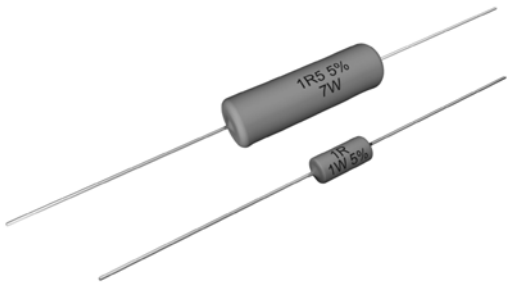
Cemented Wirewound Resistors



FEATURES

- All welded construction
- Ceramic core
- Non-flammable cement coating
- Tinned copper-clad iron leads
  (see note 3 in the 12NC Odering Code table)
- High power dissipation in small volume
- High pulse load handling capabilities

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	$P_{40\,°C}$ W	$P_{70\,°C}$ W	TOLERANCE E24 SERIES ± %	LIMITING VOLTAGE V	RESISTANCE RANGE Ω		
					TC = - 10...- 80 ppm/K	TC = 100... 180 ppm/K	TC = ± 100 ppm/K
AC01	1	0.9	5	$\sqrt{P \times R}$	R10 - 33 R	36 R - 2K4	-
AC03	3	2.5	5	$\sqrt{P \times R}$	R10 - 390 R	430 R- 3K3	3K6 - 5K1
AC04	4	3.5	5	$\sqrt{P \times R}$	R10 - 620 R	680 R- 6K8	
AC05	5	4.7	5	$\sqrt{P \times R}$	R10 - 910 R	1K0 - 10 K	-
AC07	7	5.8	5	$\sqrt{P \times R}$	R10 - 1K5	1K6 - 15 K	-
AC10	10	8.4	5	$\sqrt{P \times R}$	R68 - 560 R	620 R - 27 K	-

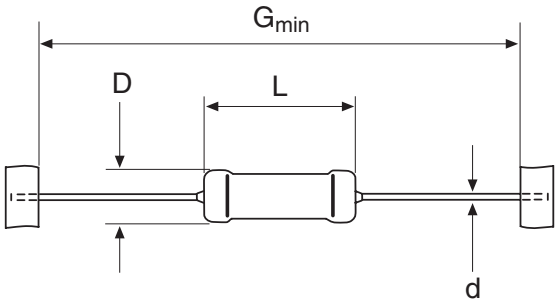
12NC ORDERING CODE INDICATING RESISTOR TYPE AND PACKAGING

TYPE	ORDERING CODE 23..		
	BANDOLIER IN AMMOPACK		
	RADIAL	STRAIGHT LEADS	
	2500 UNITS	500 UNITS	1000 UNITS
AC01	06 328 90...(2) (3)	-	06 328 33...
AC03(1)	-	22 329 03...	-
AC04(1)	-	22 329 04...	-
AC05(1)	-	22 329 05...	-
AC07(1)	-	22 329 07...	-
AC10	-	22 329 10...	-

Note

1. Products with bent leads and bulk packaging (100 pcs.) are available on request.
2. Last 3 digits available on request.
3. Radial parts with tin plated copper leads.

DIMENSIONS

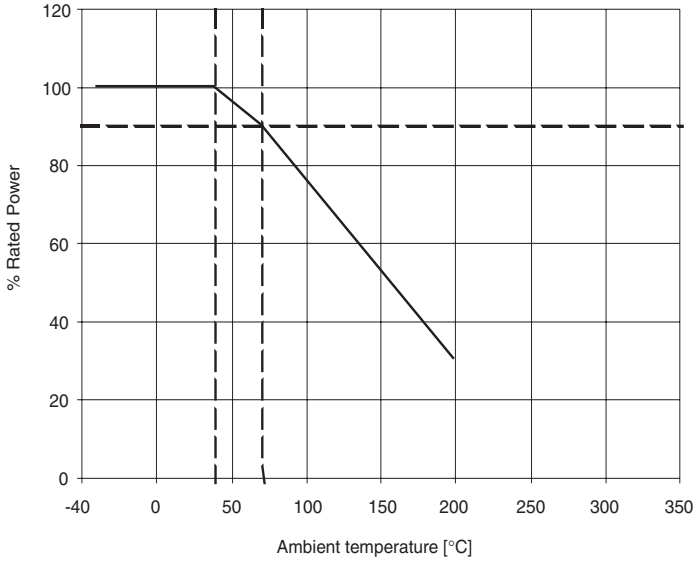


For packaging dimensions see separate packaging dimensions page.

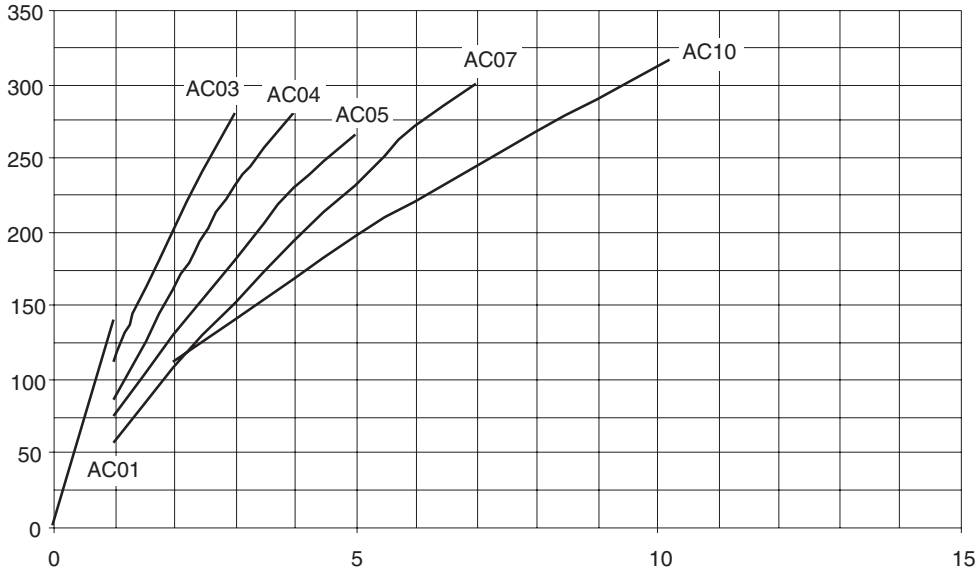
DIMENSIONS - resistor types, mass and relevant physical dimensions					
MODEL	**DIMENSIONS** in inches [millimeters]				
	D max	**L max**	**d**	**G min**	**WEIGHT g PER 100 UNITS**
AC01	4.3 [0.169]	11 [0.433]	0.8 ± 0.03 [0.031 ± 0.001]	63 [2.480]	52
AC03	4.8 [0.189]	13 [0.512]		63 [2.480]	93
AC04	5.5 [0.217]	15.8 [0.622]		63 [2.480]	120
AC05	7.5 [0.295]	17 [0.669]		63 [2.480]	170
AC07	7.5 [0.295]	25 [0.984]		73 [2.874]	230
AC10	8.0 [0.315]	44 [1.732]		88 [3.465]	361

PERFORMANCE	
TEST	**TEST RESULTS**
Climatic category	40/200/56
Damp heat, steady state 56d	$\frac{\Delta R}{R}$max .: ± 5 % + 0.1 Ω
Storage 1000 hours, 200 °C, no load	$\frac{\Delta R}{R}$max .: ± 5 % + 0.1 Ω
Climatic sequence	$\frac{\Delta R}{R}$max .: ± 1 % + 0.05 Ω
Load life 1000 h	$\frac{\Delta R}{R}$max .: ± 5 % + 0.1 Ω
Resistance to soldering heat	$\frac{\Delta R}{R}$max .: ± 0.5 % + 0.05 Ω
Robustness of termination, 10N	$\frac{\Delta R}{R}$max .: ± 0.5 % + 0.05 Ω
Short time overload, 10 x rated power for 5 seconds	$\frac{\Delta R}{R}$max .: ± 2 % + 0.1 Ω

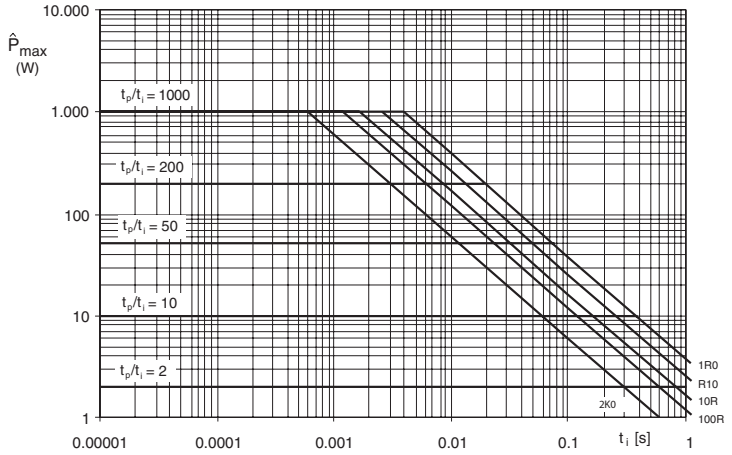
FUNCTIONAL PERFORMANCE



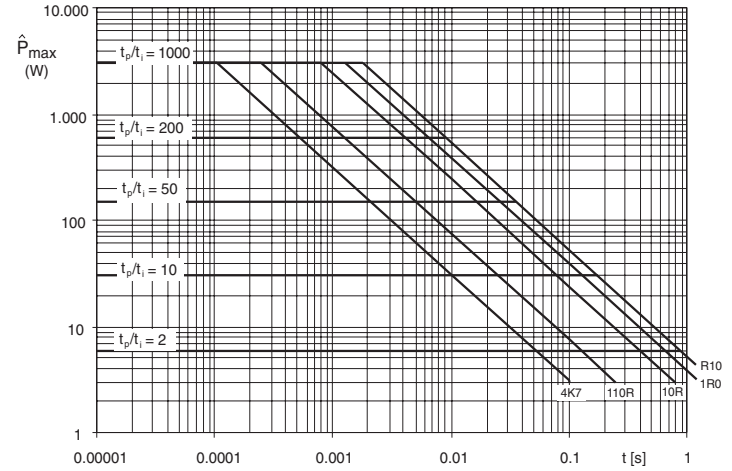
Derating



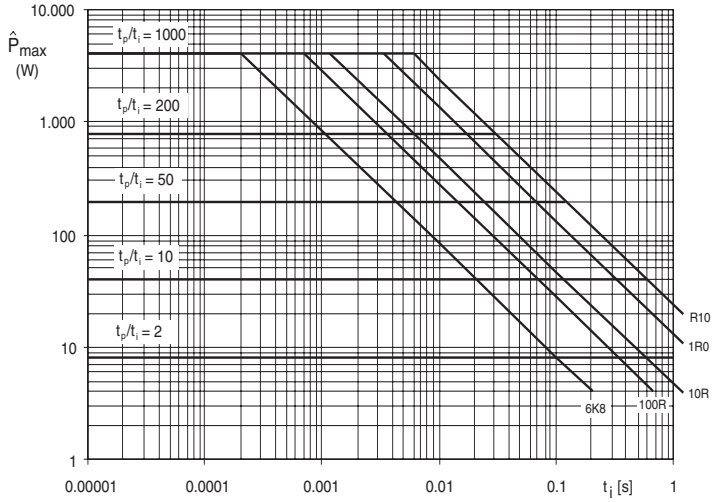
Temperature Rise



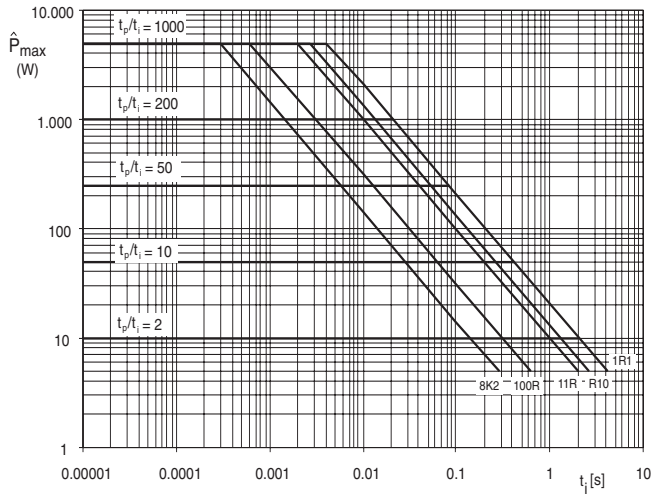
AC01 Pulse on a regular basis; maximum permissible peak pulse power ($\hat{P}_{max}$) as a function of pulse duration (t_i).



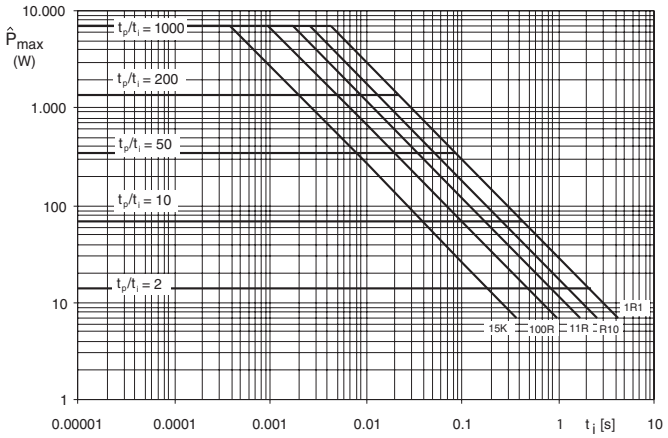
AC03 Pulse on a regular basis; maximum permissible peak pulse power ($\hat{P}_{max}$) as a function of pulse duration (t_i).



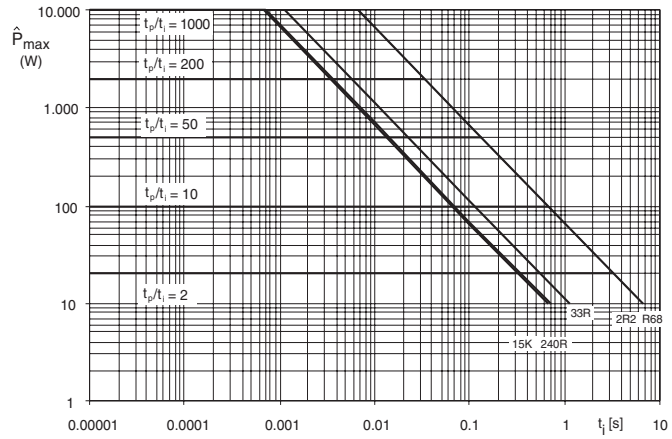
AC04 Pulse on a regular basis; maximum permissible peak pulse power ($\hat{P}_{max}$) as a function of pulse duration (t_i).



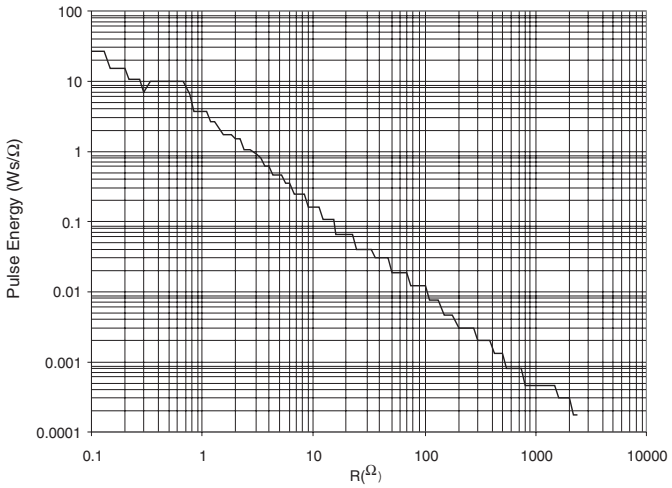
AC05 Pulse on a regular basis; maximum permissible peak pulse power ($\hat{P}_{max}$) as a function of pulse duration (t_i).



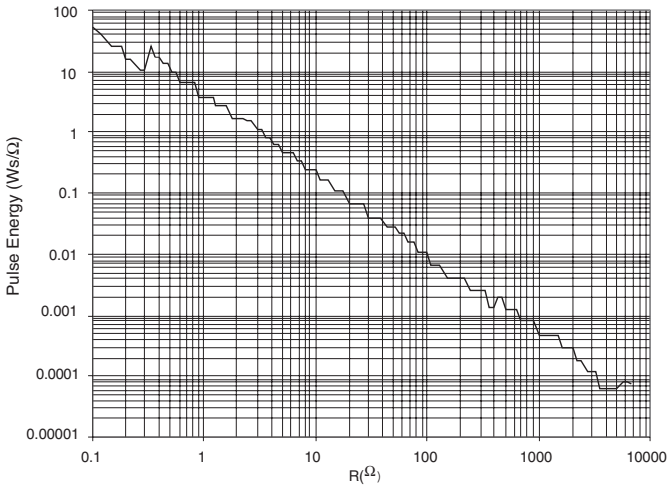
AC07 Pulse on a regular basis; maximum permissible peak pulse power ($\hat{P}_{max}$) as a function of pulse duration (t_i).



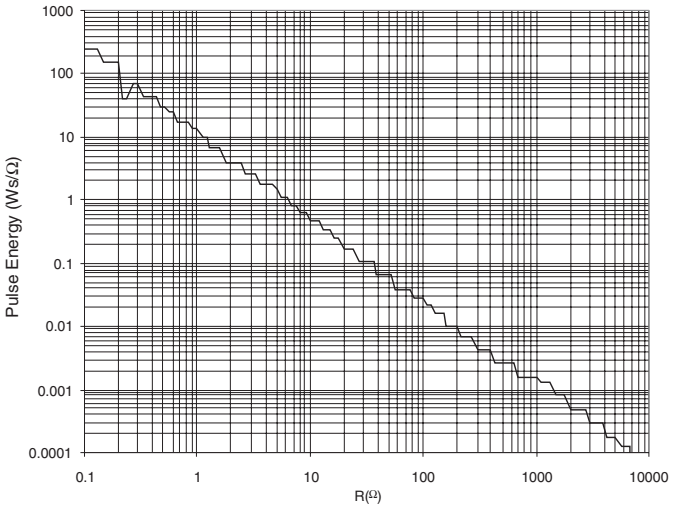
AC10 Pulse on a regular basis; maximum permissible peak pulse power ($\hat{P}_{max}$) as a function of pulse duration (t_i).



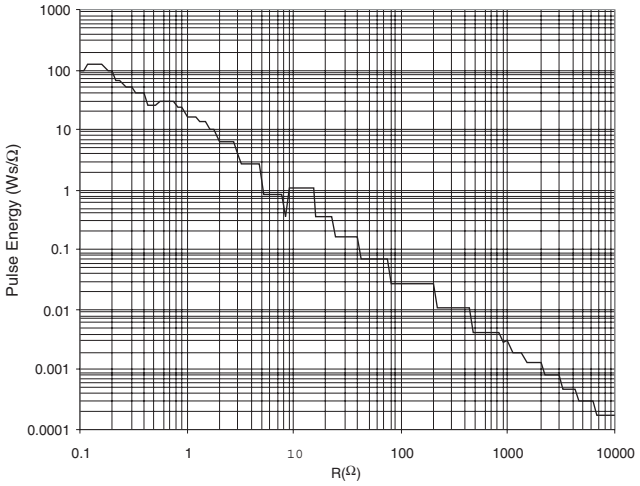
AC01 Pulse capability; E(Ws) as a function of R(Ω).



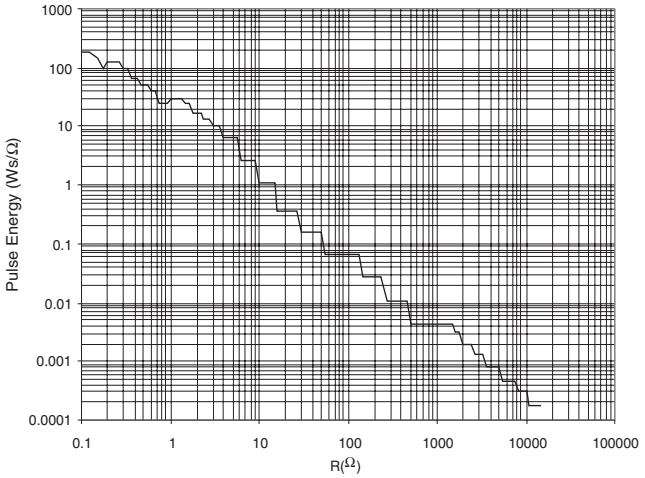
AC03 Pulse capability; E(Ws) as a function of R(Ω).



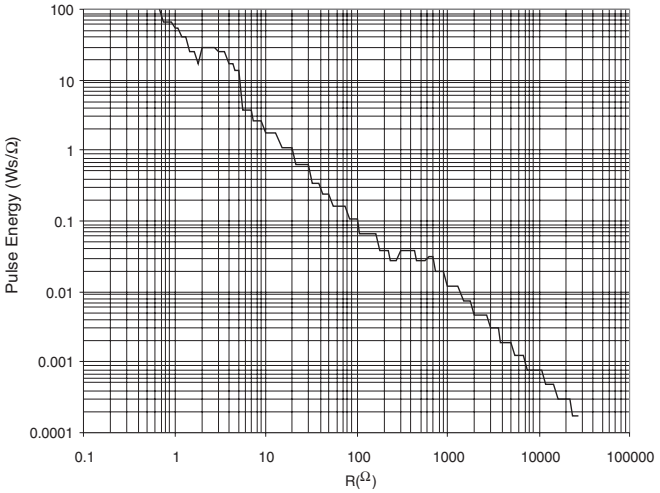
AC04 Pulse capability; E(Ws) as a function of R(Ω).



AC05 Pulse capability; E(Ws) as a function of R(Ω).



AC07 Pulse capability; E(Ws) as a function of R(Ω).



AC10 Pulse capability; E(Ws) as a function of R(Ω).

ORDERING INFORMATION

Components may be ordered by using either a simple clear text ordering code, see “Type description and ordering code” or Vishay BCcomponents’ unique 12NC.

Numeric ordering code (12NC)

- The resistors have a 12-digit ordering code starting with 23.
- The subsequent 7 digits indicate the resistor type, specification and packaging; see the 12NC Ordering Code table.
- The remaining 3 digits indicate the resistance value:

  - The first 2 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
0.1 Ω TO 0.91 Ω	7
1 Ω TO 9.1 Ω	8
10 Ω TO 91 Ω	9
100 Ω TO 910 Ω	1
1 KΩ TO 9.1 KΩ	2
10 kΩ to 56 kΩ	3

Ordering Example

The ordering code of an AC01 resistor, value 47 kΩ supplied in ammopack of 1000 units is: 2306 328 33473.

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