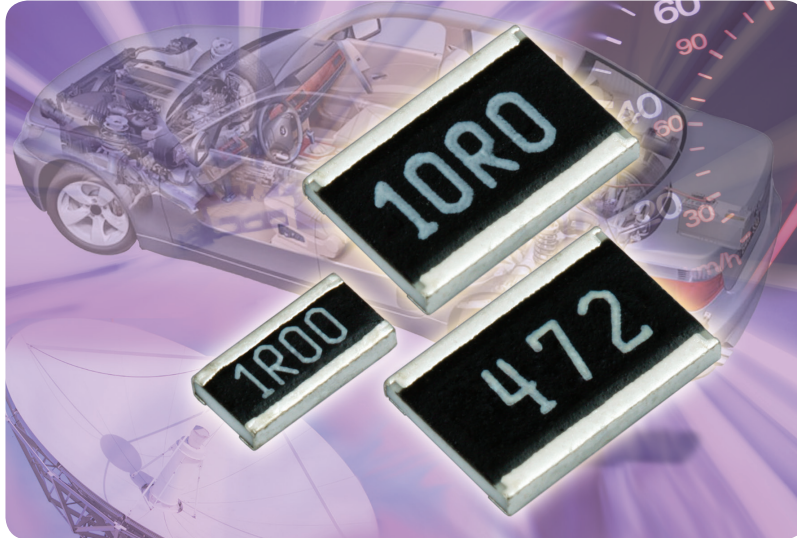




THICK FILM CHIP RESISTORS

RCA-LS

Sulfur-Resistant, Long Side Termination Thick Film Chip Resistors



KEY BENEFITS

- Superior resistance against H₂S atmospheres according to ASTM B809-95
- Enhanced power rating
- Long side terminations
- AEC-Q200 qualified

APPLICATIONS

- Automotive
- Industrial

RESOURCES

- Datasheet: RCA-LS - www.vishay.com/doc?20060
- For technical questions contact thickfilmchip@vishay.com
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



A **WORLD OF**
SOLUTIONS



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Sulfur-Resistant, Long Side Termination Thick Film Chip Resistors

TECHNICAL SPECIFICATIONS					
DESCRIPTION	RCA0406-LS e3	RCA0612-LS e3	RCA1020-LS e3	RCA1218-LS e3	RCA1225-LS e3
Imperial size	0406	0612	1020	1218	1225
Metric size code	RR1016M	RR1632M	RR2550M	RR3246M	RR3263M
Resistance range	1 Ω to 1 MΩ; Jumper (0 Ω)			1 Ω to 2.2 MΩ; Jumper (0 Ω)	1 Ω to 1 MΩ; Jumper (0 Ω)
Resistance tolerance	± 5 %; ± 1 %				
Temperature coefficient	± 200 ppm/K; ± 100 ppm/K				
Rated dissipation, P_{70} ⁽¹⁾	0.25 W	0.5 W	1.0 W	1.0 W	2.0 W ⁽²⁾
Operating voltage, U_{max} , AC _{RMS} /DC	50 V	75 V	200 V	200 V	200 V
Permissible film temperature, θ_F max. ⁽¹⁾	155 °C				
Operating temperature range	-55 °C to +155 °C				
Max. resistance change at P_{70} for resistance range, $ \Delta R/R $ after:					
1000 h	≤ 1.0 %				
8000 h	≤ 2.0 %				
Permissible voltage against ambient (insulation):					
1 min, U_{ins}	100 V	100 V	300 V	300 V	300 V

APPLICATION INFORMATION

When the resistor dissipates power, a temperature rise above the ambient temperature occurs, dependent on the thermal resistance of the assembled resistor together with the printed circuit board. The rated dissipation applies only if the permitted film temperature is not exceeded.

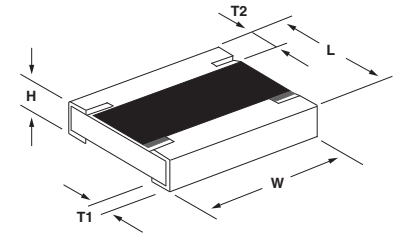
These resistors do not feature a limited lifetime when operated within the permissible limits. However, resistance value drift increasing over operating time may result in exceeding a limit acceptable to the specific application, thereby establishing a functional lifetime.

Notes

- ⁽¹⁾ Please refer to APPLICATION INFORMATION below.
- ⁽²⁾ Specified power rating requires dedicated mounting conditions to achieve the required thermal resistance.

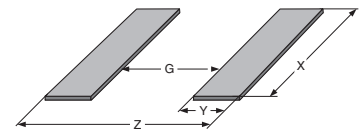
DIMENSIONS

DIMENSIONS AND MASS						
TYPE / SIZE	L (mm)	W (mm)	H (mm)	T1 (mm)	T2 (mm)	MASS (mg)
RCA0406-LS e3	1.0 ± 0.10	1.6 ± 0.10	0.35 ± 0.10	0.2 +0.10 / -0.15	0.2 ± 0.10	2
RCA0612-LS e3	1.6 ± 0.20	3.2 ± 0.20	0.55 ± 0.10	0.35 ± 0.15	0.25 ± 0.15	11
RCA1020-LS e3	2.5 ± 0.20	5.0 ± 0.20	0.55 ± 0.10	0.38 ± 0.15	0.25 ± 0.15	25.5
RCA1218-LS e3	3.2 +0.10 / -0.20	4.6 ± 0.15	0.55 ± 0.05	0.45 ± 0.20	0.4 ± 0.20	29.5
RCA1225-LS e3	3.2 ± 0.20	6.3 ± 0.20	0.70 ± 0.10	0.8 ± 0.20	0.4 ± 0.20	55



SOLDER PAD DIMENSIONS

RECOMMENDED SOLDER PAD DIMENSIONS								
TYPE / SIZE	WAVE SOLDERING				REFLOW SOLDERING			
	G (mm)	Y (mm)	X (mm)	Z (mm)	G (mm)	Y (mm)	X (mm)	Z (mm)
RCA0406-LS e3	0.30	0.80	1.95	1.90	0.35	0.60	1.75	1.55
RCA0612-LS e3	0.50	1.20	3.70	2.90	0.60	1.00	3.50	2.60
RCA1020-LS e3	1.30	1.25	5.50	3.80	1.30	1.10	5.25	3.50
RCA1218-LS e3	1.80	1.30	5.10	4.40	1.90	1.10	4.90	4.90
RCA1225-LS e3	1.10	1.80	6.80	4.70	1.20	1.60	6.60	4.40



Notes

- The given solder pad dimensions reflect the considerations for board design and assembly as outlined e.g in standards IEC 61188-5-x ⁽¹⁾ or in publication IPC-7351. Still, the given solder pad dimensions will be found adequate for most general applications.
- ⁽¹⁾ The quoted IEC standards are also released as EN standards with the same number and identical contents.

Revision 02-Feb-16