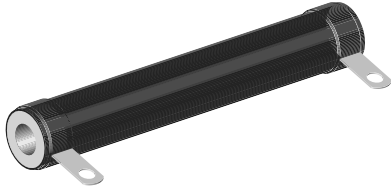


Wirewound Resistor, Industrial Power, Vitreous Coated, Fixed Tubular


FEATURES

- High temperature vitreous coating
- Complete welded construction
- Available in non-inductive style (special "NI") with Ayrton-Perry winding
- Tight tolerance of 5 % for values above 1 Ω
- Excellent stability in operation (< 3 % change resistance)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


STANDARD ELECTRICAL SPECIFICATIONS

| GLOBAL MODEL | HISTORICAL MODEL | POWER RATING $P_{25\text{ }^\circ\text{C}}$ W | RESISTANCE RANGE Ω $\pm 5\%$ | RESISTANCE RANGE Ω $\pm 10\%$ | WEIGHT (typical) g |
|--------------|------------------|---|---|--|-----------------------|
| FVT005 | FVT-5 | 5 | 1.0 to 20.5K | 0.1 to 20.5K | 4.60 |
| FVT005...NI | FVT-5-...-NI | 5 | 1.0 to 750 | 1.0 to 750 | 4.60 |
| FVT010 | FVT-10 | 12 | 1.0 to 58K | 0.1 to 58K | 6.7 |
| FVT010...NI | FVT-10-...-NI | 12 | 1.0 to 3.9K | 1.0 to 3.9K | 6.7 |
| FVT020 | FVT-20 | 20 | 1.0 to 95K | 0.1 to 95K | 12.57 |
| FVT020...NI | FVT-20-...-NI | 20 | 1.0 to 6.8K | 1.0 to 6.8K | 12.57 |
| FVT20A | - | 15 | 1.0 to 60K | 0.10 to 60K | 8.64 |
| FVT025 | FVT-25 | 25 | 1.0 to 115K | 0.1 to 115K | 20.7 |
| FVT025...NI | FVT-25-...-NI | 25 | 1.0 to 8.8K | 1.0 to 8.8K | 20.7 |
| FVT25A | FVT-25A | 30 | 1.0 to 56K | 0.1 to 56K | 20.7 |
| FVT25A...NI | FVT-25A-...-NI | 30 | 1.0 to 7.25K | 1.0 to 7.25K | 20.7 |
| FVT25B | FVT-25B | 30 | 1.0 to 49K | 0.1 to 49K | 14.5 |
| FVT25B...NI | FVT-25B-...-NI | 30 | 1.0 to 6.8K | 1.0 to 6.8K | 14.5 |
| FVT050 | FVT-50 | 50 | 1.0 to 112K | 0.1 to 112K | 42.1 |
| FVT050...NI | FVT-50-...-NI | 50 | 1.0 to 21.5K | 1.0 to 21.5K | 42.1 |
| FVT50A | FVT-50A | 60 | 1.0 to 145K | 0.1 to 145K | 65.6 |
| FVT50A...NI | FVT-50A-...-NI | 60 | 1.0 to 27.2K | 1.0 to 27.2K | 65.6 |
| FVT50B | FVT-50B | 70 | 1.0 to 170K | 0.1 to 170K | 60.0 |
| FVT50B...NI | FVT-50B-...-NI | 70 | 1.0 to 31.4K | 1.0 to 31.4K | 60.0 |
| FVT075 | FVT-75 | 75 | 1.0 to 276K | 0.1 to 276K | 98.5 |
| FVT075...NI | FVT-75-...-NI | 75 | 1.0 to 35K | 1.0 to 35K | 98.5 |
| FVT75A | FVT-75A | 90 | 1.0 to 238K | 0.1 to 238K | 64.8 |
| FVT75A...NI | FVT-75A-...-NI | 90 | 1.0 to 31K | 1.0 to 31K | 64.8 |
| FVT080 | - | 80 | 1.0 to 190K | 0.10 to 190K | 121.58 |
| FVT100 | FVT-100 | 100 | 1.0 to 260K | 0.1 to 260K | 91.4 |
| FVT100...NI | FVT-100-...-NI | 100 | 1.0 to 48.5K | 1.0 to 48.5K | 91.4 |
| FVT130 | FVT-130 | 130 | 1.0 to 380K | 0.1 to 380K | 192.4 |
| FVT130...NI | FVT-130-...-NI | 130 | 1.0 to 70.2K | 1.0 to 70.2K | 192.4 |
| FVT160 | FVT-160 | 175 | 1.0 to 470K | 0.1 to 470K | 250.8 |
| FVT160...NI | FVT-160-...-NI | 175 | 1.0 to 105K | 1.0 to 105K | 250.8 |
| FVT175 | - | 175 | 1.0 to 500K | 0.10 to 500K | 250.8 |
| FVT200 | FVT-200 | 225 | 1.0 to 645K | 0.1 to 645K | 310.0 |
| FVT200...NI | FVT-200-...-NI | 225 | 1.0 to 121K | 1.0 to 121K | 310.0 |
| FVT225 | FVT-225 | 225 | 1.0 to 645K | 0.1 to 645K | 310.0 |
| FVT225...NI | FVT-225-...-NI | 225 | 1.0 to 121K | 1.0 to 121K | 310.0 |



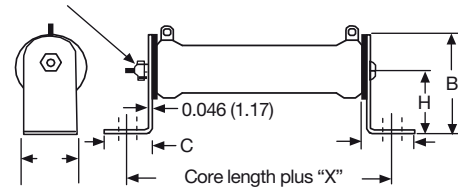
| GLOBAL PART NUMBER INFORMATION | | | | | | | | | | | | | | | | | |
|--|---|------------------------------|--|---------------------------------------|-------------------------------------|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|
| Global Part Numbering example: FVT02506E25R00JE (visit www.vishay.net SAP parts manual for all options) | | | | | | | | | | | | | | | | | |
| F | V | T | 0 | 2 | 5 | 0 | 6 | E | 2 | 5 | R | 0 | 0 | J | E | | |
| GLOBAL MODEL (6 digits) | TERMINAL DESIGNATION (2 digits) | TERMINAL FINISH (1 digit) | VALUE (5 digits) | TOLERANCE (1 digit) | PACKAGING CODE (1 digit) | SPECIAL (up to 2 digits) | | | | | | | | | | | |
| (see Standard Electrical Specifications Global Model column for options) | 02, 05, 06, 14, 15, 20 FC = ferrule cap | E = lead (Pb)-free | R = decimal K = thousand 1R500 = 1.5 Ω 1K500 = 1.5 kΩ | J = ± 5 % K = ± 10 % | E = lead (Pb)-free bulk pack | (dash number) from 1 to 99 as applicable 91 = 100 style horizontal high bracket 92 = 200 style push-in bracket 93 = 300 style thru-bolt bracket NI = non-inductive NP = non-inductive + 92 style push-in bracket NH = non-inductive + 91 style horizontal bracket NV = non-inductive + style vertical bracket | | | | | | | | | | | |
| Historical Part Number example: FVT-25-25-5 % | | | | | | | | | | | | | | | | | |
| FVT-25 | | 25 Ω | | 5 % | | | | | | | | | | | | | |
| HISTORICAL MODEL | | RESISTANCE VALUE | | TOLERANCE | | SPECIAL | | | | | | | | | | | |

| DIMENSIONS in inches (millimeters) | | | | | | | | |
|------------------------------------|------------------|-------------------|---------------------------|---------------------------|--|---|----------------------|--------------------------------|
| | | | | | | | | |
| MODEL | A MAX. | CORE DIMENSIONS | | | TERMINAL SETBACK ± 0.031 (0.79) | DISTANCE CENTER TO CENTER (REF.) | TERMINAL DESIGNATION | |
| | | LENGTH | O.D. ± 0.031 (0.79) | I.D. ± 0.031 (0.79) | | | STANDARD | OPTIONAL (QUICK CONNECT) |
| FVT005 | 0.406 (10.31) | 1.000 (25.40) | 0.313 (7.95) | 0.188 (4.78) | 0.094 (2.39) | 0.625 (15.88) | 05 | 14 |
| FVT010 | 0.406 (10.31) | 1.750 (44.45) | 0.313 (7.95) | 0.188 (4.78) | 0.094 (2.39) | 1.375 (34.93) | 05 | 14 |
| FVT020 | 0.563 (14.30) | 2.000 (50.8) | 0.438 (11.13) | 0.260 (6.60) | 0.094 (2.39) | 1.625 (41.28) | 02 | 14 |
| FVT20A | 0.563 (14.30) | 1.500 (38.10) | 0.438 (11.11) | 0.313 (7.94) | 0.094 (2.38) | 0.937 (23.80) | 02 | 14 |
| FVT025 | 0.688 (17.48) | 2.000 (50.8) | 0.563 (14.30) | 0.313 (7.95) | 0.094 (2.39) | 1.562 (39.67) | 06 | 15 |
| FVT25A | 0.906 (23.01) | 2.000 (50.8) | 0.750 (19.05) | 0.500 (12.70) | 0.094 (2.39) | 1.562 (39.67) | 06 | 15 |
| FVT25B | 0.770 (19.56) | 2.000 (50.8) | 0.625 (15.88) | 0.453 (11.51) | 0.094 (2.39) | 1.562 (39.67) | 06 | 15 |
| FVT050 | 0.688 (17.48) | 4.000 (101.6) | 0.563 (14.30) | 0.313 (7.95) | 0.094 (2.39) | 3.562 (90.47) | 06 | 15 |
| FVT50A | 0.906 (23.01) | 4.000 (101.6) | 0.750 (19.05) | 0.500 (12.70) | 0.062 (1.57) | 3.626 (92.10) | 06 | 15 |
| FVT50B | 0.906 (23.01) | 4.500 (114.3) | 0.750 (19.05) | 0.547 (13.89) | 0.125 (3.18) | 4.000 (101.60) | 06 | 15 |
| FVT075 | 0.688 (17.48) | 6.000 (152.4) | 0.563 (14.30) | 0.313 (7.95) | 0.094 (2.39) | 5.562 (141.27) | 06 | 15 |
| FVT75A | 0.906 (23.01) | 6.000 (152.4) | 0.750 (19.05) | 0.500 (12.70) | 0.094 (2.39) | 5.562 (141.27) | 06 | 15 |
| FVT080 | 1.313 (33.34) | 4.000 (101.6) | 1.125 (28.58) | 0.750 (19.05) | 0.219 (5.56) | 2.812 (71.42) | 20 | 15 |
| FVT100 | 0.906 (23.01) | 6.500 (165.1) | 0.750 (19.05) | 0.500 (12.70) | 0.125 (3.18) | 6.000 (152.40) | 06 | 15 |
| FVT130 | 1.313 (33.35) | 6.500 (165.1) | 1.125 (28.58) | 0.750 (19.05) | 0.282 (7.16) | 5.374 (136.50) | 20 | 15 |
| FVT160 | 1.313 (33.35) | 8.500 (215.9) | 1.125 (28.58) | 0.750 (19.05) | 0.267 (6.78) | 7.404 (188.06) | 20 | 15 |
| FVT175 | 1.313 (33.34) | 8.500 (215.9) | 1.125 (28.58) | 0.750 (19.05) | 0.219 (5.56) | 7.312 (185.72) | 20 | 15 |
| FVT200 | 1.313 (33.35) | 10.500 (266.7) | 1.125 (28.58) | 0.750 (19.05) | 0.266 (6.76) | 9.406 (238.91) | 20 | 15 |

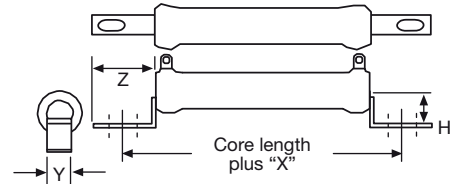
| TERMINAL DIMENSIONS in inches (millimeters) | | | | | | |
|---|------------------|-----------------|-----------------|------------------|------------------|------------------|
| DIMENSIONS | TERMINAL STYLE | | | | | |
| | 20 | 02 | 05 | 06 | 14 | 15 |
| WIDTH A | 0.375 (9.53) | 0.188 (4.76) | 0.188 (4.76) | 0.250 (6.35) | 0.188 (4.76) | 0.250 (6.35) |
| HEIGHT B | 0.562 (14.07) | 0.393 (9.98) | 0.393 (9.98) | 0.500 (12.70) | 0.563 (14.29) | 0.594 (15.08) |
| DIAMETER C | 0.204 (5.18) | 0.133 (3.38) | 0.133 (3.38) | 0.172 (4.36) | 0.050 (1.27) | 0.065 (1.65) |
| THICKNESS D | 0.020 (0.51) | 0.020 (0.51) | 0.020 (0.51) | 0.020 (0.51) | 0.020 (0.51) | 0.031 (0.79) |

| MOUNTING HARDWARE | | | |
|-------------------|--|--------------------------------|----------------------------------|
| GLOBAL MODEL | AVAILABLE BRACKET TYPES BY MODEL | | |
| | 91 = 100 STYLE HORIZONTAL 1 HIGH BRACKET | 92 = 200 STYLE PUSH-IN BRACKET | 93 = 300 STYLE THRU-BOLT BRACKET |
| FVT005 | n/a | 202 | n/a |
| FVT010 | 101 | 202 | 301 |
| FVT020 | 101 | 203 | 301 |
| FVT20A | 101 | 203 | 301 |
| FVT025 | 102 | 204 | 301 |
| FVT25A | 102 | 206 | 302 |
| FVT25B | 102 | 205 | 301 |
| FVT050 | 102 | 204 | 302 |
| FVT50A | 102 | 206 | 302 |
| FVT50B | 102 | 208 | 302 |
| FVT075 | 102 | 204 | 301 |
| FVT75A | 102 | 206 | 302 |
| FVT100 | 102 | 206 | 302 |
| FVT130 | 103 | 207 | 302 |
| FVT175 | 103 | 207 | 303 |
| FVT200 | 103 | 207 | 303 |
| FVT225 | 103 | 207 | 303 |

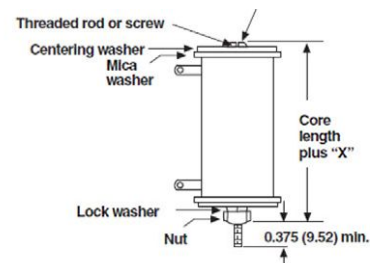
DIMENSIONS in inches (millimeters)

91 = 100 Style Horizontal 1 High Bracket


| BRACKET TYPE | X | Y | Z | H | MOUNTING SLOT | C | B |
|--------------|------------------|------------------|------------------|------------------|---------------------------------|------------------|------------------|
| 101 | 1.063 (26.99) | 0.500 (12.70) | 0.950 (24.13) | 1.000 (25.40) | 0.219 x 0.438 (5.56 x 11.11) | 0.750 (19.05) | 1.375 (34.93) |
| 102 | 1.063 (26.99) | 0.750 (19.05) | 0.859 (21.83) | 1.250 (31.75) | 0.219 x 0.438 (5.56 x 11.11) | 0.750 (19.05) | 1.750 (44.45) |
| 103 | 1.063 (26.99) | 1.250 (31.75) | 1.000 (25.40) | 1.500 (38.10) | 0.281 x 0.563 (7.14 x 14.29) | 0.927 (23.55) | 2.125 (53.98) |

92 = 200 Style Push-In Bracket


| BRACKET TYPE | X | H | Y | Z | HOLE (DIA.) |
|--------------|------------------|------------------|------------------|------------------|--------------------------------|
| 202 | 0.478 (12.14) | 0.250 (6.35) | 0.125 (3.175) | 0.375 (9.53) | 0.170 (4.32) |
| 203 | 0.583 (14.80) | 0.580 (14.73) | 0.188 (4.78) | 0.460 (11.68) | 0.115 (2.92) |
| 204 | 0.700 (17.78) | 0.578 (14.68) | 0.250 (6.35) | 0.500 (12.70) | 0.156 (3.96) |
| 205 | 0.846 (21.49) | 0.800 (20.32) | 0.375 (9.53) | 0.600 (15.24) | 0.343 x 0.213 (8.71 x 5.46) |
| 206 | 0.846 (21.49) | 0.800 (20.62) | 0.375 (9.53) | 0.600 (15.24) | 0.343 x 0.213 (8.71 x 5.46) |
| 207 | 0.700 (17.78) | 1.125 (28.58) | 0.500 (12.70) | 0.687 (17.45) | 0.250 x 0.188 (6.35 x 4.78) |
| 208 | 0.846 (21.49) | 0.800 (20.62) | 0.375 (9.53) | 0.600 (15.24) | 0.343 x 0.213 (8.71 x 5.46) |

93 = 300 Style Thru-Bolt Bracket


| BRACKET TYPE | X (APPROXIMATE) | THREAD |
|--------------|------------------|-----------|
| 301 | 0.373 (9.47) | 8 to 32 |
| 302 | 0.271 (6.88) | 8 to 32 |
| 303 | 0.463 (11.76) | 1/4 to 20 |

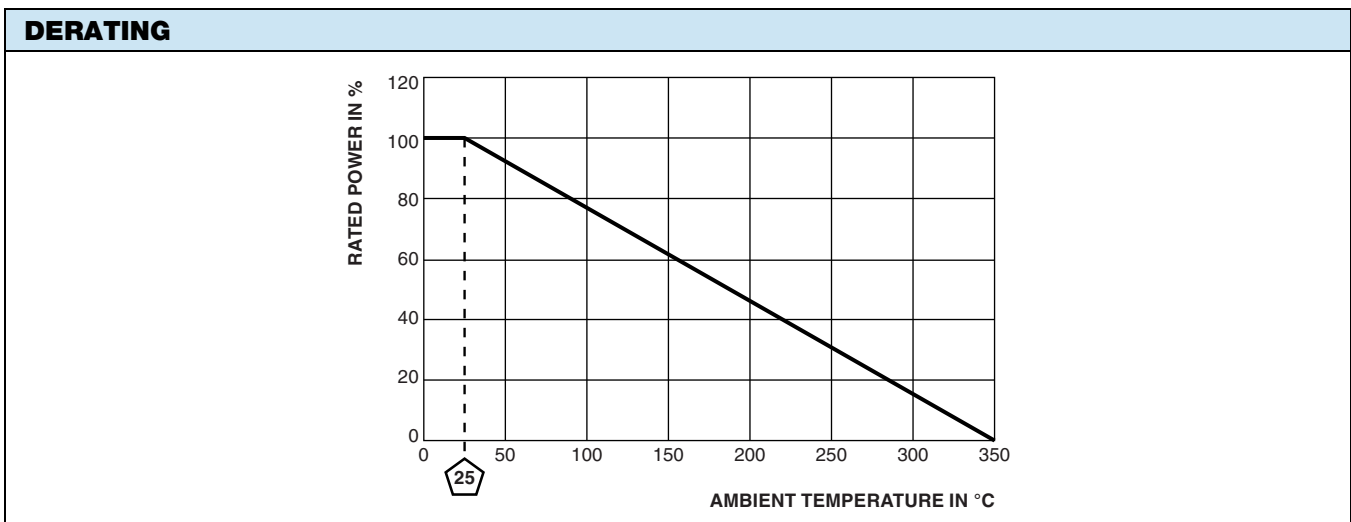


| TECHNICAL SPECIFICATIONS | | |
|--|-------------------|---|
| PARAMETER | UNIT | RESISTOR CHARACTERISTICS |
| Power Rating | W | 5 to 225 |
| Resistance Range | Ω | 0.1 to 645K |
| Resistance Tolerance | % | 5 |
| Temperature Coefficient | ppm/ $^{\circ}$ C | ± 260 for 20 Ω and above, ± 400 for 1 Ω to 19.99 Ω |
| Operating Temperature | $^{\circ}$ C | -55 $^{\circ}$ C to 350 $^{\circ}$ C |
| Temperature Rise | $^{\circ}$ C | 325 $^{\circ}$ C above an ambient of 25 $^{\circ}$ C |
| Maximum Altitude | f.a.s.l. | 10 000 |
| Short-Term Overload | - | 10x rated power for 5 s |
| Surge Windings | | Available |
| Maximum Working Voltage | - | $(P \times R)^{0.5}$ |
| Insulation Resistance | Ω | 1M |
| Dielectric Voltage | V _{RMS} | 1000 V _{AC} |
| Creepage | | Varies by wattage, see "Terminal Setback" in Dimensions table |
| Terminal Sleeves | | n/a |
| Inductance | μ H | Varies by wattage and resistance |
| Non-Inductive Winding | | Available |
| Terminal Strength | lb | 10 lbs |
| Electrical or Mechanical Customization | | Contact factory: ww2dresistors@vishay.com |

| MATERIAL SPECIFICATIONS | |
|-------------------------|---|
| Element | Copper-nickel alloy or nickel-chrome alloy, depending on resistance value |
| Core | Cordierite, steatite |
| Coating | Special high temperature vitreous enamel |
| Standard Terminals | Tinned alloy 42 |
| Optional Terminals | Alloy 42 |
| Terminal Bands | Alloy 42 |
| Part Marking | HEI, model, wattage, value, tolerance, date code |

NON-INDUCTIVE

Models of equivalent physical and electrical specifications are available with non-inductive (Ayrton-Perry) winding. They are identified by adding the letters "NI" to the end of the part number in the special section. For non-inductive models the maximum resistance values are lower, see Standard Electrical Specifications table.





Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Wirewound Resistors - Chassis Mount](#) category:

Click to view products by [Vishay](#) manufacturer:

Other Similar products are found below :

[HD300HLR71J](#) [RER50F18R7RC02](#) [RER50F7R50RC02](#) [RER75F4991MC02](#) [RH0055R000FC02W09](#) [2-1623821-6](#) [FVT200-500](#)
[RDSF010015R00JDBNI](#) [RER60F34R8RC02](#) [RER60F51R1MC0230](#) [RER65F1R50PC02](#) [RER70F62R5PC02](#) [VK100NA-200](#) [VK100NA-50](#)
[VK100NA-750](#) [40/70MJ2K00BE](#) [VP10FA-3K](#) [VP50KA-20K](#) [VPR10F1](#) [VPR10F-13.5K](#) [VPR10F-4500](#) [VPR10F-4.5K](#) [VPR10F-4K](#)
[VPR10F-700](#) [VPR10F-7.5K](#) [VPR20H150](#) [VPR5F-22.5K](#) [L75J1K0E](#) [VRH320 3K3 K](#) [RER65F2940PC02](#) [RER75F1R00RC02](#)
[RER70F27R4P](#) [VPR5F-600](#) [VPR5F250](#) [VPR10F-8K](#) [VPR10F-6K](#) [VPR10F225](#) [VPR10F-1.75K](#) [VPR10F-1.25K](#) [VPR10F-125](#) [VPR10F10](#)
[VP50KA-12K](#) [VP50KA-100K](#) [VP25KA-5000](#) [VK100NA250](#) [VK100NA-15](#) [620-5R00-FBW](#) [L100J150E-MT1](#) [L50J500E-MT1](#) [VPR10F-8.5K](#)