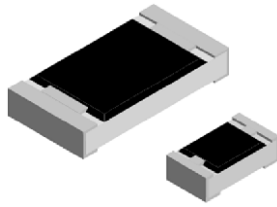


Thick Film Surface Mount, Commodity Chip Resistors, Wraparound, Low Value (0.01 Ω to 0.976 Ω)



FEATURES

- High volume product suitable for commercial applications
- Low resistance values (0.01 Ω to 0.976 Ω)
- Suitable for current sensing and shunts
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

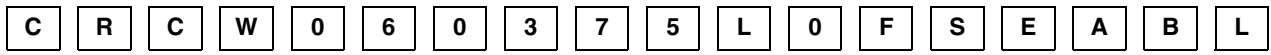
STANDARD ELECTRICAL SPECIFICATIONS						
GLOBAL MODEL	CASE SIZE	POWER RATING $P_{70\text{ }^{\circ}\text{C}}$ W	TEMPERATURE COEFFICIENT \pm ppm/ $^{\circ}\text{C}$	RESISTANCE RANGE Ω	TOLERANCE \pm %	E-SERIES
CRCW0402...BL	0402	0.063	\pm 1500	0.027 to 0.036	\pm 1 \pm 5	24, 96 24
			\pm 1200	0.039 to 0.059		
			\pm 600	0.062 to 0.196		
			\pm 300	0.20 to 0.392		
			\pm 250	0.402 to 0.976		
CRCW0603...BL	0603	0.1	\pm 1500	0.01 to 0.036	\pm 1 \pm 5	24, 96 24
			\pm 1200	0.039 to 0.059		
			\pm 600	0.062 to 0.091		
			\pm 300	0.10 to 0.196		
			\pm 400	0.20 to 0.499		
CRCW0805...BL	0805	0.125	\pm 1500	0.01 to 0.018	\pm 1 \pm 5	24, 96 24
			\pm 1200	0.02 to 0.03		
			\pm 800	0.033 to 0.047		
			\pm 600	0.051 to 0.091		
			\pm 200	0.10 to 0.976		
CRCW1206...BL	1206	0.33	\pm 1500	0.01 to 0.018	\pm 1 \pm 5	24, 96 24
			\pm 1200	0.02 to 0.024		
			\pm 1000	0.027 to 0.047		
			\pm 600	0.051 to 0.091		
			\pm 200	0.10 to 0.976		
CRCW1210...BL	1210	0.5	\pm 1500	0.01 to 0.018	\pm 1 \pm 5	24, 96 24
			\pm 1000	0.02 to 0.024		
			\pm 700	0.027 to 0.047		
			\pm 400	0.051 to 0.091		
			\pm 200	0.10 to 0.976		
CRCW2010...BL	2010	0.75	\pm 1500	0.01 to 0.018	\pm 1 \pm 5	24, 96 24
			\pm 1200	0.02 to 0.024		
			\pm 900	0.027 to 0.047		
			\pm 500	0.051 to 0.091		
			\pm 200	0.10 to 0.976		
CRCW2512...BL	2512	1.0	\pm 1500	0.01 to 0.018	\pm 1 \pm 5	24, 96 24
			\pm 1200	0.02 to 0.024		
			\pm 900	0.027 to 0.047		
			\pm 500	0.051 to 0.091		
			\pm 200	0.10 to 0.976		

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).

PART NUMBER AND PRODUCT DESCRIPTION

Part Number: CRCW060375L0FSEABL



TYPE	VALUE	TOLERANCE	TCR	PACKAGING	SPECIAL
CRCW0402-BL CRCW0603-BL CRCW0805-BL CRCW1206-BL CRCW1210-BL CRCW2010-BL CRCW2512-BL	$L = m\Omega$ ⁽¹⁾ $R = \text{decimal}$ $10L0 = 0.01 \Omega$ $R470 = 0.47 \Omega$	$F = \pm 1.0 \%$ $J = \pm 5.0 \%$	$S = \text{TCR of the resistance range specified in the Standard Electrical Specifications table of the datasheet}$	$EA = \text{lead (Pb)-free, tape/reel}$	Up to 2 digits $BL = \text{commodity, low value}$

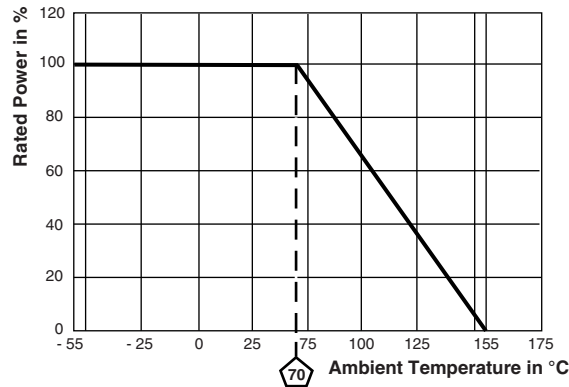
Note

 (1) Use "L" for resistance values < 0.1 Ω
TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	CRCW0402-BL	CRCW0603-BL	CRCW0805-BL	CRCW1206-BL	CRCW1210-BL	CRCW2010-BL	CRCW2512-BL
Operating temp. range	$^{\circ}\text{C}$	-55 to +155						
Maximum operating voltage	V	$(P \times R)^{1/2}$						
Insulation voltage U_{ins} (1 min)	V	> 75	> 100	> 200	> 300	> 300	> 300	> 300
Insulation resistance	Ω	> 10^9						
Weight/1000 pieces (typical)	g	0.6	2	4.5	8.5	15.5	25.5	40

DIMENSIONS


CASE SIZE	DIMENSIONS in millimeters										
	L	W	H	T1	T2	REFLOW SOLDERING			WAVE SOLDERING		
						a	b	l	a	b	l
0402	1.00 ± 0.10	0.50 ± 0.05	0.30 ± 0.10	0.20 ± 0.15	0.25 ± 0.10	0.5	0.6	0.5	0.6	0.6	0.5
0603	1.60 ± 0.10	0.80 ± 0.10	0.45 ± 0.10	0.35 ± 0.15	0.25 ± 0.15	0.7	0.9	0.8	0.9	0.9	0.8
0805	2.00 ± 0.10	1.25 ± 0.10	0.50 ± 0.10	0.35 ± 0.20	0.35 ± 0.2	0.9	1.3	1.2	1.1	1.3	1.3
1206	3.05 ± 0.10	1.55 ± 0.10	0.50 ± 0.10	0.55 ± 0.25	0.45 ± 0.20	1.0	1.7	2.2	1.2	1.7	2.5
1210	3.05 ± 0.10	2.55 ± 0.10	0.55 ± 0.10	0.50 ± 0.20	0.50 ± 0.20	1.0	2.8	2.2	1.2	2.8	2.4
2010	5.00 ± 0.20	2.50 ± 0.20	0.60 ± 0.10	0.65 ± 0.20	0.65 ± 0.20	1.3	2.8	3.5	1.5	2.8	3.5
2512	6.30 ± 0.20	3.20 ± 0.20	0.60 ± 0.10	0.65 ± 0.20	0.65 ± 0.20	2.1	3.5	3.8	2.3	3.5	3.8

DERATING


PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Rapid change of temperature	EN 60115-1, method 4.19, -55 °C to +125 °C, 30 min at each extreme, 1000 cycles	± (2.0 % + 0.0005 Ω) ΔR
Short time overload	EN 60115-1, method 4.13, 2 x rated power; duration according the model	± (2.0 % + 0.0005 Ω) ΔR
Endurance at upper category temperature	EN 60115-1, method 4.25.3, 1000 h at T = 155 °C, 0 % power	± (2.0 % + 0.0005 Ω) ΔR
Damp heat steady state	EN 60115-1, method 4.24, 1000 h, (40 ± 2) °C, (93 ± 3) % RH	± (2.0 % + 0.0005 Ω) ΔR
Vibration	EN 60115-1, method 4.22, 10 sweeps, 3 axis, A ≤ 200 m/s, 10 Hz to 55 Hz	± (2.0 % + 0.0005 Ω) ΔR
Endurance at 70°C	EN 60115-1, method 4.25.1, 1000 h at T = 70 °C at rated power, 1.5 h on, 0.5 h off	± (2.0 % + 0.0005 Ω) ΔR
Resistance to soldering heat	EN 60115-1, method 4.18.2, (260 ± 5) °C, (10 ± 1) s	± (1.0 % + 0.0005 Ω) ΔR

PACKAGING					
MODEL	REEL				
	TAPE WIDTH	DIAMETER	PITCH	PIECES/REEL	CODE
CRCW0402-BL	8 mm/punched paper	180 mm/7"	2 mm	10 000	EA
CRCW0603-BL	8 mm/punched paper	180 mm/7"	4 mm	5000	EA
CRCW0805-BL	8 mm/punched paper	180 mm/7"	4 mm	5000	EA
CRCW1206-BL	8 mm/punched paper	180 mm/7"	4 mm	5000	EA
CRCW1210-BL	8 mm/punched paper	180 mm/7"	4 mm	5000	EA
CRCW2010-BL	12 mm/embossed plastic	180 mm/7"	4 mm	4000	EA
CRCW2512-BL	12 mm/embossed plastic	180 mm/7"	4 mm	4000	EA

Note

- Embossed carrier tape per EIA-481-1A.