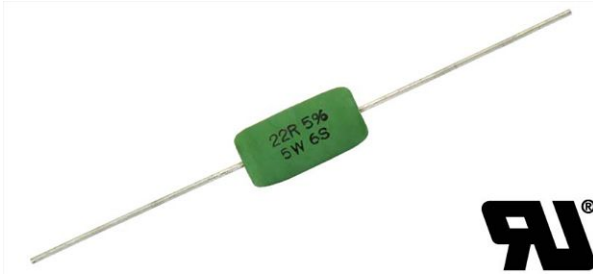


Axial Cemented Fusible Wirewound Safety Resistor



FEATURES

- UL1412 recognised fusible wirewound resistor; UL file no. E362452
- Surge voltage handling capability: 4 kV (10 Ω to 20 Ω) and 6 kV (22 Ω to 100 Ω) as per IEC 61000-4-5
- Fusing time < 45 s for 100 W overload
- Sn coated Cu termination wires
- $P_{40} = 5$ W
- Ohmic range: 10 Ω to 100 Ω, 5 %
- Non-flammable silicon cement coating for immediate interruption without flame and explosion when AC mains voltage (230 V_{AC}) is applied
- Specially designed for applications in electric appliances, energy meters
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912


**RoHS
COMPLIANT**

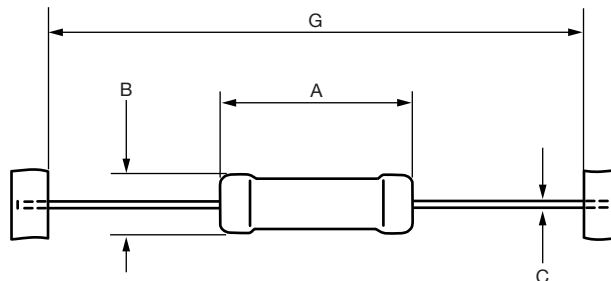
AC05 safety resistor (AC05..CS) is designed to be used as fusible safety resistor (or, AC mains voltage input resistor). It uses specially selected resistive winding wire and special non flammable silicon cement coating material to ensure safe and silent fusing operation in overload conditions. The resistor fuses “without a bang” when AC mains voltage is applied. At the same time, it acts as a in-rush current limiting resistor for the normal operation. The specially developed lacquer coating has superior thermal and electrical insulating properties of standard silicone cement. This allows designers to more easily meet the requirements of safety approval, whilst eliminating the need to put additional fuses in series with the input resistor.

STANDARD ELECTRICAL SPECIFICATIONS					
MODEL	POWER RATING $P_{40^{\circ}\text{C}}$ W	POWER RATING $P_{70^{\circ}\text{C}}$ W	LIMITING VOLTAGE U_{max}	RESISTANCE RANGE ⁽¹⁾ Ω TCR = ± 200 ppm/K	TOLERANCE %
AC05..CS	5	4.5	$\sqrt{P \times R}$	10 to 100	± 5

Note

⁽¹⁾ Resistance value to be selected for ± 5 % from E24 series

DIMENSIONS



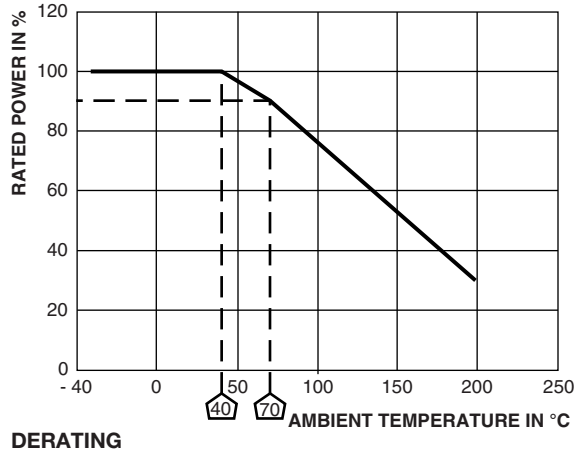
DIMENSIONS in millimeters					
MODEL	A MAX.	B MAX.	C	G	WEIGHT PER UNIT g
AC05..CS	18	10	0.8 ± 0.3	83 ± 1; 93 ± 1	2.5

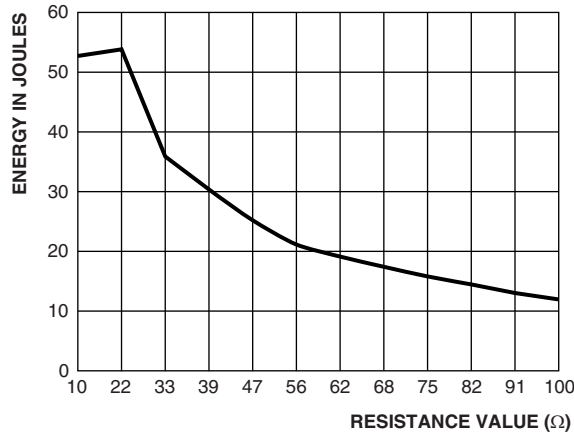


PART NUMBER AND PRODUCT DESCRIPTION																
Part Number: AC050000B100J6BCS																
A	C	0	5	0	0	0	B	1	0	0	0	J	6	B	C	S
MODEL	VERSION	TCR/MATERIAL		RESISTANCE		TOLERANCE	PACKAGING		SPECIAL							
AC05000	0 = Neutral	0 = Neutral, A = 4 kV B = 6 kV		3 digit value 1 digit multiplier MULTIPLIER 9 = *10 ⁻¹ 0 = *10 ⁰ 1 = *10 ¹		J = ± 5 %	6B = 250 pieces, box: 83 mm 6F = 250 pieces, box: 93 mm		CS = Safety resistor							
Product Description: AC05 100R 5 % 6 kV 6B G83 CD1402																
AC05	100R	5 %	6 kV	6B	G83	CD1402										
MODEL	RESISTANCE	TOLERANCE	TCR/MATERIAL	PACKAGING	TAPE WIDTH	SPECIAL										

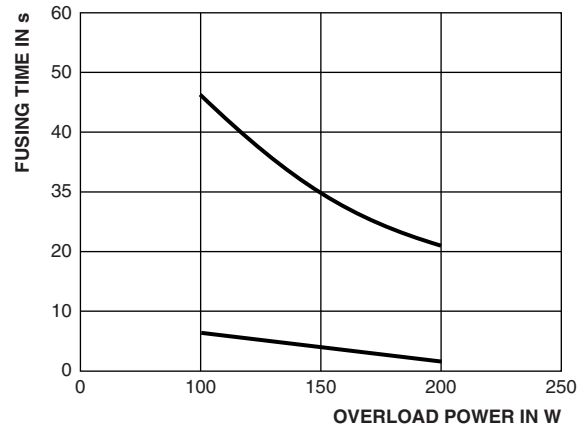
PACKAGING TABLE			
MODEL	BOX		
	DIMENSIONS	PIECES	PACKAGING CODE
AC05..CS	83 mm	250	6B
	93 mm	250	6F

FUNCTIONAL PERFORMANCE





PULSE ENERGY CURVE FOR AC05..CS



FUSING CHARACTERISTICS OF AC05..CS: 10 Ω ≤ R ≤ 100 Ω

Note

- Surge voltage handling capability: 4 kV (10R to 20R) and 6 kV (22R to 100R) as per IEC 61000-4-5

PERFORMANCE	
TEST	PERMISSIBLE CHANGE (ΔR)
Climatic Category (LCT/UCT/Days)	40/200/56
Climatic Sequence, IEC 60115-1, 4.23	$\pm (1 \% R + 0.05 \Omega)$
Damp Heat, Steady State, IEC 60115-1, 4.24 (40 ± 2) °C, 56 days, (93 ± 3) % RH	$\pm (5 \% R + 0.1 \Omega)$
Endurance at Room Temperature (116 % P_{70}), 1000 h, IEC 60115-1, 4.25.2	$\pm (5 \% R + 0.1 \Omega)$
Endurance at UCT, 200 °C (30 % P_{70}), 1000 h, IEC 60115-1, 4.25.3	$\pm (5 \% R + 0.1 \Omega)$
Resistance to Soldering Heat, IEC 60115-1, 4.18 (260 ± 5) °C, (10 ± 1) s	$\pm (0.5 \% R + 0.05 \Omega)$
Robustness of Termination, IEC 60115-1, 4.16	$\pm (0.5 \% R + 0.05 \Omega)$
Short Time Overload, IEC 60115-1, 4.13 10 x Rated Power (P_{40}) for 5 s	$\pm (2 \% R + 0.1 \Omega)$
1.2 μs/50 μs Surge Test (Impedance of Surge Tester is 2 Ω) as per IEC 61000-4-5; 10 Pulses at 30 s Interval	$\pm (5 \% R + 0.1 \Omega)$
Fail Safe Mains Fusing at 230 V _{AC}	Resistance > 100 kΩ, fusing time < 2 s (fusing without flame and explosion)

Notes

- Please see document "Vishay Material Category Policy": www.vishay.com/doc?99912
- For further information, please contact: ww1resistors@vishay.com



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