



WIREWOUND RESISTORS

CW-High Surge

Wirewound Resistors, High Surge Immunity, Silicone Coated, Axial Lead



KEY BENEFITS

- High-voltage surge immunity up to 12 kV
- High-temperature silicone coating
- Complete welded construction
- Excellent stability in operation
- High power to size ratio
- Meets IEC61000-4-5 (1.2 μ s/50 μ s) surge handling requirements

APPLICATIONS

- Power supplies
- Metering
- Welding equipment
- Power tools
- Appliances

RESOURCES

- Datasheet: CW-High Surge - www.vishay.com/doc?30285
- Material categorization: For definitions please see www.vishay.com/doc?99912
- For technical questions contact ww2aresistors@vishay.com



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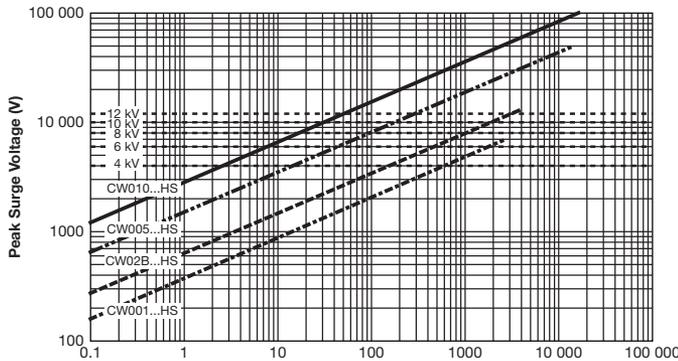
Note
* This datasheet provides information about parts that are RoHS-compliant and/or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information/tables in this datasheet for details.

STANDARD ELECTRICAL SPECIFICATIONS					
GLOBAL MODEL	POWER RATING ⁽¹⁾ $P_{25^\circ\text{C}}$ W CHARACTERISTIC U +250 °C	POWER RATING ⁽¹⁾ $P_{25^\circ\text{C}}$ W CHARACTERISTIC V +350 °C	RESISTANCE RANGE Ω	TOLERANCE \pm %	WEIGHT (max.) g
CW001...HS	1.0	-	0.1 to 6.37K	5, 10	0.34
CW02B...HS	3.0	3.75	0.1 to 15K	5, 10	0.7
CW005...HS	5.0	6.5	0.1 to 58.5K	5, 10	4.2
CW010...HS	10.0	13.0	0.1 to 167K	5, 10	9.0

Note
⁽¹⁾ Vishay Dale CW models have two power ratings, depending on operating temperature and stability requirements.

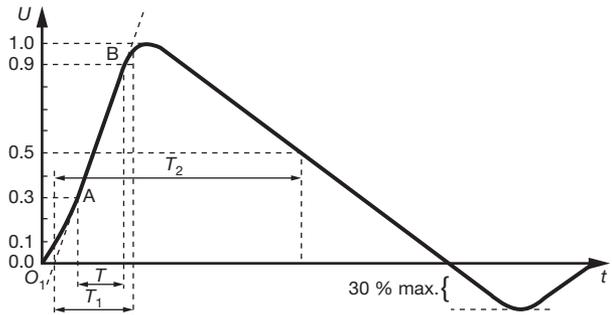
PEAK SURGE VOLTAGE

IEC 61000-4-5 (1.2 μ s/50 μ s pulse)



HIGH VOLTAGE SURGE

The surge handling capability is based upon applying an exponential open circuit voltage waveform according to specification. IEC 61000-4-5 (1.2 μ s/50 μ s) as shown below at an ambient temperature of 25 °C.



Front time: $T_1 = 1.67 \times T = 1.2 \mu\text{s} \pm 30\%$
Time to half-value: $T_2 = 50 \mu\text{s} \pm 20\%$

Open circuit voltage waveform at the output of the pulse generator

GLOBAL MODEL	MINIMUM RESISTANCE VALUE FOR SURGE VOLTAGE				
	PEAK SURGE VOLTAGE				
	4 kV	6 kV	8 kV	10 kV	12 kV
CW001...HS	586 Ω	1.7 Ω	-	-	-
CW02B...HS	151 Ω	457 Ω	1.0 k Ω	1.8 k Ω	3.0 k Ω
CW005...HS	15 Ω	43 Ω	94 Ω	171 Ω	281 Ω
CW010...HS	2.6 Ω	7.6 Ω	17 Ω	30 Ω	50 Ω