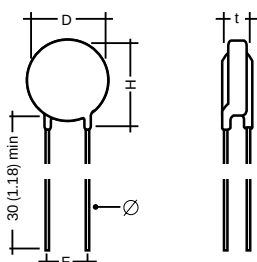


Zinc Oxide Varistors



VE/VF Types for Heavy Duty Applications ("P" Series)



Dimensions millimeters (inches)

Type	Type	D		H max.	t max.	Ø +10% -0.05 (.002)	E ± 0.8
		Ceramic diameter	Maximum coated diameter				
VE07	VF05	5 (.196)	7 (.275)	10 (.394)		0.6 (.024)	5.08 (0.20)
VE09	VF07	7 (.275)	9 (.354)	12 (.472)	see table	0.6 (.024)	5.08 (0.20)
VE13*	VF10*	10 (.393)	13* (.512)	16 (.630)		0.8* (.031)	7.62* (0.30)
VE17	VF14	14 (.551)	17 (.669)	20 (.787)		0.8 (.031)	7.62 (0.30)
VE24**	VF20**	20 (.787)	24 (.945)	27 (1.06)		0.8** (.031)	7.62 (0.30)

* VE13 / VF10: For models with $V_{RMS} \leq 320$ V
other version/suffixes available with:
E = 5.08 (0.20) Suffix: HB
Ø = 0.6 (.024) Bulk: HB
D = 12.5 (.492) max Tape: DA, DB, DC, DD, DQ, ...

**VE24 / VF20: For lead diameter = 1.0 (.039), please consult us.

Types	VE 07/09 - VF 05/07 (VE13 - VF10 320 V _{rms} upon request)					
Leads	Straight		Kinked (type 1)		Kinked (type 2)	
Dimensions						
	0.6 (.024)	5.08 (0.2)	0.6 (.024)	5.08 (0.2)	0.6 (.024)	5.08 (0.2)
Packaging	AMMOPACK	REEL	AMMOPACK	REEL	AMMOPACK	REEL
H/Ho = 16 ± 0.5	DA(*)	DB(*)	DQ(**)	DR(**)	D7(**)	D5(**)
H/Ho = 18 -0/+2	DC(**)	DD(**)	DS	DT	D8	D6

Types	VE 13/17 - VF 10/14					
Leads	Straight		Kinked (type 1)		Kinked (type 2)	
Dimensions						
	0.8 (.031)	7.62 (0.3)	0.8 (.031)	7.62 (0.3)	0.8 (.031)	7.62 (0.3)
Packaging	AMMOPACK	REEL	AMMOPACK	REEL	AMMOPACK	REEL
H/Ho = 16 ± 0.5	EA(*)	EN(*)	EC(**)	EF(**)	EQ(**)	ER(**)
H/Ho = 18 -0/+2	EB(**)	ED(**)	EG	EH	ES	ET

(*) DA, DB, EA, EN suffixes are not available for varistors with V_{RMS} 300V and available only upon request. (**) Preferred versions according to IEC 286-2

"P" Series Range Capability Dimensions: millimeters (inches)

Style	Operating Voltage V _{rms}	Breakdown Voltage 1mA _{dc}	Clamping Voltage	Energy Absorption (J)	Max. Peak Current 1p (A)	Typical Capacitance pF@1kHz	Mean Power Dissipation (W)
VE07	130 min.	205 min.	340 min.	8.5 min.	800	90 min.	0.01
VF05	to 230 max.	to 360 max.	to 595 max.	to 16 max.		to 55 max.	
VE09	130 min.	205 min.	340 min.	17.5 min.	1750	250 min.	0.02
VF07	to 230 max.	to 360 max.	to 595 max.	to 32 max.		to 140 max.	
VE13	130 min.	205 min.	340 min.	35 min.	3500	450 min.	0.40
VF10	to 230 max.	to 360 max.	to 595 max.	to 65 max.		to 250 max.	
VE17	130 min.	205 min.	340 min.	70 min.	6000	1000 min.	0.60
VF14	to 230 max.	to 360 max.	to 595 max.	to 130 max.		to 550 max.	
VE24	130 min.	205 min.	340 min.	140 min.	10,000	2500 min.	0.80
VF20	to 230 max.	to 360 max.	to 595 max.	to 250 max.		to 1500 max.	

NB: VE Series - Allows ordering code to be built by specifying operating voltage.
VF Series - Allows ordering code to be built by specifying breakdown voltage.

HOW TO ORDER

VE 09 P 0 0251 K DB
① ② ③ ④ ⑤ ⑥ ⑦

① Type Code:

VE = Selection by working voltage
VF = Selection by breakdown voltage

② Size Code:

VE Series: 07, 09, 13, 17, 24
VF Series: 05, 07, 10, 14, 20

③ Material Code:

P = Power Series

④ Voltage Marking Code:

0 = VE Series
1 = VF Series

⑤ Voltage Code:

VE Series: 1st digit: zero. 2nd & 3rd digit: 2 significant figures of working voltage. 4th digit: number of significant zeros to be added. Example: 0750 = 75 V, 0301 = 300 V
VF Series: 1st, 2nd & 3rd digits: significant figures of breakdown voltage. 4th digit: number of significant zeros to be added. Example: 2050 = 205 V

⑥ Tolerance Code:

K = ±10% (contact factory for ±5%)

⑦ Packaging Code:

Please refer to fall catalog

Packaging Quantities

Type	Bulk	AMMOPACK	REEL
VE07 - VF05 all	1500	1500	1500
VE09 - VF07 < 230 V _{rms}	1000	1500	1500
VE09 - VF07 230 V ≤ V _{rms} ≤ 300 V	1000	1000	1000
VE09 - VF07 > 300 V _{rms}	750	1000	1000
VE13 - VF10 ≤ 230 V _{rms}	500	750	750
VE13 - VF10 230 V ≤ V _{rms} ≤ 300 V	500	500	500
VE13 - VF10 > 300 V _{rms}	500	—	—
VE17 - VF14 ≤ 230 V _{rms}	500	750	750
VE17 - VF14 230 V ≤ V _{rms} ≤ 300 V	500	500	500
VE17 - VF14 > 300 V _{rms}	500	—	—
VE24 - VF20	250	—	—

Additional information on this product is available from AVX's catalog or AVX's FAX Service. Call 1-800-879-1613 and request document #109. Visit our website <http://www.avxcorp.com>