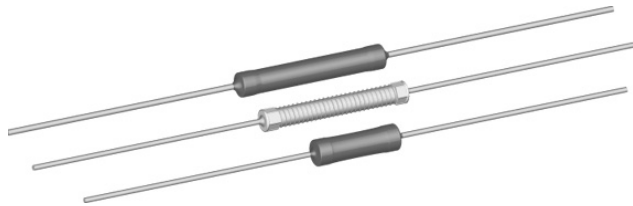


## Wirewound Resistors, Commercial Power, Axial Lead



### FEATURES

- High performance for low cost
- Auto insertable
- CA0001, CA0002 and CA5000 models are supplied with a high temperature silicone coating for additional environmental protection
- Lead forming available



### APPLICATIONS

Kitchen appliances: Percolators, blenders, mixers, ranges, toasters, deep fryers. Automotive devices: Horns, ignitions, windshield wipers, voltage regulators, instrument gauges. Entertainment devices: Radios, televisions, computers and power supplies.

RoHS\* COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS				
GLOBAL <sup>(1)</sup> MODEL	HISTORICAL <sup>(1)</sup> MODEL	POWER RATING <i>P</i> <sub>25 °C</sub> W	RESISTANCE RANGE Ω ± 10 % Standard, ± 5 % Available	WEIGHT (Typical) g
CA0001	CA-1	1.0	0.1 - 1K	0.65
CA0002	CA-2	2.0	0.1 - 2.4K	0.80
CA4050/CA5050	CA-4050/CA-5050	2.0/2.5	0.1 - 170/0.1 - 2.7K	0.64/0.78
CA4055/CA5055	CA-4055/CA-5055	2.2/2.75	0.1 - 195/0.1 - 3.1K	0.65/0.80
CA4060/CA5060	CA-4060/CA-5060	2.4/3.0	0.1 - 220/0.1 - 3.5K	0.66/0.82
CA4070/CA5070	CA-4070/CA-5070	2.8/3.5	0.1 - 270/0.1 - 4.3K	0.68/0.86
CA4080/CA5080	CA-4080/CA-5080	3.2/4.0	0.1 - 320/0.1 - 5.1K	0.70/0.90
CA4090/CA5090	CA-4090/CA-5090	3.6/4.5	0.1 - 370/0.1 - 5.9K	0.72/0.94
CA4100/CA5100	CA-4100/CA-5100	4.0/5.0	0.15 - 420/0.15 - 6.7K	0.74/0.98
CA4150/CA5150	CA-4150/CA-5150	6.0/7.5	0.2 - 630/0.2 - 7K	0.84/1.19
CA4200/CA5200	CA-4200/CA-5200	8.0/10.0	0.2 - 920/0.2 - 7K	0.94/1.40
CA4220/CA5220	CA-4220/CA-5220	8.8/11.0	0.2 - 1.02K/0.2 - 7K	0.98/1.48

**Note**

<sup>(1)</sup> CA4000 and CA5000 model numbers are calculated from the CA4000 power rating of 4 W per inch and CA5000 power rating of 5 W per inch. The last three digits of the model number are the body length of the resistor in inches (decimal is between the first and second digit). Example: CA5150 = 1.50 inches x 5 W per inch = 7.5 W.

TECHNICAL SPECIFICATIONS					
PARAMETER	UNIT	CA0001	CA0002	CA4000	CA5000
Temperature Coefficient	ppm/°C	± 600 below 1 Ω, ± 300 1 Ω and above			
Power Rating	W	1	2	4 per inch	5 per inch
Short Time Overload	-	5 x rated power for 5 s			
Maximum Working Voltage	V	$(P \times R)^{1/2}$			
Dielectric Withstanding Voltage	V <sub>AC</sub>	1000	1000	1000	1000
Operating Temperature Range	°C	- 65/+ 275	- 65/+ 275	- 65/+ 275	- 65/+ 275
Terminal Strength (minimum)	lb	10	10	10	10

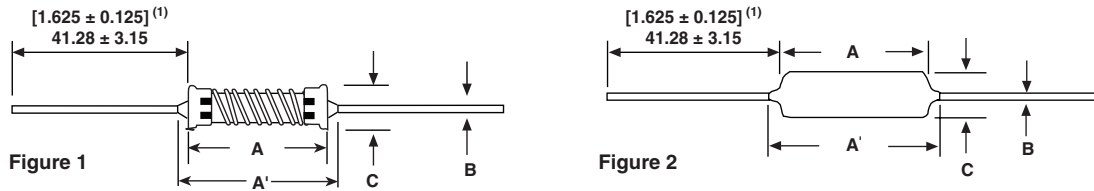
**Note**

- Wirewound CA resistors can reliably function as a fuse and as a resistor. Such components involve compromise between fusing and resistive functions; therefore, each design should be tailored to the application to ensure optimum performance. Contact factory by using the e-mail address at the bottom of this page for design assistance.

GLOBAL PART NUMBER INFORMATION					
New Global Part Numbering: CA000150R00JR05 (preferred part number format)					
C	A	0	0	0	1
5	0	R	0	0	J
					R
					0
					5
GLOBAL MODEL (See Standard Electrical Specifications Global Model column for options)	VALUE R = Decimal K = Thousand R1500 = 0.15 Ω 1K500 = 1500 Ω	TOLERANCE H = ± 3.0 % J = ± 5.0 % K = ± 10.0 %	PACKAGING E14 = Lead (Pb)-free bulk E05 = Lead (Pb)-free tape and reel B14 = Tin/lead bulk R05 = Tin/lead tape and reel	SPECIAL (Dash Number) (up to 3 digits) From 1 - 999 as applicable	
Historical Part Number example: CA-1 50 Ω 5 % R05 (will continue to be accepted for tin/lead product only)					
CA-1	50 Ω	5 %	R05		
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING		

\* Pb containing terminations are not RoHS compliant, exemptions may apply

**DIMENSIONS** in inches [millimeters]



**Note**

(1) On some standard reel pack methods, the leads may be trimmed to a shorter length than shown.

GLOBAL MODEL	DIMENSIONS in inches [millimeters]				FIGURE
	A ± 0.031 [0.794]	A' (Maximum)	B ± 0.001 [0.025]	C	
CA0001	0.400 [10.16]	0.460 [11.68]	0.032 [0.813]	0.170 maximum [4.32 maximum]	2
CA0002	0.570 [14.48]	0.630 [16.00]	0.032 [0.813]	0.170 maximum [4.32 maximum]	2
CA4050	0.500 [12.70]	0.594 [15.09]	0.032 [0.813]	0.140 ± 0.031 [3.56 ± 0.794]	1
CA4055	0.550 [13.97]	0.644 [16.36]	0.032 [0.813]	0.140 ± 0.031 [3.56 ± 0.794]	1
CA4060	0.600 [15.24]	0.694 [17.63]	0.032 [0.813]	0.140 ± 0.031 [3.56 ± 0.794]	1
CA4070	0.700 [17.78]	0.794 [20.17]	0.032 [0.813]	0.140 ± 0.031 [3.56 ± 0.794]	1
CA4080	0.800 [20.32]	0.894 [22.71]	0.032 [0.813]	0.140 ± 0.031 [3.56 ± 0.794]	1
CA4090	0.900 [22.86]	0.994 [25.25]	0.032 [0.813]	0.140 ± 0.031 [3.56 ± 0.794]	1
CA4100	1.00 [25.40]	1.094 [27.79]	0.032 [0.813]	0.140 ± 0.031 [3.56 ± 0.794]	1
CA4150	1.50 [38.10]	1.594 [40.49]	0.032 [0.813]	0.140 ± 0.031 [3.56 ± 0.794]	1
CA4200	2.00 [50.80]	2.094 [53.19]	0.032 [0.813]	0.140 ± 0.031 [3.56 ± 0.794]	1
CA4220	2.20 [55.88]	2.294 [58.27]	0.032 [0.813]	0.140 ± 0.031 [3.56 ± 0.794]	1
CA5050	0.500 [12.70]	0.625 [15.88]	0.036 [0.914]	0.170 ± 0.031 [4.32 ± 0.794]	2
CA5055	0.550 [13.97]	0.675 [17.15]	0.036 [0.914]	0.170 ± 0.031 [4.32 ± 0.794]	2
CA5060	0.600 [15.24]	0.725 [18.42]	0.036 [0.914]	0.170 ± 0.031 [4.32 ± 0.794]	2
CA5070	0.700 [17.78]	0.825 [20.96]	0.036 [0.914]	0.170 ± 0.031 [4.32 ± 0.794]	2
CA5080	0.800 [20.32]	0.925 [23.50]	0.036 [0.914]	0.170 ± 0.031 [4.32 ± 0.794]	2
CA5090	0.900 [22.86]	1.025 [26.04]	0.036 [0.914]	0.170 ± 0.031 [4.32 ± 0.794]	2
CA5100	1.00 [25.40]	1.125 [28.58]	0.036 [0.914]	0.170 ± 0.031 [4.32 ± 0.794]	2
CA5150	1.50 [38.10]	1.625 [41.28]	0.036 [0.914]	0.170 ± 0.031 [4.32 ± 0.794]	2
CA5200	2.00 [50.80]	2.125 [53.98]	0.036 [0.914]	0.170 ± 0.031 [4.32 ± 0.794]	2
CA5220	2.20 [55.88]	2.325 [59.06]	0.036 [0.914]	0.170 ± 0.031 [4.32 ± 0.794]	2

**MATERIAL SPECIFICATIONS**

**Element:** Copper-nickel alloy or nickel-chrome alloy, depending on resistance value

**Core:** Woven fiberglass

**Coating:** Special high temperature silicone (CA4000 series is not coated)

**Terminals:** Tin/lead electroplated copper (Lead (Pb)-free will be 100 % tin)

**End Caps:** Tin plated steel

**Part Marking:** DALE, model, wattage, value, tolerance, date code



**Derating**

PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS (EIA RS-344)
Thermal Shock	- 55 °C to + 275 °C, 5 cycles, 30 min dwell time	± (5.0 % + 0.05 Ω) ΔR
Short Time Overload	5 x rated power for 5 s	± (4.0 % + 0.05 Ω) ΔR
Dielectric Withstanding Voltage	600 V <sub>AC</sub> , (CA0001, CA0002) for 1 min	± (2.0 % + 0.05 Ω) ΔR
Low Temperature Storage	- 65 °C, full rated working voltage for 45 min	± (3.0 % + 0.05 Ω) ΔR
Humidity	75 °C, 90 % - 100 % RH, 240 h	± (5.0 % + 0.05 Ω) ΔR
Load Life	1000 h at rated power, + 25 °C, 1.5 h "ON", 0.5 h "OFF"	± (10.0 % + 0.05 Ω) ΔR
Terminal Strength	10 pounds for 30 s; body twisted about axis, 3 360° rotations	± (2.0 % + 0.05 Ω) ΔR
Resistance to Solder Heat	Terminal immersed 3.5 s in molten solder at 1/8" to 3/16" from body	± (4.0 % + 0.05 Ω) ΔR



## Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А