Wirewound Resistors, Industrial Power, Vitreous Coated, Adjustable Tubular



FEATURES

- High temperature vitreous coating
- Complete welded construction
- Tight tolerance of 5 % for values above 1 Ω
- Excellent stability in operation (< 3 % change in resistance)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

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
AVT010	AVT-10	12	0.1 to 10.2K	0.1 to 10.2K	6.69
AVT020	AVT-20	20	1.0 to 18K	1.0 to 18K	12.57
AVT20A	-	15	1.0 to 60K	0.10 to 60K	8.64
AVT025	AVT-25	25	0.1 to 23K	0.1 to 23K	20.72
AVT25A	AVT-25A	30	0.1 to 30K	0.1 to 30K	20.72
AVT25B	AVT-25B	30	0.1 to 24K	0.1 to 24K	14.25
AVT050	AVT-50	50	0.1 to 57K	0.1 to 57K	42.08
AVT50A	AVT-50A	60	0.1 to 75K	0.1 to 75K	65.64
AVT50B	AVT-50B	70	0.1 to 84.3K	0.1 to 84.3K	64.82
AVT075	AVT-75	75	0.1 to 85.5K	0.1 to 85.5K	106.37
AVT75A	AVT-75A	90	0.1 to 114K	0.1 to 114K	183.82
AVT080	-	90	1.0 to 190K	0.10 to 190K	121.58
AVT100	AVT-100	100	0.1 to 132K	0.1 to 132K	91.37
AVT130	AVT-130	130	0.1 to 192K	0.1 to 192K	192.36
AVT160	AVT-160	175	0.1 to 398K	0.1 to 398K	250.8
AVT175	-	175	1.0 to 500K	0.10 to 500K	250.8
AVT200	AVT-200	225	0.1 to 337K	0.1 to 337K	309.97
AVT225	AVT-225	225	0.1 to 337K	0.1 to 337K	309.97

For technical questions, contact: ww2dresistors@vishay.com

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GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: AVT02506E25R00JE (visit www.vishay.net SAP parts manual for all options)

A	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)	**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 cell and 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

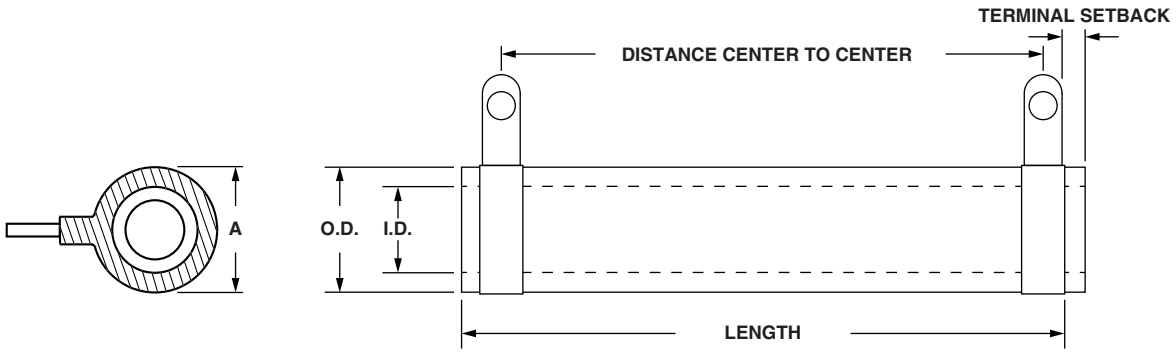
Historical Part Number example: AVT-25-25-5 %

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

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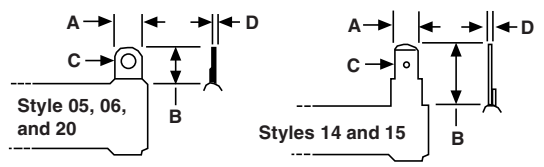
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DIMENSIONS in inches (millimeters)



MODEL	A (MAX.)	CORE DIMENSIONS			TERMINAL SETBACK ± 0.031 (0.79)	DISTANCE CENTER TO CENTER (REF.)	TERMINAL DESIGNATION		SLIDER MODEL NUMBER
		LENGTH	O.D. ± 0.031 (0.79)	I.D. ± 0.031 (0.79)			STANDARD	OPTIONAL (QUICK CONNECT)	
AVT010	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	70
AVT020	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	70
AVT20A	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	-
AVT025	0.668 (17.48)	2.000 (50.8)	0.563 (14.30)	0.313 (7.95)	0.094 (2.39)	1.562 (39.67)	06	15	71
AVT25A	0.906 (23.01)	2.000 (50.8)	0.750 (19.05)	0.500 (12.7)	0.094 (2.39)	1.562 (39.67)	06	15	72
AVT25B	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	71
AVT050	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	71
AVT50A	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	71
AVT50B	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	72
AVT075	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	71
AVT75A	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	72
AVT080	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	-
AVT100	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	72
AVT130	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	73
AVT160	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	73
AVT175	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	-
AVT200 AVT225	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	73

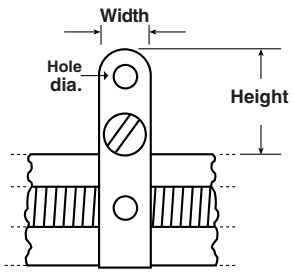
TERMINAL DIMENSIONS in inches (millimeters)



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	0.562 (14.27)	0.393 (9.98)	0.393 (9.98)	0.500 (12.70)	0.563 (14.29)	0.594 (15.08)
C (HOLE DIAMETER)	0.204 (5.18)	0.133 (3.38)	0.133 (3.38)	0.172 (4.36)	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)

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AVT SLIDERS-DIMENSIONS in inches (millimeters)

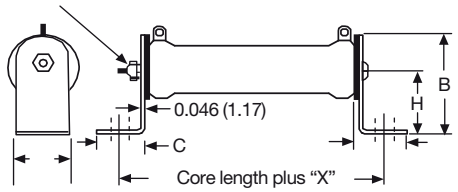


GLOBAL PART NUMBER (1) (RoHS COMPLIANT)	GLOBAL PART NUMBER FOR EXTRA SLIDERS	SLIDER MODEL TYPE	DIMENSIONS		
			WIDTH	HEIGHT	HOLE DIAMETER
75008602E29	AVT010, AVT020	70	0.187 (4.75)	0.516 (13.11)	0.125 (3.18)
75008603E29	AVT025, AVT25B, AVT050, AVT50A, AVT075	71	0.250 (6.35)	0.719 (18.26)	0.141 (3.58)
75008604E29	AVT25A, AVT50B, AVT75A, AVT100	72	0.250 (6.35)	0.844 (21.44)	0.141 (3.58)
75008605E29	AVT130, AVT160, AVT200, AVT225	73	0.312 (7.92)	0.797 (20.24)	0.170 (4.32)

Note
(1) Order HEI slider with global part number.

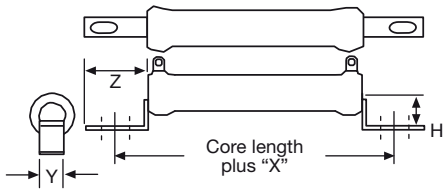
MOUNTING HARDWARE FOR AVT PRODUCTS - Dimensions in inches (millimeters)

91 = 100 Style Horizontal 1 High Bracket



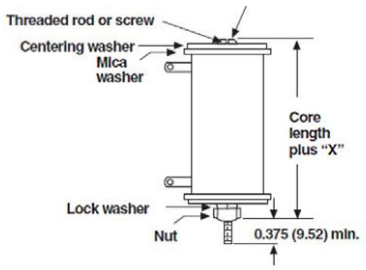
BRACKET TYPE	X	Y	Z	H	MOUNTING SLOT	C	B
101	1.063 (26.99)	0.500 (12.70)	0.950 (24.13)	1.000 (25.40)	0.219 x 0.438 (5.56 x 11.11)	0.750 (19.05)	1.375 (34.93)
102	1.063 (26.99)	0.750 (19.05)	0.859 (21.83)	1.250 (31.75)	0.219 x 0.438 (5.56 x 11.11)	0.750 (19.05)	1.750 (44.75)
103	1.063 (26.99)	1.250 (31.75)	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)

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

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
AVT010	101	202	301
AVT020	101	203	301
AVT20A	101	203	301
AVT025	102	204	301
AVT25A	102	206	302
AVT25B	102	205	301
AVT050	102	204	302
AVT50A	102	206	302
AVT50B	102	208	302
AVT075	102	204	301
AVT75A	102	206	302
AVT100	102	206	302
AVT130	103	207	302
AVT175	103	207	303
AVT200	103	207	303
AVT225	103	207	303

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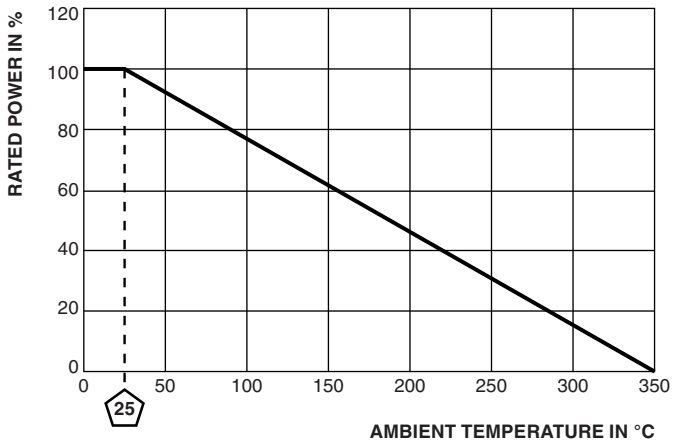
TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Power Rating	W	12 to 225
Resistance Range	Ω	1 to 398K
Resistance Tolerance	%	5, 10
Temperature Coefficient	ppm/°C	± 260 for 20 Ω and above, ± 400 for 1 Ω to 19.99 Ω
Operating Temperature	°C	-55 °C to 350 °C
Temperature Rise	°C	325 °C above an ambient of 25 °C
Maximum Altitude	f.a.s.l.	10 000
Short-Term Overload	-	10x rated power for 5 s
Surge Windings		Available
Maximum Working Voltage	-	$(P \times R)^{0.5}$
Insultation 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	µH	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

DERATING



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