

New Product Notification

27th Mar 2008

Release	
Welwyn Sales Force	*
TT electronics Sales Channels	*
Distributors & Agents	*



Datasheet Status		
Preliminary	Target for development. Not supported by test data. Not for customer use.	
Provisional	Ongoing development. Incomplete test data. Limited customer use.	
Publication	Approved for website / catalogue. Full customer use.	*

Product Description

CC is an axial hot-moulded carbon composition resistor in 1 and 2W sizes. The CC1 replaces the existing CCR1 which is being withdrawn and CC2 adds a larger size. Composition resistors have no film or wire element but the rod itself is a resistive element which exhibits poor precision but excellent pulse performance.

Key Features

- High pulse energy
- Wide ohmic range 100R to 50K
- Low inductance

Target Markets / Applications

Medical - defibrillator pulse protection
Industrial – rapid high voltage line discharge

Competitors' Equivalents

The following products may be replaced by CC:
Ohmite OA, OX (CC1), OY (CC2)
Koa HPC1 (CC1), HPC2 (CC2)
and, for very old designs,
Allen Bradley GB (CC1), HB (CC2)

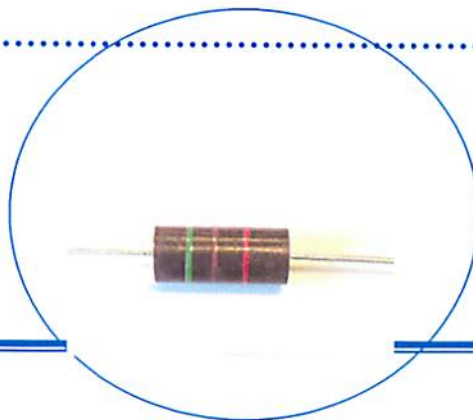
Target Launch Date

Available now.

Carbon Composition Resistors

CC Series

- Hot moulded carbon composition
- High pulse voltage and energy capability
- Non-inductive



Electrical Data

		CC1/2	CC1	CC2
Power rating at 25°C	watts	0.5	1	2
Resistance range	ohms	100R – 10K	100R – 50K	100R – 10K
Maximum pulse voltage	volts	See pulse graphs		
TCR (20 to 70°C)	ppm/°C	< ±1000		
Resistance Tolerance	%	10 or 20 *		
Standard Values		E12		
Ambient temperature range	°C	-55 to 125		
Thermal Impedance	°C/watt	80	51	28

* Tolerance applies to date of manufacture. As in all carbon composition parts value drift in storage is possible. This is typically ±3% in one year and ±5% in 2 years.

Physical Data

Dimensions (mm) & Weight (g)					
Type	L	D	d	f	Wt. nom.
CC1/2	9.5 ±0.8	3.6 ±0.2	0.7 ±0.05	27 ±2	0.4
CC1	15 +1.5/0-5	6 +0.2/-0.1	0.8 ±0.05	28 ±1	1.1
CC2	18 +1.5/0-5	8 +0.2/-0.1	1.0 ±0.05	28 ±1	2.4



Construction

CC series resistors are produced using a hot moulded carbon composition material, which is varied to produce the required resistance value. The leads are moulded into the resistor. Finally these are coated and band marked.

Solvent Resistance

The body protection and marking are resistant to all normal industrial cleaning solvents suitable for printed circuits.

Marking

CC series resistors are colour coded. Resistors with 20% tolerance have three bands indicating value, and resistors with 10% tolerance have four bands indicating value and tolerance in accordance with IEC62.

General Note

Welwyn Components reserves the right to make changes in product specification without notice or liability. All information is subject to Welwyn's own test data and is considered accurate at time of print.

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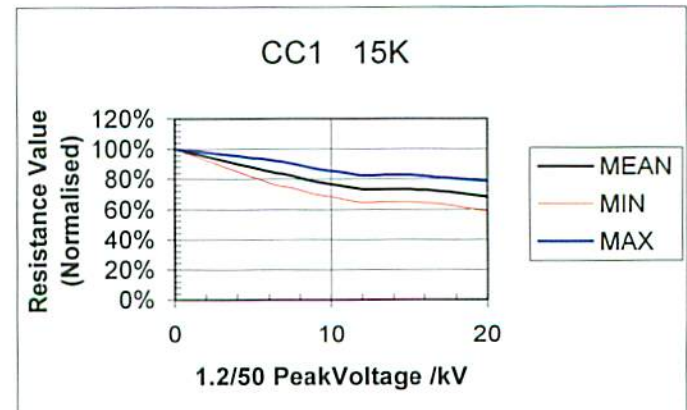
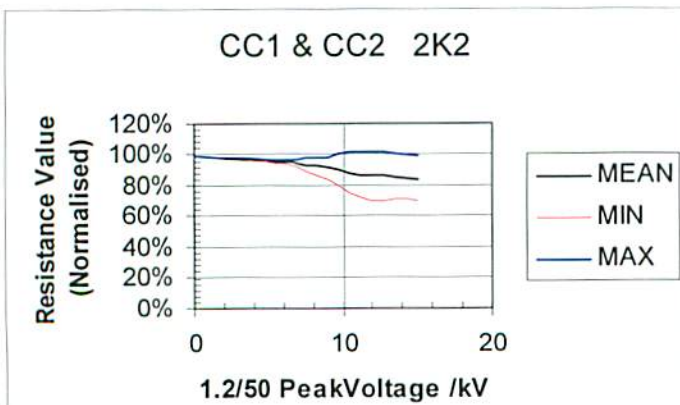
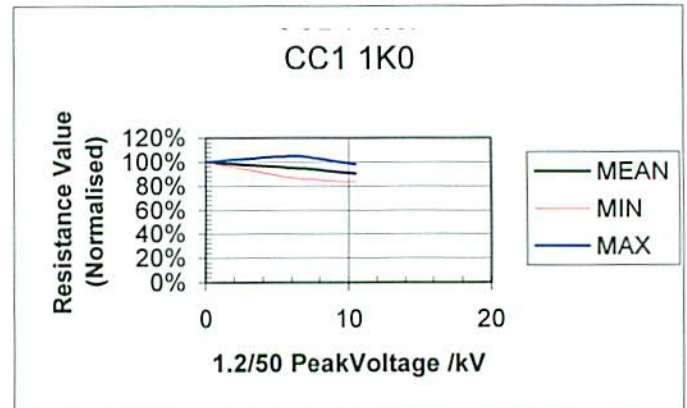
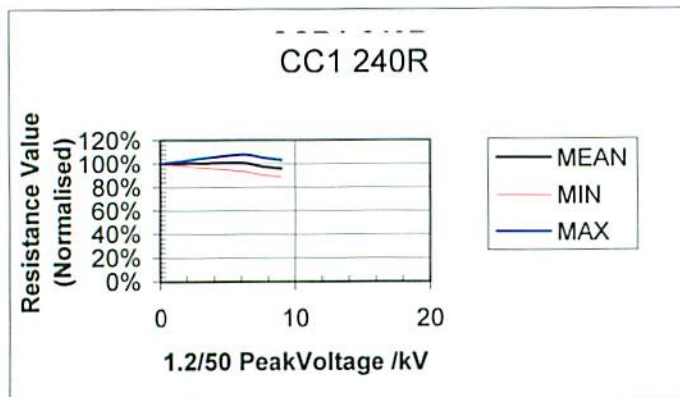
Welwyn Electronics Park, Bedlington, Northumberland, NE22 7AA, England. Tel: 01670 822181 Fax: 01670 829465 Web: www.welwyn-tt.com

Performance Data

		Typical
Load at rated power 1000hrs @ 25°C	±ΔR%	8
Dry heat 1000hrs @ 125°C	±ΔR%	8
Long Pulse 100ms at 60 x Rated Power	±ΔR%	2
Short term overload 2s at 6.25 x Rated Power	±ΔR%	2
Derating from rated power @ 25°C		Zero at 125°C
Climatic sequence	±ΔR%	8
Vibration	±ΔR%	2
Temperature rapid change	±ΔR%	2
Resistance to solder heat	±ΔR%	2
Isolation voltage	V	500V

Pulse Performance

The graphs below show the value changes resulting from applying multiple pulses of increasing peak voltage. The pulse shape was 1.2/50μS as defined in IEC 6100-4-5 / ANSI C62.41. The highest voltage plotted on each graph represents the maximum peak voltage for that resistance value.



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Carbon Composition Resistors

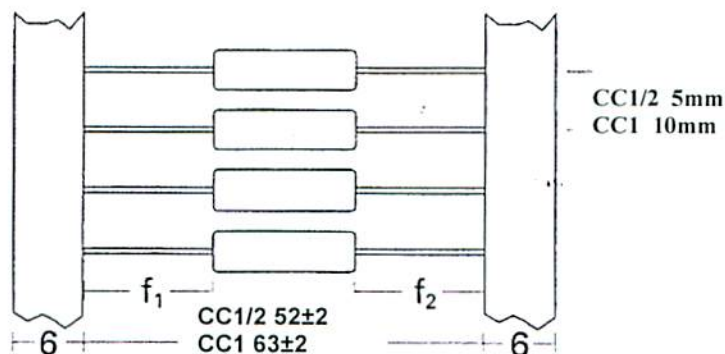
CC Series

Packaging

CC1/2 parts are supplied tape packed on reel. Quantity per reel: 2000.

CC1 & CC2 parts are supplied as standard loose packed in boxes. Quantity per box: 2400 (CC1) & 1200 (CC2).

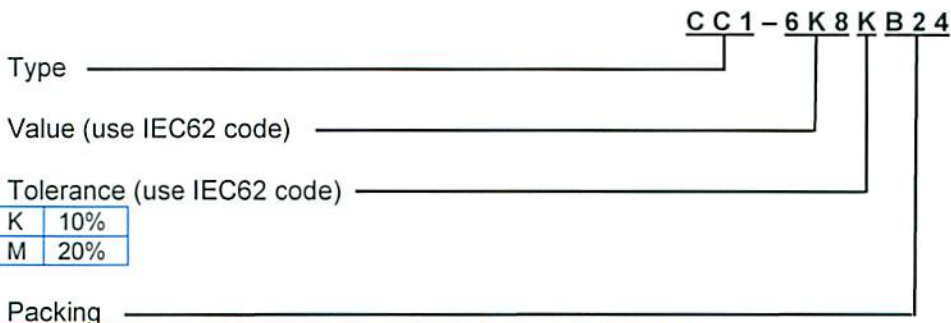
CC1 can be supplied by special request tape packed as shown in an ammo box. Quantity per box: 960.



Body Location $f_1 - f_2 \leq 1.4 \text{ mm}$

Ordering Procedure

Example: CC1 at 6.8 kilohms and 10% tolerance in a bulk pack box of 2400 pieces -



K	10%
M	20%

T2	Tape	CC1/2	2000/reel	Standard
B24	Bulk	CC1	2400/box	Standard
B12		CC2	1200/box	
T096	Tape	CC1	960/reel	Non-standard

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