THICK FILM CHIP RESISTORS

RCG e3

Resistors - AEC-Q200 Qualified Green Design

Fully RoHS-Compliant, *GREEN*, Thick Film, Rectangular Chip Resistors

KEY BENEFITS

- Fully *GREEN* resistor body with pure tin solder contacts
- Stability DR/R = 1 % for 1000 h at 70 °C
- Metal glaze on high-quality ceramic
- AEC-Q200 qualified

APPLICATIONS

- Telecom infrastructure
- Computer
- Consumer
- Industrial equipment
- Automotive

RESOURCES

- Datasheet: RCG e3 - http://www.vishay.com/doc?20047
- For technical questions contact thickfilmchip@vishay.com
- Material categorization: For definitions of compliance please see http://www.vishay.com/doc?99912

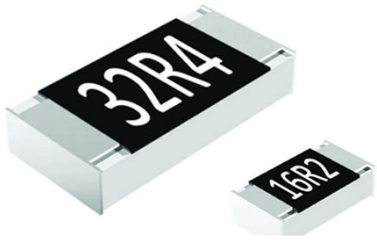
Pb e3 RoHS COMPLIANT GREEN (5-2008)

One of the World's Largest Manufacturers of
Discrete Semiconductors and Passive Components

THICK FILM CHIP RESISTORS

RCG e3

Fully RoHS-Compliant, *GREEN*, Thick Film, Rectangular Chip Resistors



FEATURES

- Fully Green** resistor body with pure tin solder contacts
- Stability $\Delta R/R$ = 1 % for 1000 h at 70 ° C
- Metal glaze on high quality ceramic
- Compliant to RoHS Directive 2011/65/EU
- AEC-Q200 qualified

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	SIZE		RATED DISSIPATION P_{70} W	LIMITING ELEMENT VOLTAGE $U_{MAX.}$ AC/DC	TEMPERATURE COEFFICIENT ppm/K	TOLERANCE %	RESISTANCE RANGE Ω	SERIES
	INCH	METRIC						
RCG0402	0402	RR 1005M	0.063	50	± 100 ± 200	± 1 ± 5	1R0 to 10M	E24; E96 E24
			Zero-Ohm Resistor: $R_{max.}$ = 20 mΩ, $I_{max.}$ = 1.5 A					
RCG0603	0603	RR 1608M	0.1	75	± 100 ± 200	± 1 ± 5	1R0 to 10M	E24; E96 E24
			Zero-Ohm Resistor: $R_{max.}$ = 20 mΩ, $I_{max.}$ = 2.0 A					
RCG0805	0805	RR 2012M	0.125	150	± 100 ± 200	± 1 ± 5	1R0 to 10M	E24; E96 E24
			Zero-Ohm Resistor: $R_{max.}$ = 20 mΩ, $I_{max.}$ = 2.5 A					
RCG1206	1206	RR 3216M	0.25	200	± 100 ± 200	± 1 ± 5	1R0 to 10M	E24; E96 E24
			Zero-Ohm Resistor: $R_{max.}$ = 20 mΩ, $I_{max.}$ = 3.5 A					

Notes

- These resistors do not feature a limited lifetime when operated within the permissible limits. However, resistance value drift increa operating time may result in exceeding a limit acceptable to the specific application, thereby establishing a functional lifetime.
- Marking: See datasheet “Surface Mount Resistor Marking” (document number 20020).
- Power rating depends on the max. temperature at the solder point, the component placement density and the substrate material.

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RCG0603	RCG0805	RCG1206
Rated dissipation P_{70} (1)	W	0.1	0.125	0.25
Limiting element voltage $U_{max.}$ AC/DC	V	75	150	200
Insulation voltage U_{ins} (1 min)	V	> 100	> 200	> 300
Insulation resistance	Ω	$> 10^9$		
Category temperature range	°C	- 55 to + 155		
Weight	mg	2	5.5	10

Revision 01-Jun-11

Note

(1) The power dissipation on the resistor generates a temperature rise against the local ambient, depending on the heat flow support of the printed-circuit board (thermal resistance). The rated dissipation applies only if the permitted film temperature of 155 °C is not exceeded.