

DATA SHEET

LEADED POWER RESISTORS

CR - PRECISION wirewound, down to 0.25% tolerance

UP TO 7.2 W



Product Specification - Jun. 18, 2003 V.0



Series CR
Precision Power Wirewound resistors
axial, ceramic carrier, coated

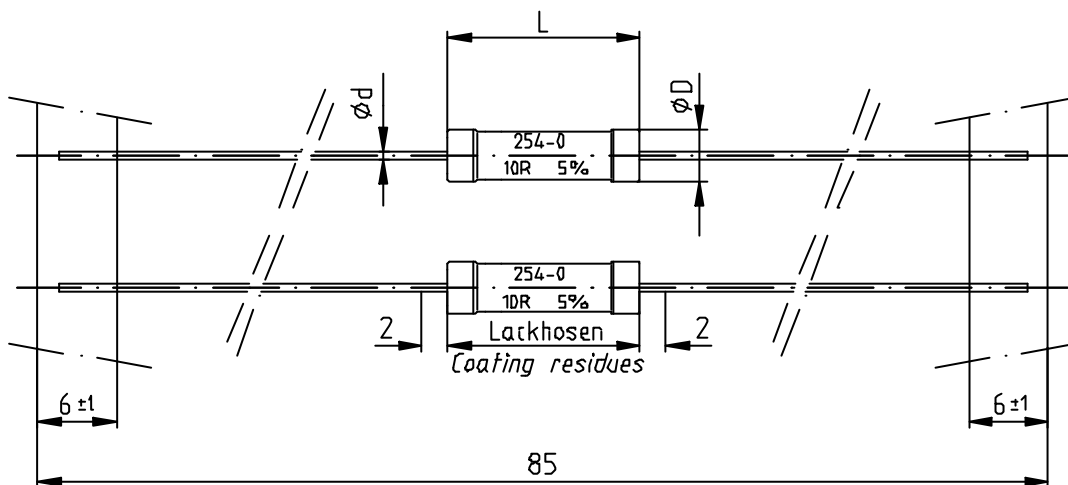
Specification

Type		CR251-0	CR253-0	CR254-0	CR255-0	CR256-0	CR257-0	CR258-0	CR259-0
Power rating	P_{40}	1,1	2,2	3,0	3,3	4,0	5,0	5,5	7,2
	$\vartheta_0 = 235^\circ\text{C}$	1,0	2,0	2,5	3,0	3,5	4,3	5,0	6,5
Resistance range		see Page 2							
Tolerance	%	Rmin. ... Rmax.: $\pm 5, \pm 2, \pm 1; R \geq 1R0: \pm 0,5$							
Temperature coefficient	$10^{-6} * K^{-1}$	0 ± 20							
working voltage	V_{RMS}	$\sqrt{P_{70} \cdot R}$							
Insulation voltage (1min.)	V_{RMS}	max. 75V							
Insulation resistance	Ω	not insulated							
Derating linear	$^\circ\text{C}$	70 ... 350 (0W)							
Climatic category		55/200/56							
Temperature range	$^\circ\text{C}$	- 55 ... 350							
Thermal resistance	KW^{-1}	280	140	112	94	80	65	56	43
Failure rate (Total, ϑ_0 max., 60% conf. lev.)	$10^{-9} * h^{-1}$	appr. 10, depends on value							
Endurance (P_{70} , 70°C , 1000h, intm.)	$\left[\frac{\Delta R}{R} \right] \%$	$\pm 3,0$ average							
Damp heat, steady state (40°C , 93% r. h., 56d)	$\left[\frac{\Delta R}{R} \right] \%$	$\pm 1,0$							
Climatic sequence (IEC 115-1/23)	$\left[\frac{\Delta R}{R} \right] \%$	$\pm 1,0$							
Resistance to soldering heat (260°C , 10s, 3mm)	$\left[\frac{\Delta R}{R} \right] \%$	$\pm 0,2$ typ.							
Solderability	s	2,5 Flowtime, solderglobule test, IEC 60068-2-20							
Terminal strength	$\left[\frac{\Delta R}{R} \right] \%$	$\pm 0,2$							
Terminal tensile strength	N	50							
Marking		printed in clear							

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Type	Resistance range		Temperature Coefficient (-20 °C to +120 °C)			
	min.	max.	CuNi44 0±20 ppm/K		NiCr20AlSi 0±10 ppm/K	
CR251-0	0R1	82R	≥ R50	< 62R	≥ 62R	≤ 82R
CR253-0	0R1	360R	≥ R10	< 160R	≥ 160R	≤ 360R
CR254-0	0R1	360R	≥ R10	< 160R	≥ 160R	≤ 360R
CR255-0	0R1	470R	≥ R10	< 220R	≥ 200R	≤ 470R
CR256-0	0R1	750R	≥ R15	< 330R	≥ 330R	≤ 750R
CR257-0	0R2	1K1	≥ R20	< 430R	≥ 430R	≤ 1K1
CR258-0	0R2	1K3	≥ R20	< 430R	≥ 430R	≤ 1K3
CR259-0	0R3	2K	≥ R30	< 800R	≥ 800R	≤ 2K0

Dimensions in mm:



Type	L max.	øD * max.	ød
CR251-0	9,0	3,0	0,65
CR253-0	14,5	4,0	0,65
CR254-0	12,6	5,5	0,80
CR255-0	15,0	8,5	0,80
CR256-0	17,0	5,5	0,80
CR257-0	18,0	8,5	0,80
CR258-0	22,0	8,5	0,80
CR259-0	27,0	8,5	0,80

* R ≤ 1R0 Dmax. +1

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Packaging:

Type	Packaging	Pieces	Pack.-Code
CR251-0	taped	1000	T
CR253-0	taped	1000	T
CR254-0	taped	1000	T
CR255-0	taped	500	T
CR256-0	taped	1000	T
CR257-0	taped	500	T
CR258-0	taped	500	T
CR259-0	taped	500	T

Ordering example: CR 259-0 1 T 10R
Type Tolerance Pack.-Code R-Value