

Thickfilm Resistor CS 003 / CS 003C

► Resistance ranges, tolerances and TC's

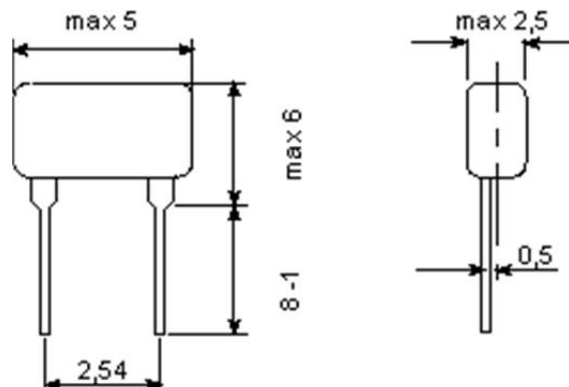
Tolerance	± 1%	± 2%	± 5%	± 10%
Resistance ranges	100R - 10M	>100R - 25M	>25R - 150M	>150M - 500M

All values within the resistance range are available.
Lower tolerance-values upon request.

► Ratings by IEC 60115-1

Thermal resistance R_{th}		max. 440 K/W
Limiting element voltage		$\cong 100$ V
Rated dissipation	P_{70} ($\vartheta_o = 125$ °C)	0.125 W
	P_{40} ($\vartheta_o = 125$ °C)	0.19 W
Climatic category		55 / 125 / 56
Insulation voltage		> 500 V
Insulation resistance		> $10^{10} \Omega$
Temp. characteristics	≤ 25 M	$\pm 100 \times 10^{-6} / ^\circ\text{C}$
	> 25M	$\pm 250 \times 10^{-6} / ^\circ\text{C}$
Voltage coefficient		$< 0.5 \times 10^{-6} / \text{V}$
Weight (100 pcs.)		ca. 10 g
Marking		letter
Cleaning solvents	For the removal of flux can be used: ethanol, methanol, isopropanol, propanol, butanol and water; reaction time max. 5 minutes	

► Dimensions CS 003



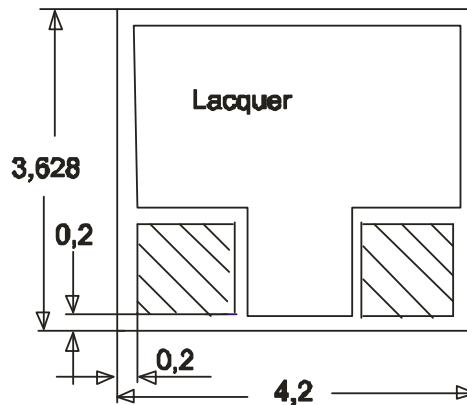
Thickfilm Resistor CS 003 / CS 003C

► Tests

	Test	Conditions	Requirements
4.13	Overload	5 s, 2,5 x U_{rat} or 2 x U_{max}	$\Delta R \leq \pm (0.10\%R)$
4.18	Soldering-Resistance to heat	260 ± 5 °C, 10 s	$\Delta R \leq \pm (0.10\%R)$
4.19	Rapid change of temp.	-65°C, 155°C, 5x	$\Delta R \leq \pm (0.25\%R)$
4.24	Damp heat, steady	40°C, 90% r.H., 56 d	$\Delta R \leq \pm (0.25\%R)$
4.25	Endurance at 70 °C	U_{rat} or U_{max} 1000 h	$\Delta R \leq \pm (0.25\%R)$
		U_{rat} or U_{max} 8000 h	$\Delta R \leq \pm (0.50\%R)$

Section numbers of test and performance requirements refer to IEC 60115-1.

► Dimensions CS 003C



► Tests

	Test	Conditions	Requirements
4.13	Overload	5 s, 2,5 x U_{henn} or 2 x U_{max}	$\Delta R \leq \pm (0.10\%R)$
4.18	Soldering-Resistance to heat	260 ± 5 °C, 10 s	$\Delta R \leq \pm (0.10\%R)$
4.19	Rapid change of temp.	-65°C, 155°C, 5x	$\Delta R \leq \pm (0.25\%R)$
4.24	Damp heat, steady	40°C, 93% r.H., 56 d	$\Delta R \leq \pm (0.25\%R)$
4.25	Endurance at 70 °C	U_{rat} or U_{max} 1000 h	$\Delta R \leq \pm (0.25\%R)$
		U_{rat} or U_{max} 8000 h	$\Delta R \leq \pm (0.50\%R)$

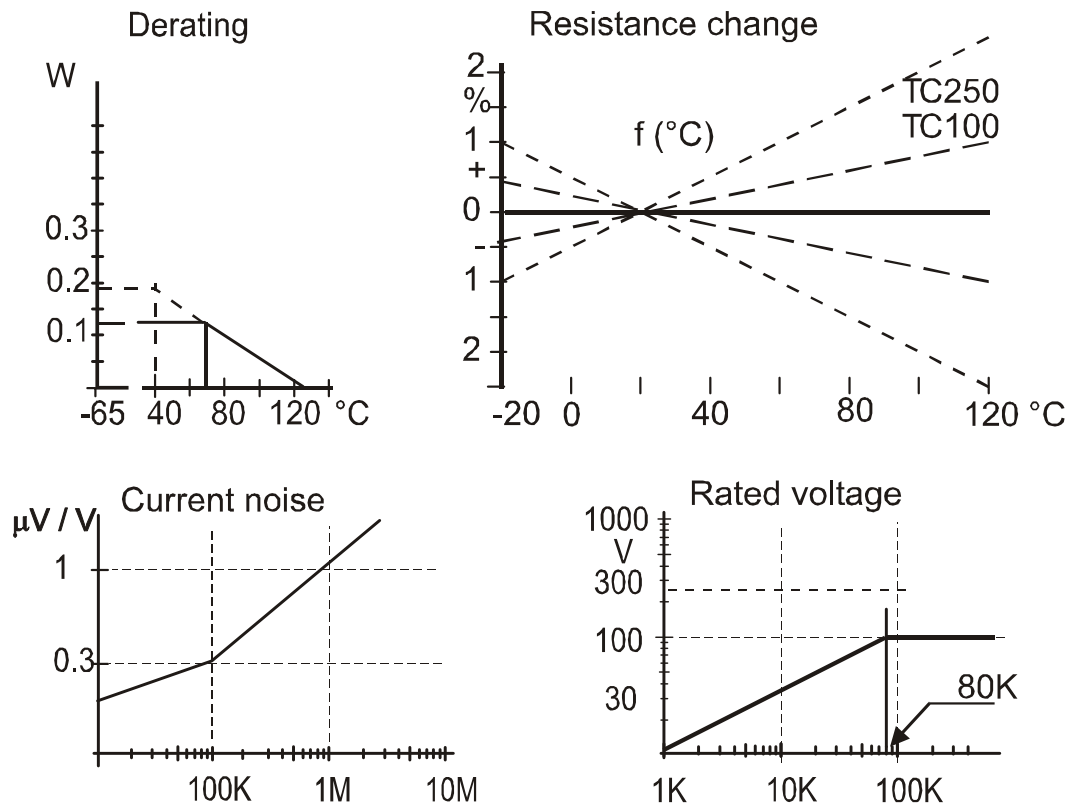
Section numbers of test and performance requirements refer to IEC 60115-1.

► Order examples

CS 003	10M	1%
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Type	rated resistance	tolerance
CS 003C	10M	1%
—	—	—
Type	rated resistance	tolerance

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► Rating curves



► Standard Values

100R	1%	150K	1%	18M	2%
180R	1%	270K	1%	20M	5%
270R	1%	330K	1%	22M	5%
560R	1%	500K	1%	27M	5%
1K	1%	680K	1%	30M	5%
1K5	1%	1M	1%	56M	5%
2K	1%	1M5	1%	100M	5%
3K3	1%	2M	1%		
5K	1%	3M	1%		
6K8	1%	4M7	1%		
10K	1%	5M	1%		
15K	1%	5M6	1%		
20K	1%	6M8	1%		
36K	1%	8M2	1%		
50K	1%	10M	1%		
68K	1%	12M	2%		
100K	1%	15M	2%		