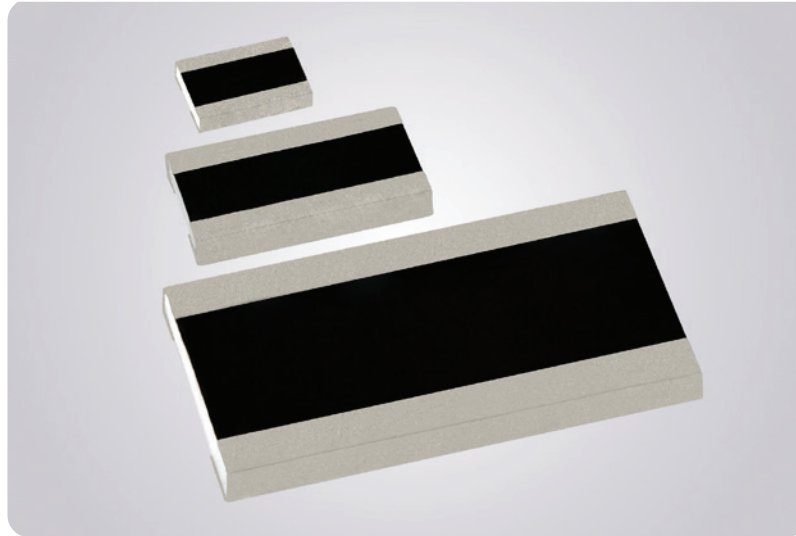




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Long Side Termination Thick Film Chip Resistors



KEY BENEFITS

- Higher power dissipation due to wider terminals
- Better withstand ability in temperature cycle test
- AEC-Q200 qualified

APPLICATIONS

- All general purpose applications
- Densely populated PCBs
- Automotive electronic circuits
- Industrial equipment
- Telecom infrastructure

RESOURCES

- Datasheet: RCL e3 - <http://www.vishay.com/ppg?20046>
- 3D models: www.vishay.com/doc?20104
- For technical questions contact thickfilmchip@vishay.com
- Material categorization: for definitions of compliance, please see <http://www.vishay.com/doc?99912>



RoHS
COMPLIANT

HALOGEN
FREE

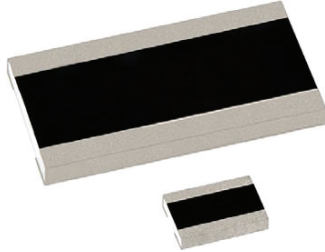


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THICK FILM RESISTORS

RCL e3

Long Side Termination Thick Film Chip Resistors



FEATURES

- Enhanced power rating
- Long side terminations
- Enhanced thermal cycling performance
- Pure tin solder contacts on Ni barrier layer, provides compatibility with lead (Pb)-free and lead (Pb)-containing soldering processes
- AEC-Q200 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

TECHNICAL SPECIFICATIONS						
DESCRIPTION	RCL0406 e3	RCL0612 e3		RCL1020 e3	RCL1218 e3	RCL1225 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 39.2 kΩ; jumper (0 Ω)	40.2 kΩ to 1 MΩ	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	1.0 W ⁽²⁾	1.0 W ⁽²⁾	1.0 W	1.0 W	2.0 W ⁽²⁾
Operating voltage, U_{max} , AC _{RMS} /DC	50 V	200 V	75 V	200 V	200 V	200 V
Permissible film temperature, $t_{F max}$ ⁽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	100 V	300 V	300 V	300 V
Failure rate: FIT _{observed}	≤ 0.1 x 10 ⁻⁹ /h					

Notes

⁽¹⁾ Please refer to APPLICATION INFORMATION below

⁽²⁾ Specified power rating requires dedicated mounting conditions to achieve the required thermal resistance

TEMPERATURE COEFFICIENT AND RESISTANCE RANGE				
TYPE / SIZE	TCR	TOLERANCE	RESISTANCE	E-SERIES
RCL0406 e3	± 200 ppm/K	± 5 %	1 Ω to 1 MΩ	E24
	± 100 ppm/K	± 1 %	1 Ω to 1 MΩ	E24; E96
	Jumper, $I_{max} = 4$ A	≤ 10 mΩ	0 Ω	-
RCL0612 e3	± 200 ppm/K	± 5 %	1 Ω to 1 MΩ	E24
	± 100 ppm/K	± 1 %	1 Ω to 1 MΩ	E24; E96
	Jumper, $I_{max} = 6$ A	≤ 10 mΩ	0 Ω	-
RCL1020 e3	± 200 ppm/K	± 5 %	1 Ω to 1 MΩ	E24
	± 100 ppm/K	± 1 %	1 Ω to 1 MΩ	E24; E96
	Jumper, $I_{max} = 10$ A	≤ 10 mΩ	0 Ω	-
RCL1218 e3	± 200 ppm/K	± 5 %	1 Ω to 2.2 MΩ	E24
	± 100 ppm/K	± 1 %	1 Ω to 2.2 MΩ	E24; E96
	Jumper, $I_{max} = 7$ A	≤ 20 mΩ	0 Ω	-
RCL1225 e3	± 200 ppm/K	± 5 %	1 Ω to 1 MΩ	E24
	± 100 ppm/K	± 1 %	1 Ω to 1 MΩ	E24; E96
	Jumper, $I_{max} = 12$ A	≤ 10 mΩ	0 Ω	-

Note

- The temperature coefficient of resistance (TCR) is not specified for 0 Ω jumpers