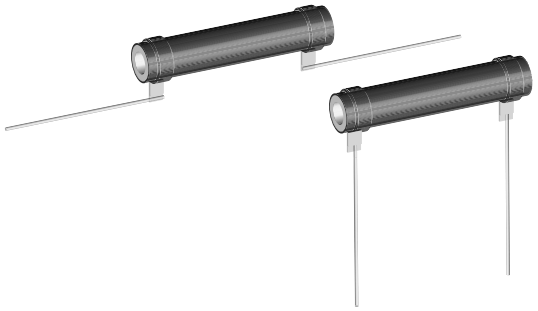
Wirewound Resistor, Industrial Power, Vitreous Coated, Tubular



FEATURES

- High temperature vitreous coating
- Complete welded construction
- Excellent for intermittent power and pulsing application
- Available in non-inductive style (special “NI”) with Ayrton-Perry winding
- Various lead and terminal options
- Excellent stability in operation (< 3 % change resistance)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

e3

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{25\,°C}$ W	RESISTANCE RANGE Ω ± 5 %	RESISTANCE RANGE Ω ± 10 %	WEIGHT (typical) g
FVTL05	FVTL-5	5	1.0 to 20.5K	0.1 to 20.5K	4.60
FVTS05	FVTS-5	5	1.0 to 20.5K	0.1 to 20.5K	4.60
FVWL5A	-	5.25	1.0 to 15K	0.1 to 15K	2.12
FVTL5A	-	5.25	1.0 to 15K	0.1 to 15K	2.12
FVWL05	FVWL-5	8	1.0 to 20.5K	0.1 to 20.5K	4.60
FVWL08	-	8	1.0 to 20.5K	0.1 to 20.5K	4.60
FVTL08	-	8	1.0 to 20.5K	0.1 to 20.5K	4.60
FVWL1A	-	10	1.0 to 29K	0.10 to 29K	6.24
FVTL10	FVTL-10	12	1.0 to 58K	0.10 to 58K	6.69
FVTS10	FVTS-10	12	1.0 to 58K	0.10 to 58K	6.69
FVWL10	FVWL-10	12	1.0 to 58K	0.10 to 58K	6.69
FVWL12	-	12	1.0 to 58K	0.10 to 58K	6.69
FVTL12	-	12	1.0 to 58K	0.10 to 58K	6.69
FVWL15	-	15	1.0 to 60K	0.10 to 60K	8.82
FVTL15	-	15	1.0 to 60K	0.10 to 60K	8.82
FVWL2A	-	20	1.0 to 95K	0.10 to 95K	11.36
FVTL2A	-	20	1.0 to 95K	0.10 to 95K	11.36
FVTL20	FVTL-20	20	1.0 to 95K	0.10 to 95K	12.57
FVTS20	FVTS-20	20	1.0 to 95K	0.10 to 95K	12.57
FVWL20	FVWL-20	20	1.0 to 95K	0.10 to 95K	12.57

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	FVT RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 260 for 20 Ω and above, ± 400 for 1 Ω to 20 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

GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: FVTL05R2E25R00JE (visit www.vishay.net SAP parts manual for all options)

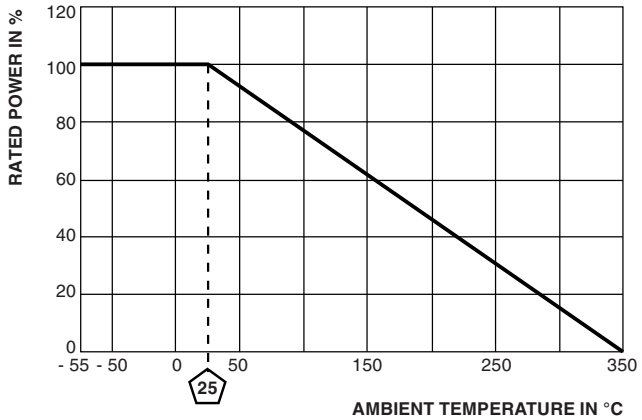
F	V	T	L	0	5	R	2	E	2	5	R	0	0	J	E		

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)	**A1** **A2** **R1** **R2**	**E** = lead (Pb)-free	**R** = decimal **K** = thousand **1R500** = 1.5 Ω **1K500** = 1.5 kΩ	**J** = ± 5 % **K** = ± 10 %	**E** = lead (Pb)-free cell and bulk pack	(dash number) from **1** to **99** as applicable **NI** = non-inductive **92** = 203 or 209 style push-in bracket as applicable

Historical Part Number example: FVTL-5-25-5 %

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

DERATING



MATERIAL SPECIFICATIONS

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

Core: ceramic, steatite

Coating: special high temperature vitreous

Standard Terminals: tinned alloy 42

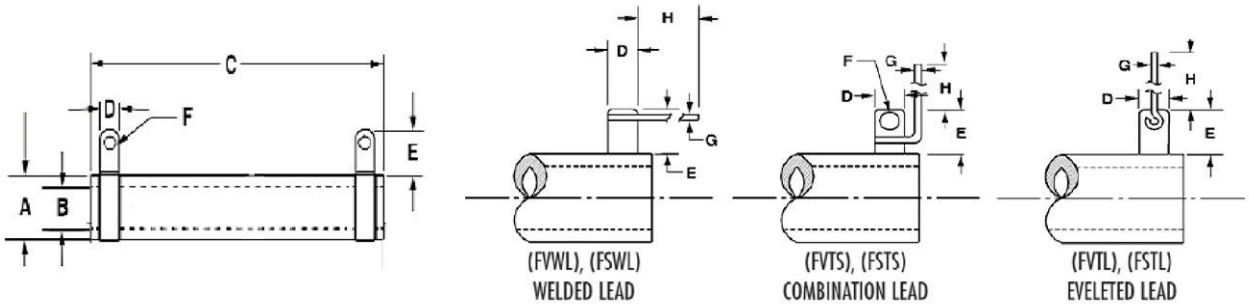
Terminal Bands: alloy 42

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.

DIMENSIONS in inches [millimeters]



MODEL	CORE DIMENSIONS (REF.)			TERMINAL				LEADS		BRACKET TYPE
	A	B	C	D ± 0.005 [± 0.12]	E ± 0.015 [± 0.38]	F ± 0.005 [± 0.12]	DESIGNATION	G ± 0.002 [± 0.05]	H ± 0.125 [± 3.18]	
FVTL05	0.313 [7.94]	0.188 [4.76]	1.000 [25.40]	0.188 [4.78]	0.406 [10.31]	0.132 [3.35]	R2	0.032 [0.813]	2.90 [73.66]	209
FVTS05	0.313 [7.94]	0.188 [4.76]	1.000 [25.40]	0.188 [4.78]	0.406 [10.31]	0.132 [3.35]	R2	0.032 [0.813]	1.50 [38.10]	209
FVWL5A	0.250 [6.35]	0.125 [3.18]	0.625 [15.88]	0.063 [1.59]	0.188 [4.76] typ.	n/a	A2	0.032 [0.813]	1.50 [38.10]	-
FVTL5A	0.250 [6.35]	0.125 [3.18]	0.625 [15.88]	0.063 [1.59]	0.188 [4.76] typ.	n/a	R2	0.032 [0.813]	1.50 [38.10]	-
FVWL05	0.313 [7.94]	0.188 [4.76]	1.000 [25.40]	0.125 [3.175]	0.188 [4.78]	-	A2	0.032 [0.813]	1.50 [38.10]	209
FVWL08	0.313 [7.94]	0.188 [4.76]	1.000 [25.40]	0.125 [3.175]	0.188 [4.78]	n/a	R1	0.040 [1.20]	1.50 [38.10]	-
FVTL08	0.313 [7.94]	0.188 [4.76]	1.000 [25.40]	0.125 [3.175]	0.188 [4.78]	n/a	A1	0.040 [1.20]	1.50 [38.10]	-
FVWL1A	0.438 [11.11]	0.313 [7.94]	1.000 [25.40]	0.125 [3.18]	0.188 [4.76] typ.	n/a	A1	0.040 [1.02]	1.50 [38.10]	-
FVTL10	0.313 [7.94]	0.188 [4.76]	1.750 [44.45]	0.188 [4.78]	0.406 [10.31]	0.132 [3.35]	R1	0.040 [1.02]	2.90 [73.66]	209
FVTS10	0.313 [7.94]	0.188 [4.76]	1.750 [44.45]	0.188 [4.78]	0.406 [10.31]	0.132 [3.35]	R1	0.040 [1.02]	1.50 [38.10]	209
FVWL10	0.313 [7.94]	0.188 [4.76]	1.750 [44.45]	0.125 [3.175]	0.188 [4.78]	-	A1	0.040 [1.02]	1.50 [38.10]	209
FVWL12	0.313 [7.94]	0.188 [4.76]	1.750 [44.45]	0.125 [3.175]	0.188 [4.76] typ.	n/a	A1	0.040 [1.02]	1.50 [38.10]	-
FVTL12	0.313 [7.94]	0.188 [4.76]	1.750 [44.45]	0.125 [3.175]	0.188 [4.76] typ.	n/a	R1	0.040 [1.02]	1.50 [38.10]	-
FVWL15	0.438 [11.11]	0.313 [7.94]	1.500 [38.10]	0.125 [3.18]	0.188 [4.76] typ.	n/a	A1	0.040 [1.02]	1.50 [38.10]	-
FVTL15	0.438 [11.11]	0.313 [7.94]	1.500 [38.10]	0.125 [3.18]	0.188 [4.76] typ.	n/a	R1	0.040 [1.02]	1.50 [38.10]	-
FVWL2A	0.438 [11.11]	0.260 [6.604]	2.000 [50.8]	0.125 [3.18]	0.188 [4.76] typ.	-	A1	0.040 [1.02]	1.50 [38.10]	-
FVTL2A	0.438 [11.11]	0.313 [7.94]	2.000 [50.80]	0.125 [3.18]	0.188 [4.76] typ.	0.133 [3.37]	R1	0.040 [1.02]	1.65 [41.91]	-
FVTL20	0.438 [11.11]	0.260 [6.604]	2.000 [50.8]	0.188 [4.78]	0.406 [10.32]	0.133 [3.37]	R1	0.040 [1.02]	1.65 [41.91]	203
FVTS20	0.438 [11.11]	0.260 [6.604]	2.000 [50.8]	0.188 [4.78]	0.406 [10.32]	0.133 [3.37]	R1	0.040 [1.02]	1.50 [38.10]	203
FVWL20	0.438 [11.11]	0.260 [6.604]	2.000 [50.8]	0.125 [3.175]	0.188 [4.78]	-	A1	0.040 [1.02]	1.50 [38.10]	203

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