

RoHS

HALOGEN FREE

GREEN

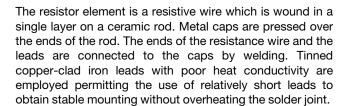
(5-2008)

Cemented Wirewound Precision Resistors



FEATURES

- High power dissipation in small volume
- Ideal for pulse application
- TCR ± 100 ppm/K
- Maximum permissible hot spot temperature is 275 °C
- Lead (Pb)-free
- Tolerance 1 %
- Material categorization: for definitions of compliance please see <u>www.vishav.com/doc?99912</u>

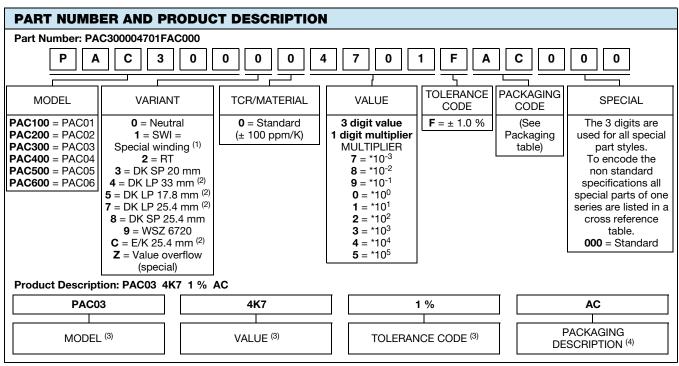


The resistor is coated with a green silicon cement which is not resistant to aggressive fluxes. The coating is non-inflammable, will not drip even at high overloads and is resistant to most commonly used cleaning solvents, in accordance with IEC 60068-2-45.

STANDARD EL	ECTRICAL SPECI	FICATIONS		
MODEL	POWER RATING P _{25 °C} W	LIMITING VOLTAGE U _{max} .	RESISTANCE RANGE $^{(2)}$	TOLERANCE ± %
PAC01	1	√ <i>P</i> x <i>R</i>	0.10 to 2.2K	1
PAC02 ⁽¹⁾	2	√P x R	0.10 to 3.6K	1
PAC03	3	$\sqrt{P \times R}$	0.10 to 4.7K	1
PAC04	4	√ <i>P</i> x <i>R</i>	0.10 to 8.2K	1
PAC05	5	√P x R	0.10 to 12K	1
PAC06	6	√P x R	0.10 to 12K	1

Notes

- PAC02 WSZ: P_{25 °C} = 1.8 W
- $\bullet~$ Resistance value to be selected for $\pm~1~\%$ tolerance from E24 and E96
- For Pulse Diagrams see AC.. Series (<u>www.vishay.com/doc?28730</u>)

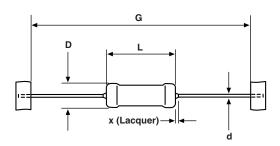


Notes

- (1) Special winding on request
- (2) Other dimensions on request
- (3) See "Part Number and Product Description"
- (4) See "Packaging Table"

PACKAGING	TABLE								
		АММО			LOOSE			BLISTER	
MODEL	PIECES	PACK CODE	PACK. DESC.	PIECES	PACK CODE	PACK. DESC.	PIECES	PACK CODE	PACK. DESC.
PAC01	1000	A1	A1						
PAC01 DK/EK				500	LC	LC			
PAC01RT	2500	AE	AE						
PAC02	500	AC	AC						
PAC02 DK/EK				500	LC	LC			
PAC02 WSZ							1250	ВМ	ВМ
PAC03	500	AC	AC						
PAC03 DK/EK				500	LC	LC			
PAC04	500	AC	AC						
PAC04 DK/EK				500	LC	LC			
PAC05	500	AC	AC						
PAC05 DK/EK		•	•	250	LB	LB			
PAC06	500	AC	AC						
PAC06 DK/EK		•	•	250	LB	LB			

DIMENSIONS in millimeters [inches]



MODEL	D _{max.}	L _{max} .	d	X _{max} .	G	WEIGHT g PER UNIT
PAC01	4.3 [0.169]	11 [0.433]		2	63 ± 1 [2.480 ± 0.039]	0.52
PAC02	4.8 [0.189]	13 [0.512]		2	63 ± 1 [2.480 ± 0.039]	0.75
PAC03	5.5 [0.217]	16.5 [0.650]	0.8 ± 0.03	3	63 ± 1 [2.480 ± 0.039]	1.10
PAC04	7.5 [0.295]	18 [0.709]	$[0.031 \pm 0.001]$	3	73 ± 1 [2.874 ± 0.039]	1.90
PAC05	7.5 [0.295]	26 [1.024]		3	73 ± 1 [2.874 ± 0.039]	2.60
PAC06	7.5 [0.295]	26 [1.024]		3	73 ± 1 [2.874 ± 0.039]	2.60

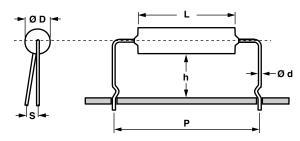
Note

• For packaging dimensions see: www.vishay.com/doc?28721



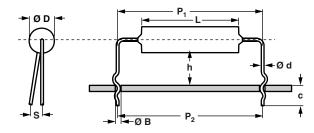
BENDING FORMS

KINK TYPE S = EK



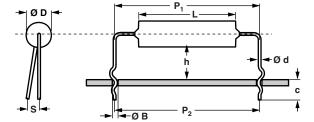
TYPE	Ød	Ø D _{max.}	L	h ± 1	P ± 1	S _{max.}
PAC01					17.8	
PAC02 - PAC04	0.8	(1)	(1)	8	25.4	2
PAC05 - PAC06					33.0	

DOUBLE KINK SP = DK SP



TYPE	ØD	Ø D _{max.}	L	h ± 1	P ₁ ± 1	P ₂ ± 3	S _{max} .	ØВ	С
PAC01					19.8	17.8			
DACO2 DACO4	0.0	(1)	(1)	0	22.0	20.0	0	10.01	45.4
PAC02 - PAC04	0.8	(1)	(1)	8	27.4	25.4	2	1.0 ± 0.1	4.5 ± 1
PAC05 - PAC06					35.0	33.0			





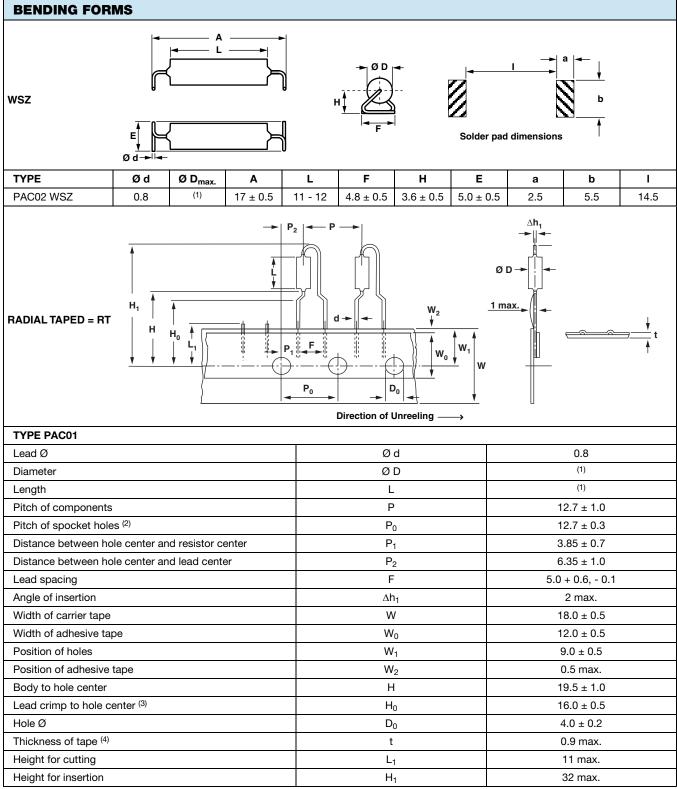
TYPE	ØD	Ø D _{max.}	L	h ± 1	P ₁ ± 1	P ₂ ± 3	S _{max} .	ØВ	С
PAC01 - PAC02					17.8	17.8			
PAC02 - PAC04	0.8	(1)	(1)	8	25.4	25.4	2	1.0 ± 0.1	4.5 ± 1
PAC05 - PAC06					33.0	33.0			

Note

⁽¹⁾ See table DIMENSIONS

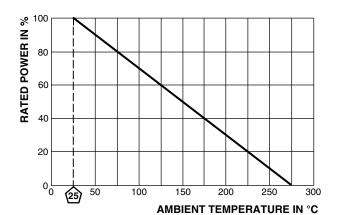






Notes

- (1) See table DIMENSIONS
- (2) Test over 10 holes 9 intervals P_0 12.7 x 9 = 114.3 ± 0.5
- (3) Parallelism, < 0.5 mm
- (4) Thickness of carrier tape: 0.55 mm ± 0.1



Maximum dissipation ($P_{max.}$) as a function of the ambient temperature (T_{amb})

PERFORMANCE	
TEST	PERMISSIBLE CHANGE
Climatic category (LCT/UCT/Days)	55/200/56
Climatic Sequence IEC 60115-1 4.23	$\Delta R = \pm (0.5 \% R + 0.05 \Omega)$
Damp Heat, Steady State, IEC 60115-1, 4.24 (40 \pm 2) °C, 56 days, (93 \pm 3) % RH	$\Delta R = \pm (1.0 \% R + 0.05 \Omega)$
Endurance at room temperature (116 % <i>P</i> ₇₀), 1000 h, IEC 60115-1, 4.25.2	$\Delta R = \pm (0.5 \% R + 0.05 \Omega)$
Storage, UCT, IEC 60115-1, 4.25.3 1000 h, 200 °C, no load	$\Delta R = \pm (1.0 \% R + 0.05 \Omega)$
Resistance to Soldering Heat, IEC 60115-1, 4.18 (260 \pm 5) °C, (10 \pm 1) s	$\Delta R = \pm (0.2 \% R + 0.05 \Omega)$
Robustness of Termination, IEC 60115-1, 4.16 10N	$\Delta R = \pm (0.1 \% R + 0.05 \Omega)$
Short Time Overload, IEC 60115-1, 4.13 10 x Rated Power for 5 s	$\Delta R = \pm (0.2 \% R + 0.05 \Omega)$



HISTORICAL 12NC INFORMATION

- The resistors had a 12-digit ordering code staring with 2306 327
- The subsequent first digit indicated the resistor type and packaging.
- The remaining 4 digits indicated the resistance value:
 - -The first 3 digits indicated the resistance value.
 - -The last digit indicated the resistance decade in accordance with Resistance Decade table.

Resistance Decade

RESISTANCE DECADE	LAST DIGIT
0.10 to 0.976 Ω	7
1 to 9.76 Ω	8
10 to 97.6 Ω	9
100 to 976 Ω	1
1 to 9.76 kΩ	2
10 to 12 kΩ	3

Ordering Example

The ordering code for an PAC02, resistor value 47 Ω with \pm 1 % tolerance, supplied in ammopack of 500 units was: 2306 327 04709.

HISTORICAL 12NC	- Resistor type and packaging		
		2306 327	
TYPE		BANDOLIER IN AMMOPACK	
ITPE	RADIAL	STRAIGH	T LEADS
	2500 units	500 units	1000 units
PAC01	RT ⁽¹⁾	-	2306 327 5
PAC02	-	2306 327 0	-
PAC03	-	2306 327 1	-
PAC04	-	2306 327 2	-
PAC05	-	2306 327 3	-
PAC06	-	2306 327 4	-

Note

⁽¹⁾ Radial parts with tin plated copper leads



Legal Disclaimer Notice

Vishay

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.

Revision: 02-Oct-12 Document Number: 91000



Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию.

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России, а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научноисследовательскими институтами России.

С нами вы становитесь еще успешнее!

Наши контакты:

Телефон: +7 812 627 14 35

Электронная почта: sales@st-electron.ru

Адрес: 198099, Санкт-Петербург,

Промышленная ул, дом № 19, литера Н,

помещение 100-Н Офис 331