



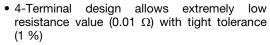
www.vishay.com

Vishay Dale

Thick Film Surface Mount Chip Resistors, Current Sensor, 4-Terminal



FEATURES





- High power to foot print size ratio
- Suitable for current sensing in power supplies and other applications
- ROHS COMPLIANT

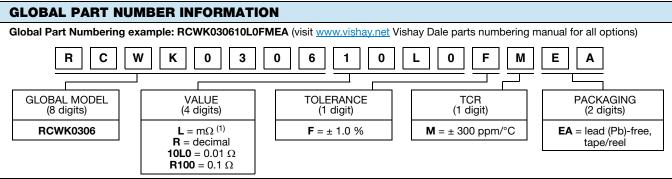
FREE

- Metal glaze on high quality ceramic
- Protective overglaze
- · Lead (Pb)-free solder contacts on Ni barrier layer
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

STANDARD ELECTRICAL SPECIFICATIONS									
GLOBAL MODEL	CASE SIZE	POWER RATING P _{70°C} W	TEMPERATURE COEFFICIENT ± ppm/°C RESISTANCE RANGE		TOLERANCE ± %				
RCWK0306	0306	0.33	300	0.01 to 0.1	1.0				

Notes

- Power rating depends on the max. temperature at the solder point, the component placement density and the substrate material
- Part marking: reference "Surface Mount Resistor Marking" (www.vishay.com/doc?20020)
- (1) Use E24 decade values for 5.0 % and 1.0 % tolerance parts and E96 decade values for 0.5 % and 1.0 %. Refer to Standard Decade Table (www.vishay.com/doc?31001)



Note

 $^{(1)}\,$ Use "L" for resistance values < 0.1 Ω

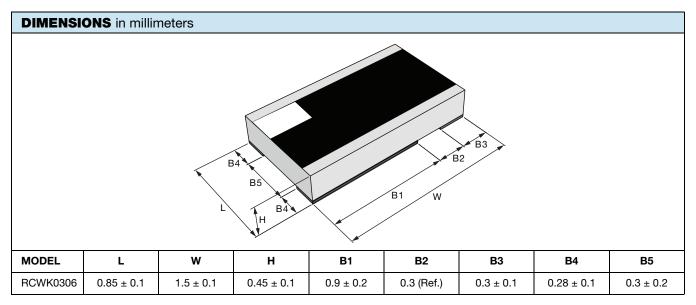
TECHNICAL SPECIFICATIONS					
PARAMETER	UNIT	RCWK0306			
Operating temperature range	°C	-55 to +155			
Maximum operating voltage	V	(P x R) ^{1/2}			
Insulation voltage U _{ins} (1 min.)	V	> 100			
Insulation resistance	Ω	> 109			
Weight/1000 pieces (typical)	g	3			

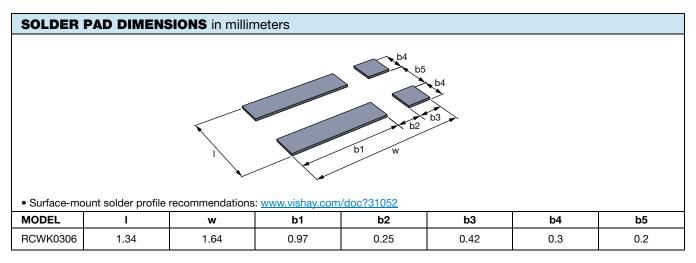
Revision: 24-Feb-2020 1 Document Number: 20064



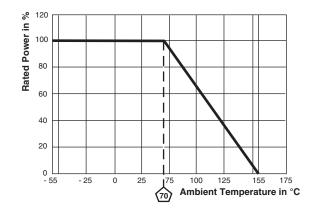
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DERATING





RCWK0306

 \pm (2.0 % + 0.0005 Ω)

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PERFORMANCE					
TEST	CONDITIONS OF TEST				
Thermal shock	MIL-STD-202, method 107, -55 °C to +125 °C, 15 min at each extreme, 300 cycles	± (1.0 % + 0.0005 Ω)			
Short time overload	2.5 x rated power; 5 s	\pm (0.5 % + 0.0005 Ω)			
High temperature exposure	MIL-STD-202, method 108, 1000 h at T = 155 °C, 0 % power	\pm (2.0 % + 0.0005 Ω)			
Temperature cycling	JESD 22, method JA-104, 1000 cycles (-55 °C to +125 °C)	± (2.0 % + 0.0005 Ω)			
Biased humidity	MIL-STD-202, method 103, 1000 h 85 °C/85 % RH, 10 % x (P x R) ^{1/2}	\pm (2.0 % + 0.0005 Ω)			
Mechanical shock	MIL-STD-202, method 213, condition C, 10 g's, 6 ms (half sine), 3 directions	± (1.0 % + 0.0005 Ω)			
Vibration	MIL-STD-202, method 204, 5 <i>g</i> 's, 20 min, 12 cycles, 3 directions, 10 Hz to 2000 Hz	± (1.0 % + 0.0005 Ω)			
Operational life	MIL-STD-202, method 108, 1000 h at T = 125 °C at rated power	\pm (2.0 % + 0.0005 Ω)			
Resistance to solder heat	MIL-STD-202, method 210, +260 °C solder, 10 s to 12 s dwell, 25 mm/s emergence	± (1.0 % + 0.0005 Ω)			

PACKAGING								
MODEL	REEL							
	TAPE WIDTH	DIAMETER	PITCH	PIECES/REEL	CODE			
RCWK0306	8 mm/punched paper	180 mm/7"	4 mm	5000	EA			

MIL-STD-202, method 106, 0 % power, 7a and 7b not required

Notes

Moisture resistance

- Embossed carrier tape per EIA-481-1A
- Additional packaging details at: www.vishay.com/doc?31543

Legal Disclaimer Notice



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