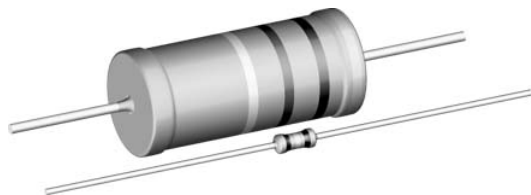


## Carbon Film Resistors, Standard



### FEATURES

- Securely bonded carbon film
- Good moisture resistance
- Good long term stability
- Lead (Pb)-free solder contacts on Ni barrier layer
- Pure tin plating provides compatibility with lead (Pb)-free and lead containing soldering processes
- Compatible with "restriction of the use of Hazardous Substances" (RoHS) directive 2002/95/EC (issue 2004)
- Low Noise
- Suitable for general purpose commercial electronics and pulse load applications



### STANDARD ELECTRICAL SPECIFICATIONS

MODEL	SIZE	POWER RATING P <sub>70°C</sub> W	LIMITING ELEMENT VOLTAGE MAX. V <sub>≧</sub>	TOLERANCE ± %	RESISTANCE RANGE Ω	E-SERIES
LCA0204	0204	0.25	200	± 2	10R - 470K	24
SK1				± 5	1R0 - 1M0	24
LCA0207	0207	0.35	300	± 2	1R0 - 1M0	24
SK2				± 5	R22 - 5M1	24
LCA0309	0309	0.45	300	± 2 ± 5	1R0 - 1M0 R22 - 4M7	24 24
LCA0411	0411	0.55	500	± 2 ± 5	1R0 - 1M0 R22 - 10M	24 24
LCA0414	0414	0.6	500	± 2 ± 5	1R0 - 1M0 R22 - 10M	24 24
SK4	0414	0.6	500	± 5 ± 10 ± 20	10M - 30M 30M - 90M 90M - 150M	24 12 6
LCA0617	0617	0.7	600	± 2 ± 5	2R2 - 1M0 2R2 - 20M	24 24
LCA0719	0719	1	750	± 2 ± 5	2R2 - 1M0 2R2 - 20M	24 24
SK5	0617	1.1	750	± 2 ± 5	1R0 - 5M1 1R0 - 24M	24 24
LCA0922	0922	1.5	750	± 2 ± 5	3R3 - 1M0 3R3 - 22M	24 24
LCA0933	0933	2	1000	± 2 ± 5	5R1 - 1M0 5R1 - 47M	24 24

- Coating : Beige
- Marking : colour code

### TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	LCA0204 SK1	LCA0207 SK2	LCA0309	LCA0411	LCA0414	LCA0617	LCA0719	SK5	LCA0922	LCA0933
Rated Dissipation at 70°C	W	0.25	0.35	0.45	0.55	0.6	0.7	1.0	1.1	1.5	2.0
Limiting Element Voltage <sup>1)</sup>	V <sub>≧</sub>	≤ 200	≤ 300	≤ 300	≤ 500	≤ 500	≤ 600	≤ 750	≤ 750	≤ 750	≤ 1000
Limiting Voltage, short-time	V <sub>≧</sub>		500	600	700	1000	1000	1500		1500	2000
Insulation Voltage (1 min)	V-	> 300	> 700	> 700	> 700	> 700	> 700	> 700	> 750	> 700	> 700
Thermal Resistance	K/W	≤ 300	≤ 220	≤ 190	≤ 150	≤ 140	≤ 110	≤ 90	≤ 80	≤ 70	≤ 60
Insulation Resistance	Ω	≥ 10 <sup>11</sup> /h									
Terminal Strength, axial	N	> 30	> 50	> 60	> 60	> 80	> 80	> 80	> 80	> 80	> 80
Category Temperature Range	°C	- 55 to + 155									
Failure Rate	10 <sup>-9</sup> /h	< 10									
Weight	g	0.1	0.21	0.3	0.5	0.68	1.1	1.8	1.5	3.2	4.2

<sup>1)</sup> Rated voltage  $\sqrt{P \times R}$