

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



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

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	1.0 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 22.3K	0.1 to 22.3K	6.7
FVT010...NI	FVT-10-...-NI	12	1.0 to 2.79K	1.0 to 2.79K	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 4.8K	1.0 to 4.8K	12.57
FVT025	FVT-25	25	1.0 to 44.6K	0.1 to 44.6K	20.7
FVT025...NI	FVT-25-...-NI	25	1.0 to 6.18K	1.0 to 6.18K	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 114K	0.1 to 114K	42.1
FVT050...NI	FVT-50-...-NI	50	1.0 to 15.1K	1.0 to 15.1K	42.1
FVT50A	FVT-50A	60	1.0 to 149K	0.1 to 149K	65.6
FVT50A...NI	FVT-50A-...-NI	60	1.0 to 19.1K	1.0 to 19.1K	65.6
FVT50B	FVT-50B	70	1.0 to 173K	0.1 to 173K	60.0
FVT50B...NI	FVT-50B-...-NI	70	1.0 to 22.1K	1.0 to 22.1K	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
FVT100	FVT-100	100	1.0 to 267K	0.1 to 267K	91.4
FVT100...NI	FVT-100-...-NI	100	1.0 to 34K	1.0 to 34K	91.4
FVT130	FVT-130	130	1.0 to 387K	0.1 to 387K	192.4
FVT130...NI	FVT-130-...-NI	130	1.0 to 49.3K	1.0 to 49.3K	192.4
FVT160	FVT-160	175	1.0 to 510K	0.1 to 510K	250.8
FVT160...NI	FVT-160-...-NI	175	1.0 to 78.8K	1.0 to 78.8K	250.8
FVT200	FVT-200	225	1.0 to 651K	0.1 to 651K	310.0
FVT200...NI	FVT-200-...-NI	225	1.0 to 85.4K	1.0 to 85.4K	310.0

GLOBAL PART NUMBER INFORMATION

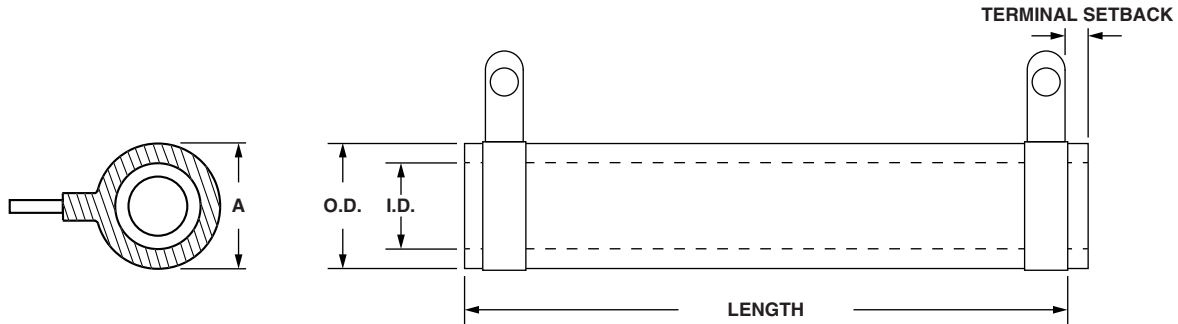
 Global Part Numbering example: **FVT02506E25R00JE** (visit www.vishay.net SAP parts manual for all options)

F	V	T	0	2	5	0	6	E	2	5	R	0	0	J	E		
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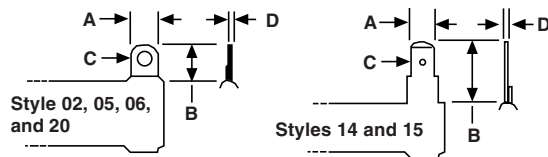
GLOBAL MODEL (6 digits)	TERMINAL DESIGNATION (2 digits)	TERMINAL FINISH (1 digit)	VALUE (5 digits)	TOLERANCE (1 digit)	PACKAGING CODE (1 digit)	SPECIAL (up to 2 digits)
(See Standard Electrical Specifications Global Model column for options)	02, 05, 06, 14, 15, 20 FC = Ferrule cap	E = Lead (Pb)-free	R = Decimal K = Thousand 1R500 = 1.5 Ω 1K500 = 1.5 kΩ	J = ± 5 % K = ± 10 %	E = E01 = Lead (Pb)-free skin pack	(Dash number) From 1 to 99 as applicable NI = Non-inductive 91 = 100 style BKT 92 = 200 style BKT 93 = 300 style BKT

 Historical Part Number example: **FVT-25-25-5 %**

FVT-25	25 Ω	5 %	
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE	SPECIAL

DIMENSIONS in inches [millimeters]


MODEL	DIMENSIONS in inches [millimeters]								
	A MAX.	CORE DIMENSIONS			TERMINAL SETBACK ± 0.031 (0.79)	DISTANCE BETWEEN TERMINALS (REF.)	TERMINAL DESIGNATION		BRACKET TYPES
		LENGTH ± 0.062 (1.59)	O.D.	I.D. ± 0.031 (0.79)			STANDARD	OPTIONAL (QUICK CONNECT)	
FVT005	0.406 [10.31]	1.000 [25.40]	0.313 [7.94]	0.188 [4.76]	0.094 [2.39]	0.437 [11.10]	05	14	209
FVT010	0.406 [10.31]	1.750 [44.45]	0.313 [7.95]	0.188 [4.78]	0.094 [2.39]	1.187 [30.15]	05	14	101, 204, 301
FVT020	0.563 [14.30]	2.000 [50.8]	0.438 [11.13]	0.260 [6.60]	0.094 [2.39]	1.437 [36.50]	02	14	203
FVT025	0.688 [17.48]	2.000 [50.8]	0.563 [14.30]	0.313 [7.95]	0.094 [2.39]	1.312 [33.32]	06	15	101, 203, 301
FVT25A	0.906 [23.01]	2.000 [50.8]	0.750 [19.05]	0.500 [12.70]	0.094 [2.39]	1.312 [33.32]	06	15	101, 203, 301
FVT25B	0.770 [19.56]	2.000 [50.8]	0.625 [15.88]	0.453 [11.51]	0.094 [2.39]	1.312 [33.32]	06	15	101, 203, 301
FVT050	0.688 [17.48]	4.000 [101.6]	0.563 [14.30]	0.313 [7.95]	0.094 [2.39]	3.312 [84.12]	06	15	101, 203, 301
FVT50A	0.906 [23.01]	4.000 [101.6]	0.750 [19.05]	0.500 [12.70]	0.062 [1.57]	3.376 [85.75]	06	15	102, 203, 303
FVT50B	0.906 [23.01]	4.500 [114.3]	0.750 [19.05]	0.547 [13.89]	0.125 [3.18]	3.75 [95.25]	06	15	102, 206, 303
FVT075	0.688 [17.46]	6.000 [152.4]	0.563 [14.30]	0.313 [7.95]	0.094 [2.39]	5.312 [134.9]	06	15	101, 203, 301
FVT75A	0.906 [23.01]	6.000 [152.4]	0.750 [19.05]	0.500 [12.70]	0.094 [2.39]	5.312 [134.9]	06	15	102, 206, 303
FVT100	0.906 [23.01]	6.500 [165.1]	0.750 [19.05]	0.500 [12.70]	0.125 [3.18]	5.750 [146.1]	06	15	103, 205, 303
FVT130	1.313 [33.35]	6.500 [165.1]	1.125 [28.58]	0.750 [19.05]	0.282 [7.16]	5.312 [134.9]	20	15	103, 205, 303
FVT160	1.313 [33.35]	8.500 [215.9]	1.125 [28.58]	0.750 [19.05]	0.267 [6.78]	7.341 [186.5]	20	15	103, 205, 303
FVT200	1.313 [33.35]	10.500 [266.7]	1.125 [28.58]	0.750 [19.05]	0.266 [6.76]	9.343 [237.3]	20	15	103, 205, 303

TERMINAL DIMENSIONS


DIMENSIONS	TERMINAL STYLE					
	20	02	05	06	14	15
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]
B	0.625 [15.88]	0.406 [10.32]	0.438 [11.11]	0.563 [14.29]	0.563 [14.29]	0.594 [15.08]
C (HOLE DIAMETER)	0.196 [4.98]	0.093 [2.36]	0.104 [2.64]	0.166 [4.22]	0.050 [1.27]	0.065 [1.65]
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]



TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	FVT RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 260 for 20 Ω and above, ± 400 for 1 Ω to 19.99 Ω, special TC's available please contact factory
Short Time Overload	-	10 x rated power for 5 s
Dielectric Withstanding Voltage	V _{AC}	1000, from terminal to mounting hardware
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Operating Temperature Range	°C	- 55 to + 350

MATERIAL SPECIFICATIONS

Element: Copper-nickel alloy or nickel-chrome alloy, depending on resistance value

Core: Ceramic, steatite or cordierite

Coating: Special high temperature vitreous

Standard Terminals: Tinned alloy 42

Optional Terminal (Quick Connect): Alloy 42

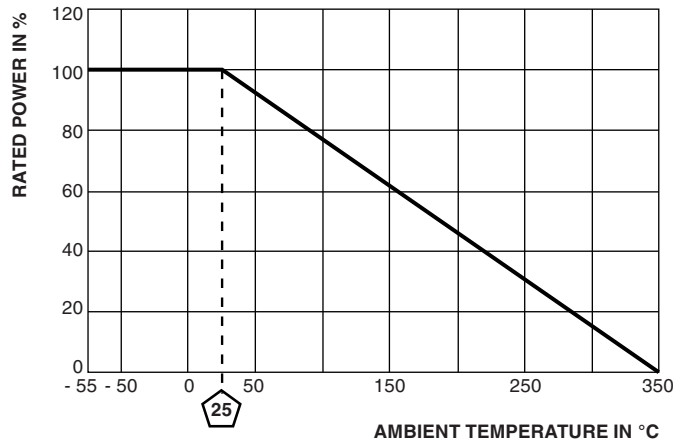
Terminal Bands: Alloy 42

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.

DERATING





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