

BVS-M-R0003-1.0

BVS Series SMD Resistor User Manual

Model: BVS-M-R0003-1.0 (and variants)

1. PRODUCT OVERVIEW

This manual provides essential information for the proper handling, installation, and understanding of the BVS Series Surface Mount Device (SMD) Resistors, specifically focusing on the BVS-M-R0003-1.0 model and its variants (BVS-M-R0005-1.0, BVS-M-R001-1.0). These resistors are designed for precise current sensing applications in various electronic circuits.



Figure 1: BVS Series SMD Resistors in their tape packaging. The image shows multiple resistors, each marked with "BVS" and resistance values, indicating their compact size and surface-mount design.

2. SPECIFICATIONS

Key technical specifications for the BVS Series SMD Resistors:

Characteristic	Value (BVS-M-R0003-1.0)	Notes
Resistance Value	0.5 mΩ (R0003)	Other variants available (R0005, R001)
Tolerance	±1%	High precision for current sensing
Package Size	3920 (EIA)	Equivalent to 9.9mm x 5.0mm
Type	SMD (Surface Mount Device)	Designed for automated assembly
Origin	Mainland China	

3. SETUP AND INSTALLATION

BVS Series SMD resistors are designed for surface mount technology (SMT) assembly processes. Proper handling and installation are crucial for optimal performance and reliability.

3.1. Handling Precautions

- Always handle components in an ESD-safe environment to prevent damage from static discharge.
- Use appropriate tools (e.g., vacuum pick-up tools, tweezers) to avoid physical damage to the resistor body or terminals.
- Store components in their original packaging in a dry, temperature-controlled environment until ready for use.

3.2. Soldering Guidelines

These resistors are compatible with standard reflow soldering processes. Adhere to the following general guidelines:

- **Solder Paste:** Use a high-quality solder paste suitable for SMD components. Ensure proper stencil design for accurate paste deposition.
- **Reflow Profile:** Follow the recommended reflow soldering profile for the specific solder paste and PCB material. Typical peak temperatures range from 230°C to 250°C, with a dwell time above liquidus of 30-90 seconds.
- **Cooling:** Ensure a controlled cooling rate to prevent thermal shock and ensure proper solder joint formation.
- **Rework:** If rework is necessary, use appropriate hot air or soldering iron techniques to minimize thermal stress on the component and surrounding PCB. Avoid excessive heat or prolonged exposure.

4. OPERATING PRINCIPLES

The BVS Series resistors function as precision current sensing elements. When current flows through the resistor, a voltage drop is created across its terminals, proportional to the current (Ohm's Law: $V = I \cdot R$). This voltage can then be measured and used by control circuitry to monitor or regulate current.

- **Current Rating:** Ensure the operating current does not exceed the resistor's maximum power dissipation rating to prevent overheating and damage.
- **Temperature Coefficient of Resistance (TCR):** Be aware that resistance values can slightly change with temperature. For critical applications, consider the TCR specified in the full datasheet.
- **Inductance:** Low-value current sense resistors may have parasitic inductance. For high-frequency applications, consider the impact of this inductance.

5. MAINTENANCE

BVS Series SMD resistors are passive components and generally require no active maintenance once properly installed. However, ensuring the cleanliness and integrity of the PCB assembly is important for long-term reliability.

- **Environmental Control:** Operate the electronic assembly within its specified environmental conditions (temperature, humidity) to prevent component degradation.
- **Cleaning:** If cleaning the PCB is necessary, use approved electronic cleaning agents and methods that do not damage components or solder joints.
- **Inspection:** Periodically inspect solder joints for cracks, corrosion, or other signs of degradation in critical applications.

6. TROUBLESHOOTING

Issues related to resistors typically stem from improper installation, incorrect value selection, or exceeding operational limits. Common troubleshooting steps include:

- **Incorrect Resistance Reading:** Verify the component value against the circuit design. Check solder joints for opens or shorts. Measure resistance in-circuit (power off) or desolder for accurate measurement.
- **Overheating/Burnout:** This indicates excessive current or power dissipation. Re-evaluate the circuit design to ensure the resistor's power rating is sufficient for the application. Check for short circuits elsewhere in the circuit.
- **Intermittent Operation:** Could be due to a cold solder joint or physical damage. Inspect the component and its connections closely.

7. WARRANTY AND SUPPORT


As a passive electronic component, the BVS Series resistors are typically covered by a standard manufacturer's warranty against defects in materials and workmanship for a period of one year from the date of purchase. This warranty does not cover damage resulting from improper installation, misuse, or operation outside of specified parameters. For technical support or inquiries, please contact your component distributor or the manufacturer directly. Provide the model number (BVS-M-R0003-1.0) and any relevant batch codes for faster assistance.








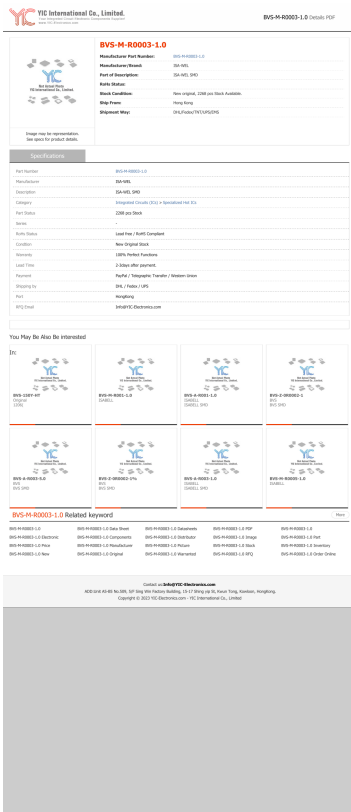
© 2024 Generic. All rights reserved.

Disclaimer: Information in this manual is subject to change without notice.

Related Documents - BVS-M-R0003-1.0

	<p>Aqua-Scope Ball Valve Servo BVSZWE01: Smart Z-Wave Water Control Manual</p> <p>This manual provides comprehensive information on the Aqua-Scope Ball Valve Servo (BVSZWE01), a Z-Wave enabled device for smart home water valve automation, leak detection, and remote control. Learn about installation, operation, and technical specifications.</p>
---	---

	<p>MUSE M-10 CPK Dual Alarm Clock Radio User Manual</p> <p>Comprehensive user manual for the MUSE M-10 CPK dual alarm clock radio, covering setup, operation, alarm functions, radio listening, sleep timer, and safety instructions.</p>
	<p>Mirro Pressure Cooker Parts, Manuals, and Replacement Guides</p> <p>Comprehensive information on Mirro pressure cooker parts, model compatibility, and instructional resources. Find replacement components, overpressure plugs, and user manuals for various Mirro pressure cooker models.</p>
	<p>Bubblebee Sidekick Version 3 IFB In-Ear Monitor User Manual</p> <p>Comprehensive user manual for the Bubblebee Sidekick Version 3 IFB In-Ear Monitor, covering setup, care, technical specifications, warranty, and accessories. Learn how to use and maintain your invisible earpiece solution.</p>
	<p>Moxa ioLogik E4200 Series Quick Installation Guide</p> <p>A concise guide to installing and configuring the Moxa ioLogik E4200 Series Modular Ethernet Remote I/O Adapter, covering hardware setup, power connections, supported modules, and software download.</p>
	<p>DeVilbiss Compact-X Automatic Spray Gun Service and Operation Manual</p> <p>Comprehensive service and operation manual for the DeVilbiss Compact-X Automatic Spray Gun, covering specifications, parts, installation, maintenance, technology, and warranty.</p>



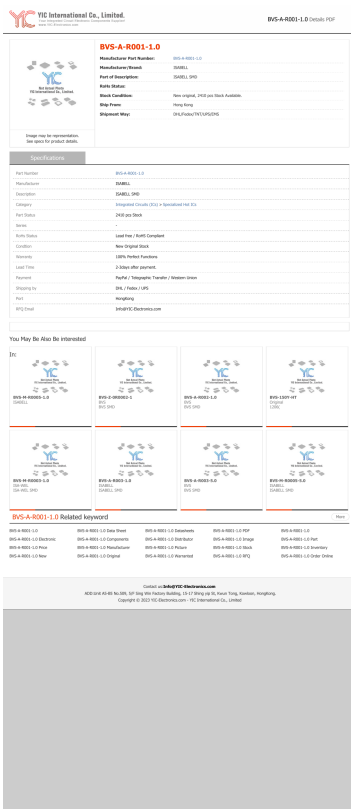
[pdf] Specifications Datasheet Warranty

BVS M R0003 1 0 Electronics in YIC Stock Components Distributor at Download Details yic electronics

38d2900673 |||

BVS-M-R0003-1.0 Details PDF Image may be representation. See specs for product details. Specifications Part Number Manufacturer Description Category Part Status Series RoHs Status Condition Warranty Lead Time Payment Shipping by Port RFQ Email **BVS-M-R0003-1.0** Manufacturer Part Number: Manufacturer...

lang:en score:37 filesize: 55.16 K page_count: 1 document date: 2023-03-21



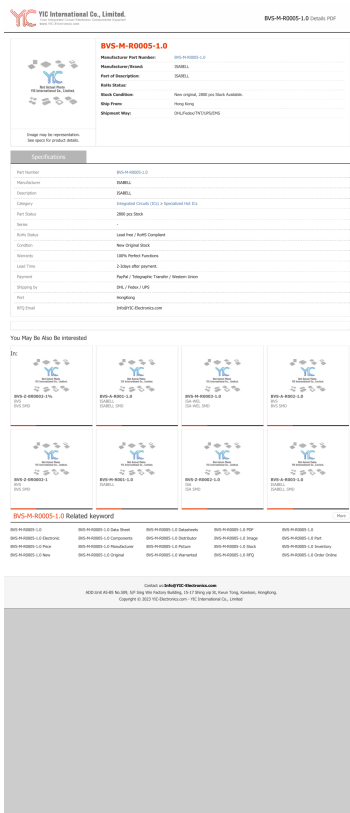
[pdf] Specifications Datasheet Warranty

BVS A R001 1 0 Electronics in YIC Stock Components Distributor at Download Details yic electronics

5b24446760 |||

Image may be representation. See specs for product details. Specifications Part Number Manufacturer ... 05-1.0 ISABELL BVS-Z-0R0002-1 BVS BVS SMD BVS-A-R002-1.0 BVS BVS SMD BVS-150Y-HT Original 1206 **BVS-M-R0003-1.0** ISA-WEL ISA-WEL SMD BVS-A-R003-1.0 ISABELL ISABELL SMD BVS-A-R003-5.0 BVS BVS SMD ...

lang:en score:27 filesize: 54.83 K page_count: 1 document date: 2023-03-21



BVS-M-R0005-5.0 Details PDF Image may be representation. See specs for product details. Specificati ... You May Be Also Be interested In: BVS-A-R003-5.0 BVS BVS SMD BVS-A-R003-1.0 ISABELL ISABELL SMD **BVS-M-R0003-1.0** ISA-WEL ISA-WEL SMD BVS-M-R001-1.0 ISABELL BVS-M-R0005-1.0 ISABELL BVS-A-R002-1.0...

BVS-M-R0005-1.0 Details PDF Image may be representation. See specs for product details. Specificati ... You May Be Also Be interested In: BVS-Z-0R0002-1 BVS BVS SMD BVS-A-R001-1.0 ISABELL ISABELL SMD **BVS-M-R0003-1.0** ISA-WEL ISA-WEL SMD BVS-A-R002-1.0 BVS BVS SMD BVS-Z-0R0002-1 BVS BVS SMD BVS-M-R...

lang:en score:27 filesize: 54.87 K page_count: 1 document date: 2023-03-21

 <p data-bbox="151 136 199 141">BVS is a registered TM trademark of B. Lohrer</p>	<div data-bbox="199 125 419 129"> <h2 data-bbox="199 125 419 129">BVS-A-R002-1.0</h2> </div> <table border="1" data-bbox="199 129 419 147"> <tr> <td data-bbox="199 129 269 134">Manufacturer Part Number:</td><td data-bbox="269 129 419 134">BVS-A-R002-1.0</td></tr> <tr> <td data-bbox="199 134 269 136">Manufacturer/Brand:</td><td data-bbox="269 134 419 136">BVS</td></tr> <tr> <td data-bbox="199 136 269 141">Part Description:</td><td data-bbox="269 136 419 141">BVS DSD</td></tr> <tr> <td data-bbox="199 141 269 143">Part Number:</td><td data-bbox="269 141 419 143">BVS DSD</td></tr> <tr> <td data-bbox="199 143 269 147">Stock Condition:</td><td data-bbox="269 143 419 147">New original, 100% pure Stock Available</td></tr> <tr> <td data-bbox="199 147 269 150">Ship From:</td><td data-bbox="269 147 419 150">Hong Kong</td></tr> <tr> <td data-bbox="199 150 269 154">Shipping Way:</td><td data-bbox="269 150 419 154">DHL/Express/TW/UPS/DG</td></tr> </table>	Manufacturer Part Number:	BVS-A-R002-1.0	Manufacturer/Brand:	BVS	Part Description:	BVS DSD	Part Number:	BVS DSD	Stock Condition:	New original, 100% pure Stock Available	Ship From:	Hong Kong	Shipping Way:	DHL/Express/TW/UPS/DG
Manufacturer Part Number:	BVS-A-R002-1.0														
Manufacturer/Brand:	BVS														
Part Description:	BVS DSD														
Part Number:	BVS DSD														
Stock Condition:	New original, 100% pure Stock Available														
Ship From:	Hong Kong														
Shipping Way:	DHL/Express/TW/UPS/DG														

Specifications	
SKU Number	0516-0000-1-0
Manufacturer	AMS
Description	AMS 3040
Category	Integrated Circuit (ICs) / 2000 / Integrated Modem ICs
Part Number	0504 av Stock
Series	
Active Status	Not New / Stock Complete
Location	New Original Stock
Quantity	100% Perfect Function
Lead Time	2-3days after payment
Package	MSOP / Tape Carrier / Tray / Shrink Sticker
Shipping Via	DHL / Fedex / UPS
Port	Integrating
MSD Code	05040101_0504000000

You May Be Also Be interested

 ESD-01 (ESD01-1) ESD-01	 ESD-02 (ESD01-2) ESD-02	 ESD-03 (ESD01-3) ESD-03	 ESD-04 (ESD01-4) ESD-04
 ESD-05 (ESD01-5) ESD-05	 ESD-06 (ESD01-6) ESD-06	 ESD-07 (ESD01-7) ESD-07	 ESD-08 (ESD01-8) ESD-08

BVS-A-R002-1.0 Related keyword

DS9 + DS92C01-0 Data Sheet	DS9 + DS92C01-0 Datasheets	DS9 + DS92C01-0 PDF	DS9 + DS92C01-0
DS9 + DS92C01-0 Electronic	DS9 + DS92C01-0 Components	DS9 + DS92C01-0 Distributor	DS9 + DS92C01-0 Image
DS9 + DS92C01-0 Price	DS9 + DS92C01-0 Manufacturer	DS9 + DS92C01-0 Picture	DS9 + DS92C01-0 Stock
DS9 + DS92C01-0 New	DS9 + DS92C01-0 Original	DS9 + DS92C01-0 Document	DS9 + DS92C01-0 Inventory
			DS9 + DS92C01-0 Order Online

[\[pdf\]](#) Specifications Datasheet Warranty

BVS A R002 1 0 Electronics in YIC Stock Components Distributor at Download Details yic electronics

4403016439 |||

Image may be representation. See specs for product details. Specifications Part Number Manufacturer ... ils PDF You May Be Also Be interested In: BVS-Z-0R0002-1 BVS BVS SMD BVS-A-R003-5.0 BVS BVS SMD **BVS-M-R0003-1.0** ISA-WEL ISA-WEL SMD BVS-M-R0005-5.0 ISABELL ISABELL SMD BVS-150Y-HT Original 1206

lang:en score:27 filesize: 54.79 K page_count: 1 document date: 2023-03-21

BVS A R003 5 0 Electronics in YIC Stock Components Distributor at Download Details yic electronics
b953164201 |||

lang:en score:27 filesize: 54.94 K page_count: 1 document date: 2023-03-21

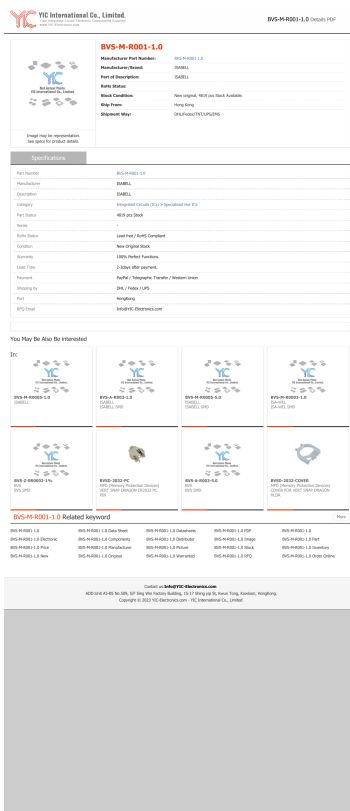
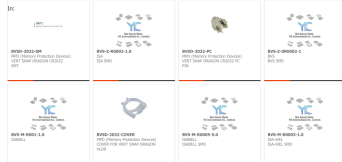


Image may be representation. See specs for product details. Specifications Part Number Manufacturer ... tronics.com BVS-A-R003-1.0 Details PDF You May Be Also Be interested In: BVS-M-R001-1.0 ISABELL **BVS-M-R0003-1.0** ISA-WEL ISA-WEL SMD BVS-Z-0R0002-1 BVS BVS SMD BVS-M-R0005-1.0 ISABELL BVS-A-R002... lang:en score:27 filesize: 54.78 K page_count: 1 document date: 2023-03-21

lang:en score:27 filesize: 63 K page_count: 1 document date: 2023-03-21

Specifications	
Part Number	9012-00000-001
Manufacturer	IBM
Manufacturer	IBM
Category	IBM System/390 in Specialized R/Ls
Part Status	1/207 per Stock
Notes	-
Item Status	Used Item / Hardly Compliant
Condition	New Original Stock
Interface	100% Feature Functions
Lead Time	2-3 Days after payment
Shipping	Paypal / Telegraph Transfer / Western Union
Payment	DM / T/T / L/C
Warranty	12 Months
Q&A Email	ibm@ic-electronics.com

You May Be Also Be interested



BVS-Z-OR0002.1% Related keyword

BIS-2-080002-1% Data Sheet	BIS-2-080002-1% Data Sheet	BIS-2-080002-1% Datasheets	BIS-2-080002-1% PDF	BIS-2-080002-1%
BIS-2-080002-1% Electronic	BIS-2-080002-1% Components	BIS-2-080002-1% Distributor	BIS-2-080002-1% Image	BIS-2-080002-1% Inventory
BIS-2-080002-1% Price	BIS-2-080002-1% Manufacturer	BIS-2-080002-1% Module	BIS-2-080002-1% Stock	BIS-2-080002-1% Part
BIS-2-080002-1% New	BIS-2-080002-1% Original	BIS-2-080002-1% Wharfedale	BIS-2-080002-1% FAQ	BIS-2-080002-1% Order Online

BVS-Z-0R0002-1 Details PDF Image may be representation. See specs for product details. Specificati ... D Memory Protection Devices COVER FOR VERT SNAP DRAGON HLDR BVS-M-R0005-5.0 ISABELL ISABELL SMD **BVS-M-R0003-1.0** ISA-WEL ISA-WEL SMD BVS-Z-0R0002-1 Related keyword BVS-Z-0R0002-1 BVS-Z-0R0002-1...

lang:en score:27 filesize: 66.38 K page_count: 1 document date: 2023-03-21