

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 %



RoHS
COMPLIANT

The resistor element is a resistive wire which is wound in a single layer on a ceramic rod. Metal caps are pressed over the ends of the rod. The ends of the resistance wire and the leads are connected to the caps by welding. Tinned copper-clad iron leads with poor heat conductivity are employed permitting the use of relatively short leads to obtain stable mounting without overheating the solder joint.

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 "MIL-STD-202E, method 215" and "IEC 60068-2-45".

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	$P_{25\text{ }^\circ\text{C}}$ W	TOLERANCE E24/E96 series \pm %	LIMITING VOLTAGE V	RESISTANCE RANGE Ω TCR ± 100 ppm/k
PAC100	PAC01	1	1	$\sqrt{P \times R}$	R10 - 2K2
PAC200	PAC02	2	1	$\sqrt{P \times R}$	R10 - 3K6
PAC300	PAC03	3	1	$\sqrt{P \times R}$	R10 - 4K7
PAC400	PAC04	4	1	$\sqrt{P \times R}$	R10 - 8K2
PAC500	PAC05	5	1	$\sqrt{P \times R}$	R10 - 10K
PAC600	PAC06	6	1	$\sqrt{P \times R}$	R10 - 12K

* For Pulse Diagrams see AC..series (28730)

12NC ORDERING CODE INDICATING RESISTOR TYPE AND PACKAGING

TYPE	ORDERING CODE 2306 327	
	BANDOLIER IN AMMOPACK	
	500 units	1 000 units
PAC01	..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 taped version available on request. 2500 pcs Ammo packaging



GLOBAL PART NUMBER INFORMATION						
New Global Part Numbering: PAC300004641FAC000 (preferred part number format)						
P	A	C	3	0	0	0
0	4	7	0	1	F	A
C	0	0	0			
MODEL	SPECIAL CHARACTER	TCR/MATERIAL	VALUE	TOLERANCE	PACKING	SPECIAL
(see Standard Electrical Specifications table)	0 = neutral 1 = DK SP 20 mm Z = value overflow (Special)	0 = standard (100 ppm) K = 90 ppm ¹⁾ C = 50 ppm ¹⁾ L = 30 ppm ¹⁾	3 digit value 1 digit multiplier Multiplier: 7 = *10 ⁻³ 8 = *10 ⁻² 9 = *10 ⁻¹ 0 = *10 ⁰ 1 = *10 ¹ 2 = *10 ² 3 = *10 ³ 4 = *10 ⁴ 5 = *10 ⁵	F = ± 1.0 %	(see Packing table)	The 3 digits are used for all special part styles. To encode the non standard specifications all special parts of one series are listed in a cross reference table. 000 = standard 0E0 = CECC E0 0E6 = CECC E6
Historical Part Number example: PAC03 4K7 1% AC (will continue to be accepted)						
PAC03	4K7	1%	AC			
HISTORICAL MODEL	VALUE	TOLERANCE	PACKING			

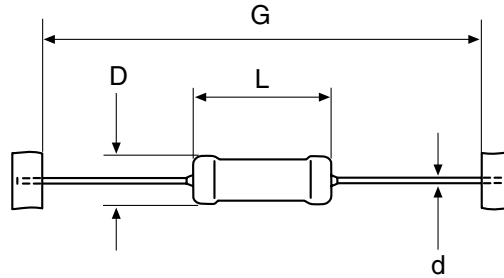
Note:

1) Is available request for specific

PACKING TABLE		
SAP	DESCRIPTION	TYPE
A1	Bandolier in ammpack, 1000 pcs.	PAC01
AC	Bandolier in ammpack, 500 pcs.	PAC02, PAC03, PAC04, PAC05, PAC06
L1	Loose 1000 pcs.	PAC02

* Radial taped version available on request

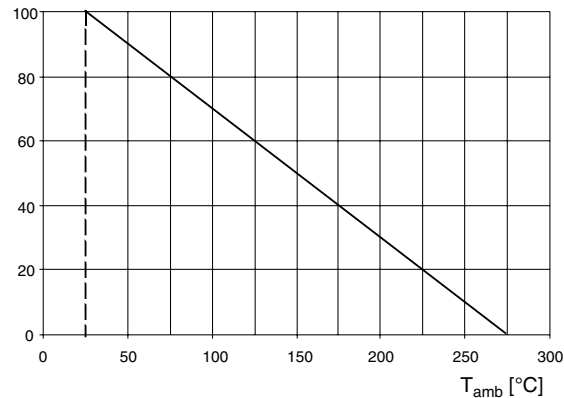
DIMENSIONS



For packaging dimensions see separate packaging dimensions page.

MODEL	DIMENSIONS in millimeters [inches]				
	D max	L max	d	G	WEIGHT g per 100 units
PAC01	4.3 [0.169]	10 [0.394]	0.8 ± 0.03 [0.031 ± 0.001]	63 ± 1 [2.480 ± 0.039]	52
PAC02	4.8 [0.189]	13 [0.512]		63 ± 1 [2.480 ± 0.039]	75
PAC03	5.5 [0.217]	17 [0.669]		63 ± 1 [2.480 ± 0.039]	110
PAC04	7.5 [0.295]	17 [0.669]		73 ± 1 [2.874 ± 0.039]	190
PAC05	7.5 [0.295]	25 [0.984]		73 ± 1 [2.874 ± 0.039]	260
PAC06	7.5 [0.295]	25 [0.984]		73 ± 1 [2.874 ± 0.039]	260

PERFORMANCE	
TEST	TEST RESULTS
Climatic category	55/200/56
Damp heat, steady state 56d	$\frac{\Delta R}{R} \text{max} : \pm 1 \% + 0.05 \Omega$
Storage 1000 hours, 200 °C, no load	$\frac{\Delta R}{R} \text{max} : \pm 1 \% + 0.05 \Omega$
Climatic sequence	$\frac{\Delta R}{R} \text{max} : \pm 0.5 \% + 0.05 \Omega$
Load life 1000 h	$\frac{\Delta R}{R} \text{max} : \pm 0.5 \% + 0.05 \Omega$
Resistance to soldering heat	$\frac{\Delta R}{R} \text{max} : \pm 0.2 \% + 0.05 \Omega$
Robustness of termination, 10N	$\frac{\Delta R}{R} \text{max} : \pm 0.1 \% + 0.05 \Omega$
Short time overload, 10 x rated power x 5 sec.	$\frac{\Delta R}{R} \text{max} : \pm 0.2 \% + 0.05 \Omega$



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

ORDERING INFORMATION

Ordering Code (12NC)

- The resistors have a 12-digit ordering code starting with 2306 327
- The subsequent first digit indicates the resistor type and packaging; see the 12NC Ordering Code table.
- The remaining 4 digits indicate the resistance value:
 - The first 3 digits indicate the resistance value.
 - The last digit indicates the resistance decade in accordance with the 12NC Indicating Resistance Decade table.

Last Digit of 12NC Indicating 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 k Ω	2
10 to 12 k Ω	3

Ordering Example

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

Product specifications deviating from the standard values are available on request.



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