Vitreous Wirewound Power Resistor with Corrugated Ribbon

FEATURES

- Excellent power dissipation
- Robust mechanical
- Good thermal shock characteristics
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS			
GLOBAL MODEL	POWER RATING W	RESISTANCE RANGE Ω	TOLERANCE (1) ± %
VC 50 x 370	1000	0.39 to 68	5, 10
VC 42 x 362	700	0.33 to 56	5, 10
VC 30 x 250	350	0.22 to 33	5, 10
VC 30 x 153	220	0.18 to 22	5, 10
VC 25 x 168	200	0.10 to 18	5, 10
VC 25 x 138	160	0.068 to 12	5, 10
VC 25 x 110	130	0.068 to 10	5, 10
VC 25 x 84	90	0.068 to 8.2	5, 10

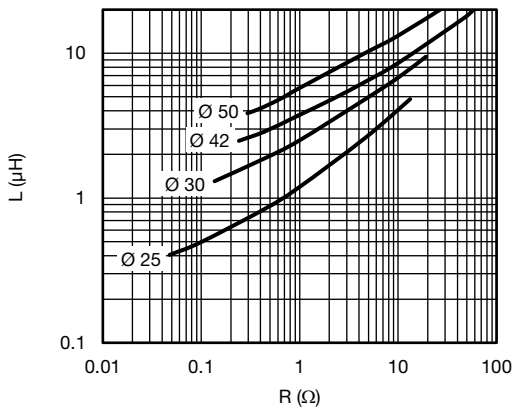
Note

(1) For $R_n < 1\ \Omega$

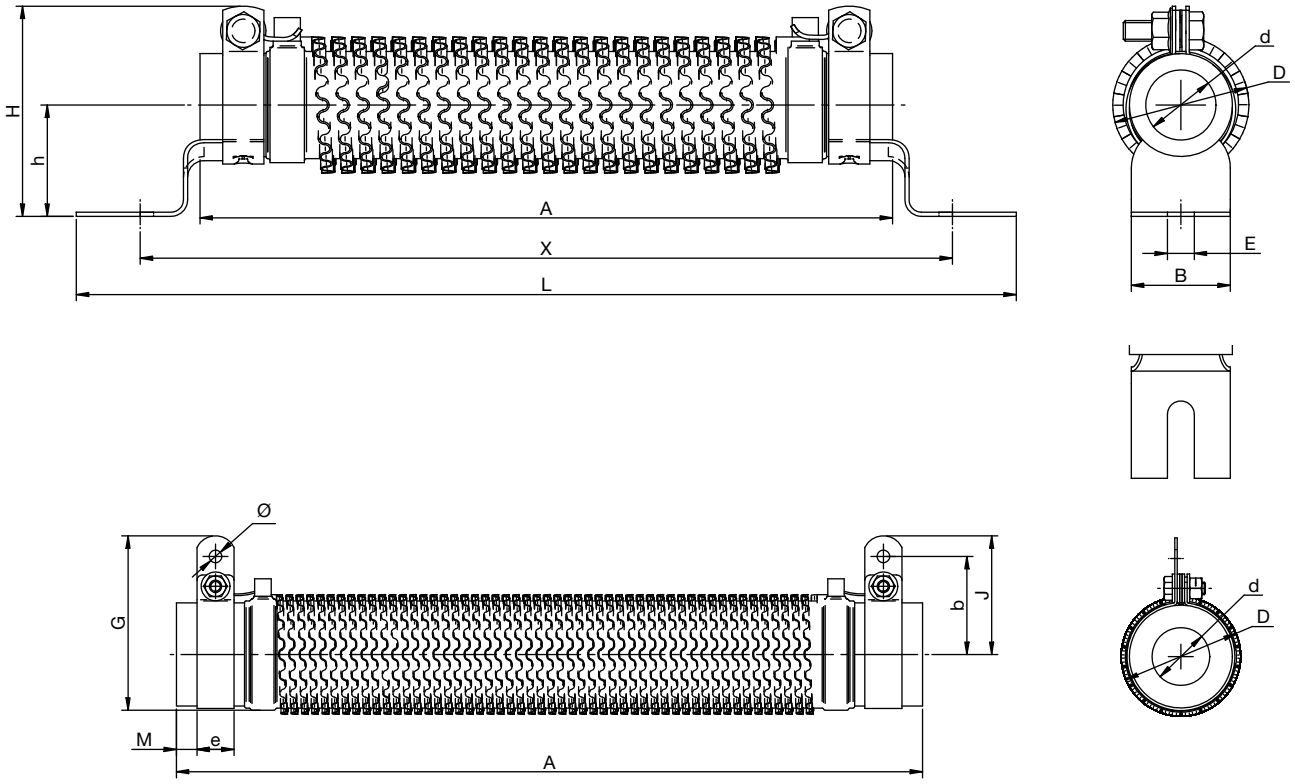
TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature coefficient	ppm/°C	180 ppm/°C (typical)
Operating temperature range	°C	-55 to +450

GENERAL CHARACTERISTICS	
Core	Ceramic
Winding	Nickel alloy
Coating	Vitreous
Ohmic values	E12
Traction lug outputs	VCF version
Collars outputs	VCN version

INDUCTANCE VALUE AS A FUNCTION OF Rn



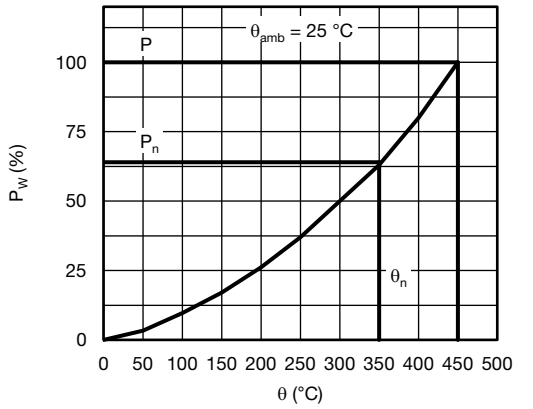
DIMENSIONS in millimeters **AND WEIGHT** in g



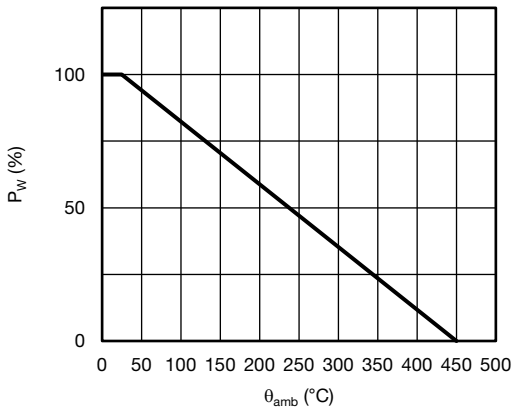
TYPE	50 x 370	42 x 362	30 x 250	30 x 153	25 x 168	25 x 138	25 x 110	25 x 84
A	362 ± 7	362 ± 7	250 ± 2	152.5 ± 1.5	168 ± 2	138 ± 2	110 ± 2	84 ± 2
B + 0.5/- 0	30	30	25	25	24	24	24	24
b	48 ± 1.5	45 ± 1.5	33 ± 1	33 ± 1	28.5 ± 1	28.5 ± 1	28.5 ± 1	28.5 ± 1
D max.	65	55	44	44	39	39	39	39
d	28.6 ± 0.6	26.5 ± 0.5	17 min.	17 min.	17 ± 0.35	17 ± 0.35	17 ± 0.35	17 ± 0.35
E	9 ± 0.5	9 ± 0.5	9 ± 0.5	9 ± 0.5	6.5 ± 0.2	6.5 ± 0.2	6.5 ± 0.2	6.5 ± 0.2
e ± 1	18	18	13	13	9	9	9	9
G max.	92	88	63	63	55	55	55	55
H max.	80	72	62	62	53	53	53	53
h ± 2	47.5	45	30	30	27	27	27	27
J	58 ± 2.5	52 ± 1.5	39 ± 1	39 ± 1	33.5 ± 1	33.5 ± 1	33.5 ± 1	33.5 ± 1
L max.	436	433	320	222.5	230	200	171	145
M	10 + 0/- 3	10 + 0/- 3	5 ± 1.5	5 ± 1.5	6 ± 1.5	6 ± 1.5	6 ± 1.5	6 ± 1.5
Ø	6.1 ± 0.5	6.1 ± 0.5	5.7 ± 0.5	5.7 ± 0.5	5 ± 0.8	5 ± 0.8	5 ± 0.8	5 ± 0.8
X ± 2	400	398	285	187.5	198	168	141	115
Mass	1600	1350	400	270	270	210	170	130

PERFORMANCES			
TESTS	**CONDITIONS**	**REQUIREMENTS**	**TYPICAL VALUES**
Overloads	10 Pn (temp. nom.), 5 s	2 %	1 %
Climatic	-55 °C, 5 cycles, +200 °C	3 %	1 %
Thermal shocks	Pn -55 °C	2 %	0.4 %
Endurance	500 cycles Pn 90 min / 30 min	5 %	2 %

DISSIPATION

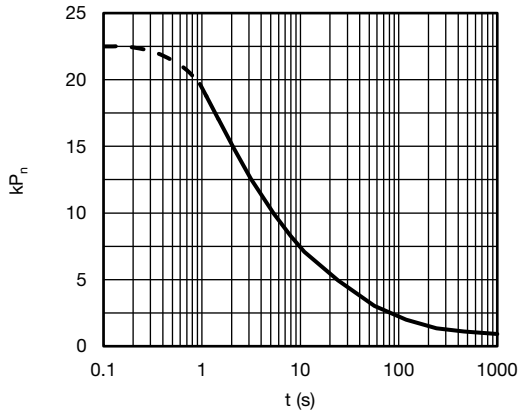


Power P_W as a Function of Surface Temperature
P(W) = f (Temperature Surface)



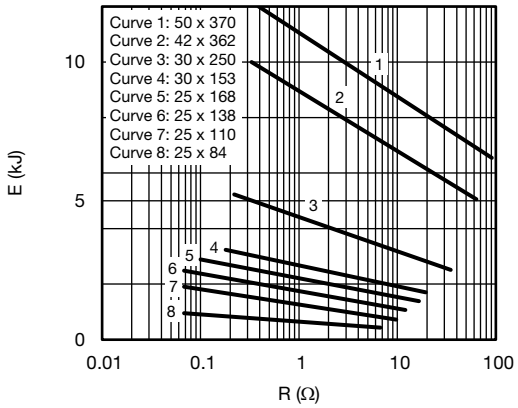
Derating in Power as a Function
of Ambient Temperature

OVERLOADS



Intermittent Overloads
Exceptional Operation
Initial Temperature < 70 °C
k x P_n = f(t)

PERMISSIBLE ENERGY



Repetitive Operation
Energy as a Function of Rn
Pulse Duration < 100 ms
E = f(R)

OPTIONS (Consult us)

- Other values than E12 series
- Intermediate terminals
- Insulated electrical output of fixed lugs

ORDERING INFORMATION

VC	F	30 x 250	U22	± 10 %	XXX	BO3
MODEL	CONNECTIONS	STYLE	RESISTANCE VALUE	TOLERANCE	CUSTOM DESIGN	PACKAGING
				± 5 % ± 10 % Other on request	Optional On request: special value, tolerance, terminals, etc.	

GLOBAL PART NUMBER INFORMATION

V	C	F	2	5	0	8	4	0	R	0	6	8	K	B	9	9	9
1		2	3					4					5	6	7		

1	2	3	4	5	6	7
PRODUCT TYPE	LEADS	SIZE	RESISTANCE VALUE	TOLERANCE	PACKAGING	INDUSTRIALIZATION NUMBER
VC	**F** **N**	**25084** **25110** **25138** **25168** **30153** **30250** **42362** **50370**	**The first three digits are significant figures and the last specifies the number of zeros to follow, R designates decimal point.** **8R2 = 8.2 Ω** **0R068 = 0.068 Ω**	**J = 5 %** **K = 10 %**	**B = box** **Box quantity depends of model and size**	**3 specific digits (if applicable)**

EXAMPLES

MODEL	DESCRIPTION	PART NUMBER
VCF	VCF 25X138 U068 10 % 999 BO3	VCF251380R068KB999
VCN	VCN 25X168 U1 10 % B03	VCN251680R10KB

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