

VM10JB150R Datasheet



| | |
|------------------------------|---|
| DiGi Electronics Part Number | VM10JB150R-DG |
| Manufacturer | Stackpole Electronics Inc |
| Manufacturer Product Number | VM10JB150R |
| Description | RES 150 OHM 5% 10W RADIAL |
| Detailed Description | 150 Ohms ±5% 10W Through Hole Resistor Radial Flame Proof, Moisture Resistant, Safety Wirewound |

<https://www.DiGi-Electronics.com>

This model VM10JB150R is available at DiGi Electronics.

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DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

VM10JB150R

Series:

VM

Resistance:

150 Ohms

Power (Watts):

10W

Features:

Flame Proof, Moisture Resistant, Safety

Operating Temperature:

-55°C ~ 250°C

Supplier Device Package:

-

Height - Seated (Max):

1.417" (36.00mm)

Failure Rate:

-

Manufacturer:

Stackpole Electronics Inc

Product Status:

Active

Tolerance:

±5%

Composition:

Wirewound

Temperature Coefficient:

±300ppm/°C

Package / Case:

Radial

Size / Dimension:

0.630" L x 0.472" W (16.00mm x 12.00mm)

Number of Terminations:

2

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8533.21.0080

Moisture Sensitivity Level (MSL):

Not Applicable

ECCN:

EAR99

VM / MVM Series

Ceramic Housed Vertical Mount Resistor

Stackpole Electronics, Inc.
Resistive Product Solutions

Features:

- Flameproof inorganic construction
- High temperature potting compound
- VM – Wirewound element
- MVM – Metal oxide element for higher values
- RoHS compliant, REACH compliant, halogen free, and lead free without exemption



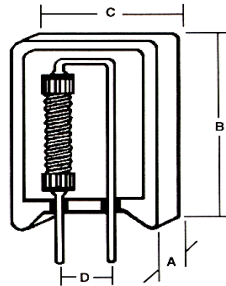
Electrical Specifications

| Type/Code | Power Rating (W) @ 70°C | Voltage Rating (V) | TCR (ppm/°C) | Ohmic Range (Ω) and Tolerance | |
|-----------|----------------------------|-----------------------|--|-------------------------------|-----|
| | | | | 5% | 10% |
| VM2 | 2 | 250 | < 1Ω = ± 700 ppm/°C ≥ 1Ω = ± 200 ppm/°C | 0.056 - 100 | |
| VM3 | 3 | 300 | | 0.1 - 100 | |
| VM5 | 5 | 350 | | 0.1 - 100 | |
| VM7 | 7 | 500 | | 0.39 - 470 | |
| VM10 | 10 | 700 | | 0.56 - 680 | |
| MVM2 | 2 | 250 | ± 200 ppm/°C | 0.1 - 51K | - |
| MVM3 | 3 | 300 | | 0.1 - 51K | - |
| MVM5 | 5 | 350 | | 0.1 - 51K | - |
| MVM7 | 7 | 500 | | 510 - 51K | - |
| MVM10 | 10 | 700 | | 750 - 51K | - |

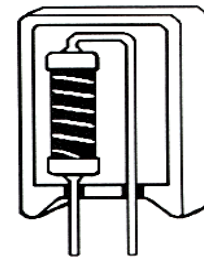
Maximum Working Voltage is limited by $\sqrt{P \cdot R}$ unless specified otherwise.

Mechanical Specifications

VM:



MVM:



| Type / Code | A | B | C | D | Lead Diameter | Lead Length | Unit |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|--------|
| VM2 / MVM2 | 0.276 ± 0.039 | 0.807 ± 0.039 | 0.433 ± 0.039 | 0.197 ± 0.039 | 0.031 ± 0.002 | 0.138 ± 0.020 | inches |
| | 7.00 ± 1.00 | 20.50 ± 1.00 | 11.00 ± 1.00 | 5.00 ± 1.00 | 0.80 ± 0.05 | 3.50 ± 0.50 | mm |
| VM3 / MVM3 | 0.335 ± 0.039 | 0.984 ± 0.039 | 0.492 ± 0.039 | 0.197 ± 0.039 | 0.031 ± 0.002 | 0.138 ± 0.020 | inches |
| | 8.50 ± 1.00 | 25.00 ± 1.00 | 12.50 ± 1.00 | 5.00 ± 1.00 | 0.80 ± 0.05 | 3.50 ± 0.50 | mm |
| VM5 / MVM5 | 0.374 ± 0.039 | 0.984 ± 0.039 | 0.512 ± 0.039 | 0.197 ± 0.039 | 0.031 ± 0.002 | 0.138 ± 0.020 | inches |
| | 9.50 ± 1.00 | 25.00 ± 1.00 | 13.00 ± 1.00 | 5.00 ± 1.00 | 0.80 ± 0.05 | 3.50 ± 0.50 | mm |
| VM7 / MVM7 | 0.374 ± 0.039 | 1.535 ± 0.059 | 0.512 ± 0.039 | 0.197 ± 0.039 | 0.031 ± 0.002 | 0.138 ± 0.020 | inches |
| | 9.50 ± 1.00 | 39.00 ± 1.50 | 13.00 ± 1.00 | 5.00 ± 1.00 | 0.80 ± 0.05 | 3.50 ± 0.50 | mm |
| VM10 / MVM10 | 0.472 ± 0.039 | 1.378 ± 0.039 | 0.630 ± 0.039 | 0.295 ± 0.039 | 0.031 ± 0.002 | 0.138 ± 0.020 | inches |
| | 12.00 ± 1.00 | 35.00 ± 1.00 | 16.00 ± 1.00 | 7.50 ± 1.00 | 0.80 ± 0.05 | 3.50 ± 0.50 | mm |

VM / MVM Series

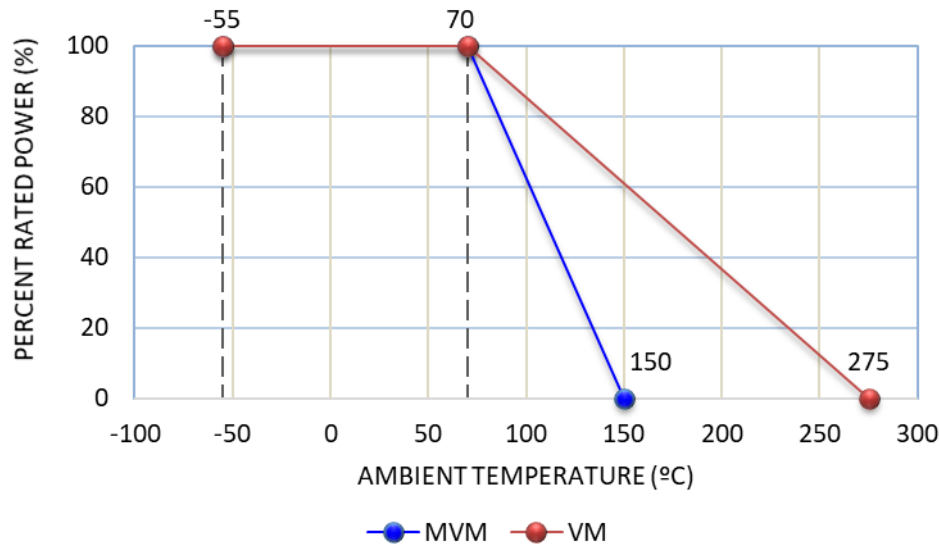
Ceramic Housed Vertical Mount Resistor

Stackpole Electronics, Inc.
Resistive Product Solutions

| Performance Characteristics | |
|--|------|
| Moisture Resistance | ± 5% |
| Thermal Shock | ± 2% |
| Load Life @ 70°C - 1000 hours | ± 5% |
| Resistance to Soldering Heat | ± 2% |
| Short Time Overload - 5 x Pn for 5 seconds | ± 2% |
| Dielectric Withstanding Voltage | ± 2% |

Operational temperature range is -55 to 275°C for VM and -55 to 150°C for MVM.

Power Derating Curve:



Recommended Solder Profile

This information is intended as a reference for solder profiles for Stackpole resistive components. These profiles should be compatible with most soldering processes. These are only recommendations. Actual numbers will depend on board density, geometry, packages used, etc., especially those cells labeled with “*”.

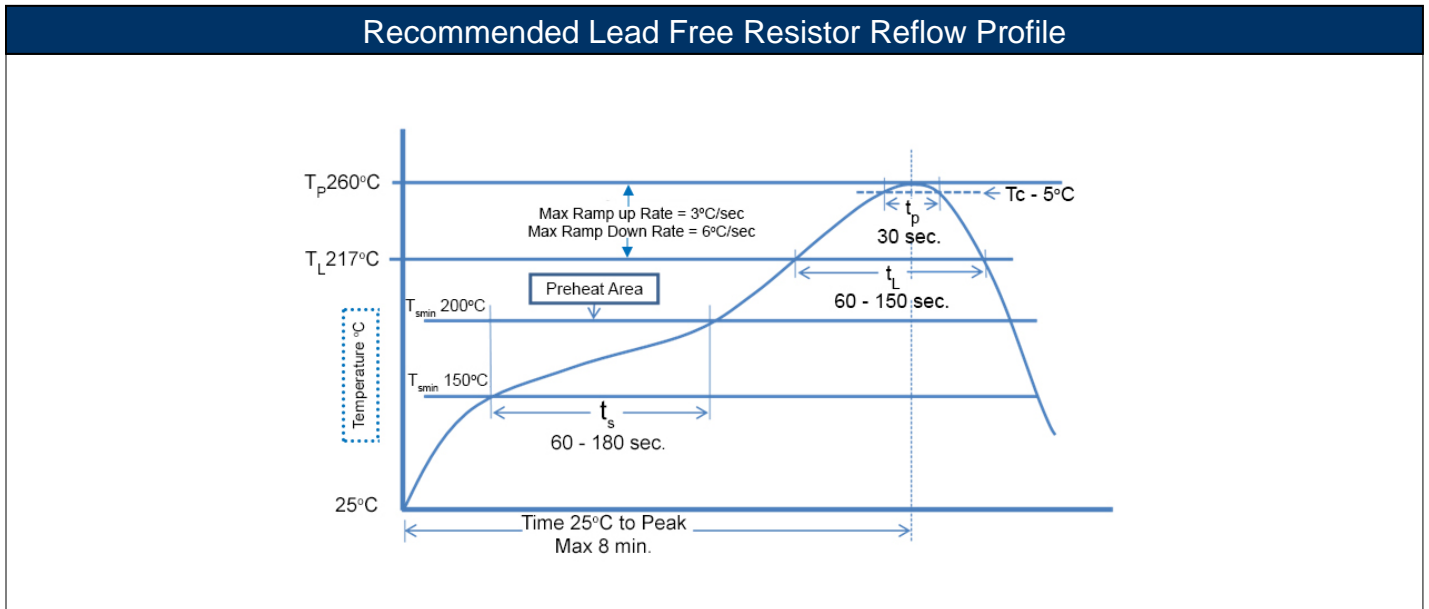
100% Matte Tin / RoHS Compliant Terminations

Soldering iron recommended temperatures: 330°C to 350°C with minimum duration.
Maximum number of reflow cycles: 3.

| Wave Soldering | | | |
|--------------------|------------|-------------|------------|
| Description | Maximum | Recommended | Minimum |
| Preheat Time | 80 seconds | 70 seconds | 60 seconds |
| Temperature Diff. | 140°C | 120°C | 100°C |
| Solder Temp. | 260°C | 250°C | 240°C |
| Dwell Time at Max. | 10 seconds | 5 seconds | * |
| Ramp DN (°C/sec) | N/A | N/A | N/A |

Temperature Diff. = Difference between final preheat stage and soldering stage.

| Convection IR Reflow | | | |
|----------------------|-------------|-------------|------------|
| Description | Maximum | Recommended | Minimum |
| Ramp Up (°C/sec) | 3°C/sec | 2°C/sec | * |
| Dwell Time > 217°C | 150 seconds | 90 seconds | 60 seconds |
| Solder Temp. | 260°C | 245°C | * |
| Dwell Time at Max. | 30 seconds | 15 seconds | 10 seconds |
| Ramp DN (°C/sec) | 6°C/sec | 3°C/sec | * |



RoHS Compliance

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union’s directive regarding “Restrictions on Hazardous Substances” (RoHS 3). As part of this ongoing program, we periodically update this document with the status regarding the availability of our compliant components. All our standard part numbers are compliant to EU Directive 2011/65/EU of the European Parliament as amended by Directive (EU) 2015/863/EU as regards the list of restricted substances.

| RoHS Compliance Status | | | | | | |
|-------------------------|--|----------------------------|--------------------------------|-----------------------------------|--|---------------------------------------|
| Standard Product Series | Description | Package / Termination Type | Standard Series RoHS Compliant | Lead-Free Termination Composition | Lead-Free Mfg. Effective Date (Std Product Series) | Lead-Free Effective Date Code (YY/WW) |
| VM | Ceramic Housed Vertical Mount Wirewound Resistor (Standard WW) | Radial | YES | 100% Matte Sn | Jan-06 | 06/01 |
| MVM | Ceramic Housed Vertical Mount Wirewound Resistor (Metal Oxide) | Radial | YES | 100% Matte Sn | Jan-06 | 06/01 |

VM / MVM Series

Ceramic Housed Vertical Mount Resistor

Stackpole Electronics, Inc.
Resistive Product Solutions

“Conflict Metals” Commitment

We at Stackpole Electronics, Inc. are joined with our industry in opposing the use of metals mined in the “conflict region” of the Eastern Democratic Republic of the Congo (DRC) in our products. Recognizing that the supply chain for metals used in the electronics industry is very complex, we work closely with our own suppliers to verify to the extent possible that the materials and products we supply do not contain metals sourced from this conflict region. As such, we are in compliance with the requirements of Dodd-Frank Act regarding Conflict Minerals.

Compliance to “REACH”

We certify that all passive components supplied by Stackpole Electronics, Inc. are SVHC (Substances of Very High Concern) free and compliant with the requirements of EU Directive 1907/2006/EC, “The Registration, Evaluation, Authorization and Restriction of Chemicals”, otherwise referred to as REACH. Contact us for complete list of REACH Substance Candidate List.

Environmental Policy

It is the policy of Stackpole Electronics, Inc. (SEI) to protect the environment in all localities in which we operate. We continually strive to improve our effect on the environment. We observe all applicable laws and regulations regarding the protection of our environment and all requests related to the environment to which we have agreed. We are committed to the prevention of all forms of pollution.

How to Order



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