

# Type CHR High Resistance Precision Chip Resistors

10 Meg to 100 Meg, 1% Tolerance, Temperature Coefficient to as low as 25 ppm/°C

These high resistance precision chip resistors are designed for use in extremely low signal detection / amplification circuits. Applications include: Photodiode signal amplification, photomultipliers, ionization detection, etc. These precision high resistance chip resistors can also be ideal for use as the input resistor for high impedance voltage division.

**Style FC** - Flip Chip version for surface mount applications. This version has solderable metallized termination pads on one side of the substrate, the same side as the resistive element. The back side of the substrate is bare ceramic.

**Style WB** - Wire Bond versions for hybrid applications are available on a custom basis for high quantity applications. Contact Applications Engineering.



**Style FC - Flip Chip Version** is a surface mount version with solderable pads for flip chip soldering.

Model	Resistance		Max. Voltage Rating	Max. Temp.	Dimensions in inches and (millimeters)				Comments
	Min.	Max.			A	B	C	D	
CHR2520FC	10 Meg	100 Meg	150	+85°C	.250 ±.007 (6.35 ±.18)	.200 ±.007 (5.08 ±.18)	.027 ±.003 (.69 ±.08)	.033 min. (.84)	Solderable Pads

## Standard Resistance Values:

Tolerance ±1% Standard.

10.0 Meg	50.0 Meg
20.0 Meg	75.0 Meg
25.0 Meg	80.0 Meg
40.0 Meg	100 Meg

## Specifications:

### Temperature Coefficient:

10 Meg to 25 Meg:

25 ppm/°C -40°C to +85°C, referenced to +25°C.

Above 25 Meg:

35 ppm/°C +10°C to +40°C, referenced to +25°C.

70 ppm/°C -40°C to +85°C, referenced to +25°C.

TC is referenced to +25°C, ΔR taken at low temperature and high temperature.

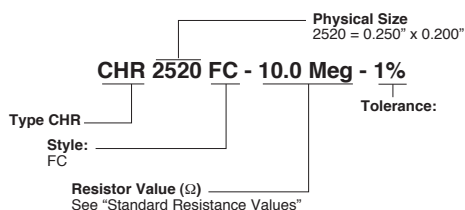
**Load Life:** 1000 hours at rated voltage at +85°C, ΔR ± 0.3% max.

**Momentary Overload:** 1.5 times rated voltage, for 5 seconds, ΔR ± 0.3% max.

**Thermal Shock:** Mil-Std-202, Method 107. -40°C to +85°C, 5 cycles, ΔR ± 0.3% max.

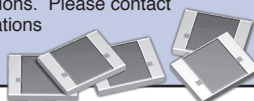
**Operating Temperature:** -40°C to +85°C.

## Ordering Information:



## Custom Type CHR Resistors

Custom resistance values and non-standard tolerances can be manufactured for high quantity applications. Please contact Caddock Applications Engineering.

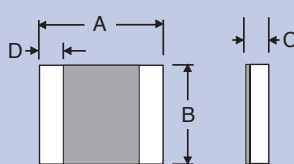


- Higher Resistances up to 1,000 Meg
- Higher Voltage Ratings
- Application Optimized Tolerance and TC
- Precision Tolerance to ±0.25%
- Offset TC (such as -150 ppm/°C ±50 ppm/°C)
- Gold Wire Bondable Versions
- Aluminum Wire Bondable Versions

## Solder attachment note:

**Style FC** has a bare ceramic back surface. The recommended solders for flip chip solder attachment are 62Sn/36Pb/2Ag, 96.5Sn/3.5Ag, or standard Sn/Ag/Cu solder alloys.

## Dimensions:

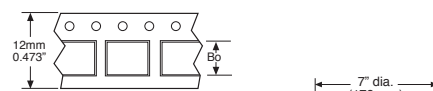


See table for dimensions in inches and (millimeters).

## Packaging information:

**Style FC**, flip chip resistors, are shipped with the bare ceramic side up in the pocket, with the solderable pads facing down.

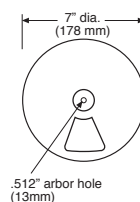
The illustration shows the orientation of the pocket. The CHR2520FC is available only with this pocket orientation.



Ko signifies tape thickness and dimension

Size 2520	
Ao	0.271\" (6.88mm)
Bo	0.216\" (5.49mm)
Ko	0.066\" (1.68mm)

Carrier Tape and pocket dimensions:  
Tape is 12mm Carrier Tape (8mm pitch)



## Full reel quantities:

1000 pieces per reel. Quantities of less than 250 will be shipped in tape without reel and without tape leader at the option of Caddock. Tape dimensions and materials will be consistent with EIA-481-1. Reels will be marked with a label containing Caddock logo, part number, resistor value, tolerance, packaging date, and quantity.

**CADDOCK ELECTRONICS, INC.**

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For Caddock Distributors listed by country see [caddock.com/contact/dist.html](http://caddock.com/contact/dist.html)

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