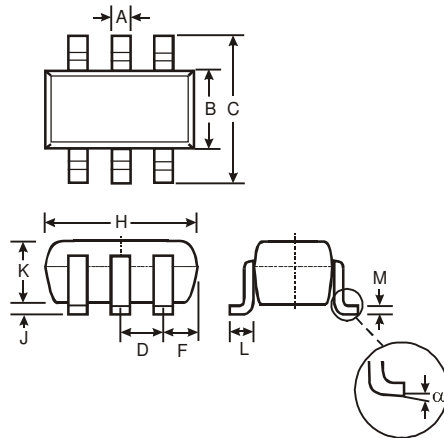
M = Month (ex: 9 = September)

Date Code Key

| Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Code | L | M | N | P | R | S | T | U | V | W | X | Y | Z | A | B | C |

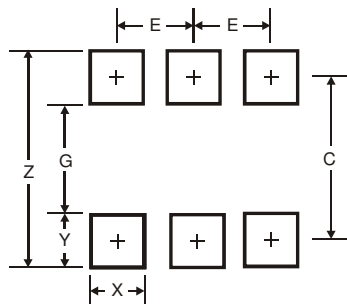
| Month | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | O | N | D |

Package Outline Dimensions



| 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 | 0.40 | 0.45 |
| H | 1.80 | 2.20 |
| J | 0 | 0.10 |
| K | 0.90 | 1.00 |
| L | 0.25 | 0.40 |
| M | 0.10 | 0.22 |
| α | 0° | 8° |
| All Dimensions in mm | | |

Suggested Pad Layout



| Dimensions | Value (in mm) |
|------------|---------------|
| Z | 2.5 |
| G | 1.3 |
| X | 0.42 |
| Y | 0.6 |
| C | 1.9 |
| E | 0.65 |

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