

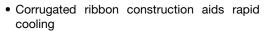


# **Cemented Wirewound Resistors with Corrugated Ribbon**



#### **FEATURES**

- All welded construction
- Power rating up to 500 W



- Available in adjustable design = "E"
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>



ROHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

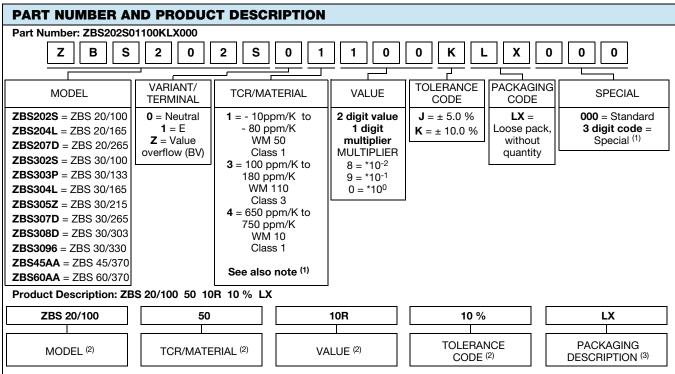
STANDARD ELECTRICAL SPECIFICATIONS									
MODEL	POWER RATING P <sub>40 °C</sub> W	RESISTANCE RANGE (1) $\Omega$ TCR + 650 ppm/K to + 750 ppm/K WM 10	RESISTANCE RANGE $^{(1)}$ $\Omega$ TCR - 10 ppm/K to - 80 ppm/K WM 50	RESISTANCE RANGE (1) $\Omega$ TCR + 100 ppm/K to + 180 ppm/K WM 110	TOLERANCE ± %				
ZBS 20/100 ZBS 20/100 E	50	0.13 to 0.51	0.56 to 2.2	1.3 to 6.2	10, 5				
ZBS 20/165 ZBS 20/165 E	100	0.27 to 1	1.1 to 4.7	2.4 to 12	10, 5				
ZBS 20/265 ZBS 20/265 E	150	0.47 to 1.8	2 to 7.5	4.3 to 22	10, 5				
ZBS 30/100 ZBS 30/100 E	75	0.1 to 0.43	0.47 to 3.3	1 to 8.2	10, 5				
ZBS 30/133 ZBS 30/133 E	110	0.15 to 0.62	0.68 to 5.1	1.5 to 12	10, 5				
ZBS 30/165 ZBS 30/165 E	150	0.2 to 0.91	1.0 to 6.8	2 to 16	10, 5				
ZBS 30/215 ZBS 30/215 E	200	0.27 to 1.1	1.2 to 9.1	2.7 to 24	10, 5				
ZBS 30/265 ZBS 30/265 E	250	0.3 to 1.3	1.5 to 11	3.9 to 27	10, 5				
ZBS 30/330 ZBS 30/330 E	300	0.39 to 1.8	2 to 15	5.1 to 36	10, 5				
ZBS 45/370 ZBS 45/370 E	375	0.75 to 3	3.3 to 24	8.2 to 56	10, 5				
ZBS 60/370 ZBS 60/370 E	500	0.91 to 3.9	4.3 to 33	10 to 75	10, 5				

#### Notes

<sup>•</sup> For available "Mounting Accessories for Resistors", please see: www.vishay.com/doc?21015

 $<sup>^{(1)}</sup>$  Resistance value to be selected for  $\pm$  10 % tolerance from E12 and for  $\pm$  5 % from E24

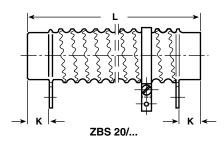


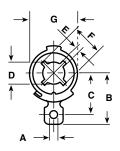


#### Notes

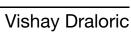
- (1) For special variants or special winding, please contact: ww1resistors@vishay.com
- (2) See "Part Number" above
- (3) See "Packaging Code" above

#### **DIMENSIONS**



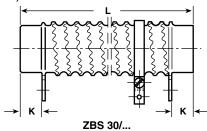


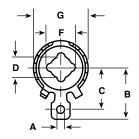
MODEL	DIMENSIONS in millimeters [inches]									
WIODEL	L	K	Α	В	С	D	E	F	G	MASS (g)
ZBS 20/100	100 ± 2.5	15	4.2	26.5	22	10	1.5	14	24	100
ZBS 20/100 E	[3.937 ± 0.098]	[0.591]	[0.165]	[1.043]	[0.866]	[0.394]	[0.059]	[0.551]	[0.945]	
ZBS 20/165	165 ± 4	15	4.2	26.5	22	10	1.5	14	24	150
ZBS 20/165 E	[6.496 ± 0.157]	[0.591]	[0.165]	[1.043]	[0.866]	[0.394]	[0.059]	[0.551]	[0.945]	
ZBS 20/265	265 ± 6.6	15	4.2	26.5	22	10	1.5	14	24	250
ZBS 20/265 E	[10.433 ± 0.260]	[0.591]	[0.165]	[1.043]	[0.866]	[0.394]	[0.059]	[0.551]	[0.945]	



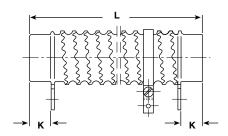


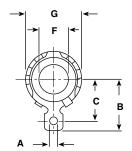
#### **DIMENSIONS** (continued)





MODEL	DIMENSIONS in millimeters [inches]									
WODEL	L	K	Α	В	С	D	F	G	MASS (g)	
ZBS 30/100 ZBS 30/100 E	$100 \pm 2.5$ [3.937 $\pm$ 0.098]	15 [0.591]	5.2 [0.205]	34 [1.339]	28 [1.102]	14 [0.551]	18.5 [0.728]	37 ± 1 [1.457 ± 0.039]	200	
ZBS 30/133	133 ± 3.3	15	5.2	34	28	14	18.5	37 ± 1	250	
ZBS 30/133 E	[5.236 ± 0.130]	[0.591]	[0.205]	[1.339]	[1.102]	[0.551]	[0.728]	[1.457 ± 0.039]		
ZBS 30/165	165 ± 4	15	5.2	34	28	14	18.5	37 ± 1	300	
ZBS 30/165 E	[6.496 ± 0.157]	[0.591]	[0.205]	[1.339]	[1.102]	[0.551]	[0.728]	[1.457 ± 0.039]		
ZBS 30/215	215 ± 5.4	15	5.2	34	28	14	18.5	37 ± 1	400	
ZBS 30/215 E	[8.465 ± 0.213]	[0.591]	[0.205]	[1.339]	[1.102]	[0.551]	[0.728]	[1.457 ± 0.039]		
ZBS 30/265	265 ± 6.6	15	5.2	34	28	14	18.5	37 ± 1	500	
ZBS 30/265 E	[10.433 ± 0.260]	[0.591]	[0.205]	[1.339]	[1.102]	[0.551]	[0.728]	[1.457 ± 0.039]		
ZBS 30/330	330 ± 8	15	5.2	34	28	14	18.5	37 ± 1	600	
ZBS 30/330 E	[12.992 ± 0.315]	[0.591]	[0.205]	[1.339]	[1.102]	[0.551]	[0.728]	[1.457 ± 0.039]		





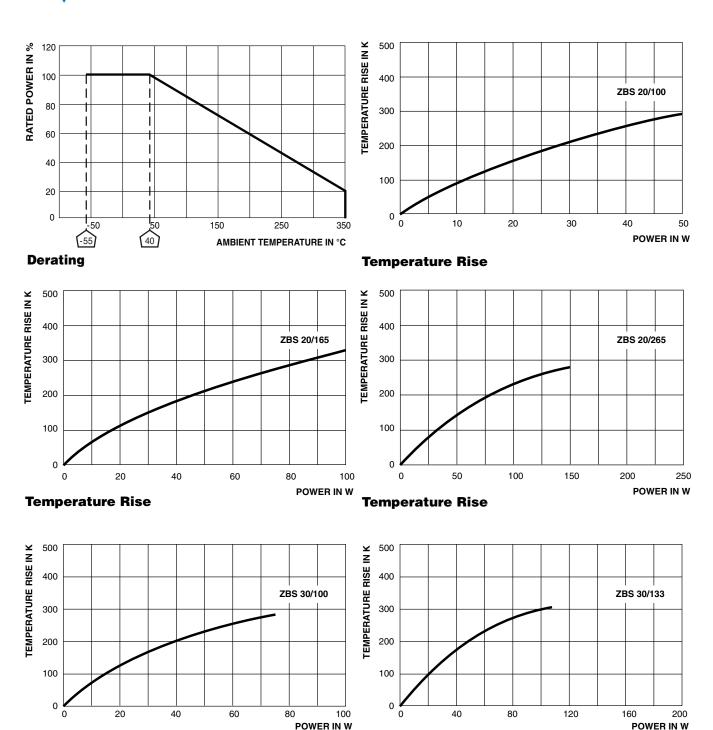
ZBS 45/370, ZBS 60/370

MODEL	DIMENSIONS in millimeters [inches]									
	L	K	Α	В	С	F	G	MASS (g)		
ZBS 45/370	370 ± 9	15	5.2	42.5	37	30	52 ± 1	1000		
ZBS 45/370 E	[14.567 ± 0.354]	[0.591]	[0.205]	[1.673]	[1.457]	[1.181]	[2.047 ± 0.039]			
ZBS 60/370	370 ± 9	15	5.2	51.5	45.5	45	67 ± 1	1200		
ZBS 60/370 E	[14.567 ± 0.354]	[0.591]	[0.205]	[2.028]	[1.791]	[1.772]	[2.638 ± 0.039]			





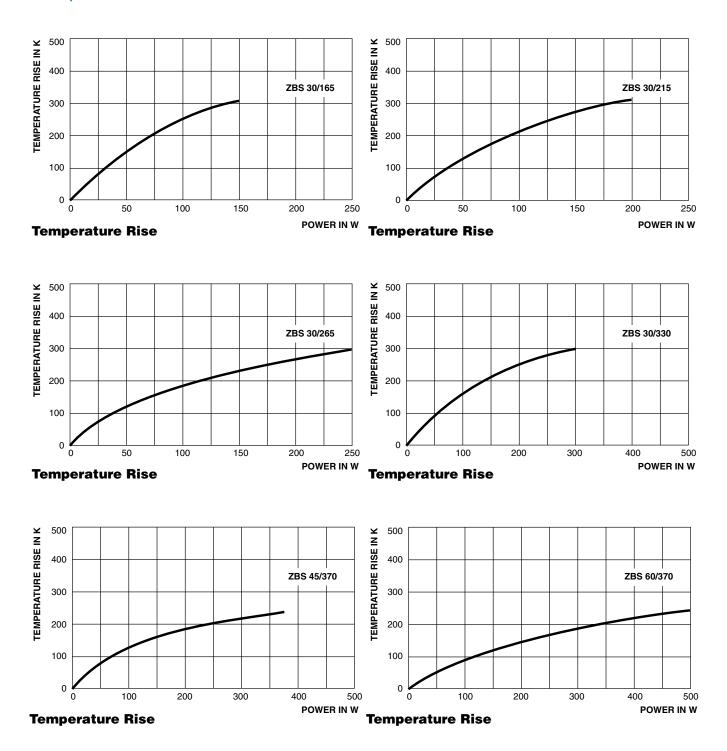
**Temperature Rise** 



**Temperature Rise** 









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Vishay

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