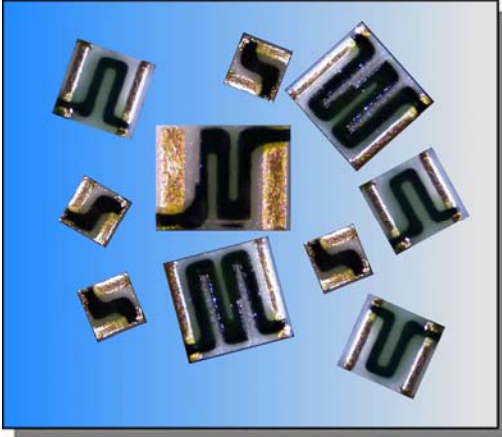


HC Series

Bondable Chip Resistors



Ohmcraft's revolutionary fine line, thick film technology, called **FineFilm**, provides an entirely new level of performance and stability in chip resistors.



- ◆ **Ultra High Stability**
- ◆ **Ohmic Values to 500 Gigohms**
- ◆ **Very Small Package Sizes**
- ◆ **Tight Tolerances (to 0.1%)**
- ◆ **Low TCR (to 25 ppm/°C)**
- ◆ **Low VCR (to 1 ppm/V)**
- ◆ **Very Low noise**
- ◆ **Custom Configurations**

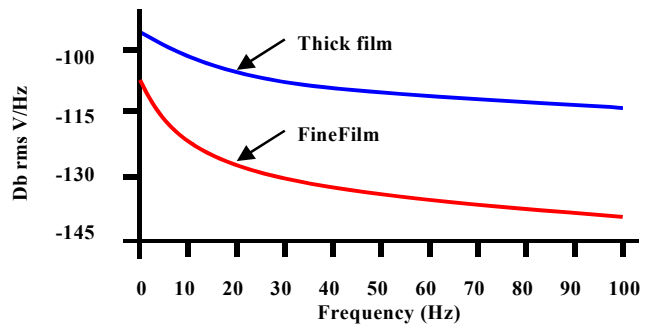
The usual hybrid technologies for manufacturing resistors depend upon composite materials that have limitations. Traditional thick-film methods severely limit performance characteristics and thin-film methods are limited in attainable ohmic values. The **FineFilm** method of manufacturing offers the best characteristics of both methods, plus adds many unique features. **FineFilm** resistors feature a longer, high-aspect ratio trace of lower resistivity film. The combination of long line, high-aspect ratio, and higher conductivity film, give **FineFilm** resistors unmatched design efficiency, versatility,

linearity, stability and low noise. The **FineFilm** method allows control of process parameters to very tight tolerances. The result is chip resistors with outstanding stability and performance.

Using the same method, a complete line of **FineFilm** leaded resistors, dividers and networks are manufactured. For information on those products, please refer to the appropriate data sheets.

Low Noise:

FineFilm resistors exhibit exceptional noise characteristics. The graph on the right demonstrates the comparison of a resistor written by **FineFilm**, and an equivalent resistor printed using a standard thick-film process. The longer serpentine path which uses lower resistivity inks, and the smoother edges created by "writing" rather than "screening" combine to make one of the lowest noise generating resistors in the market.

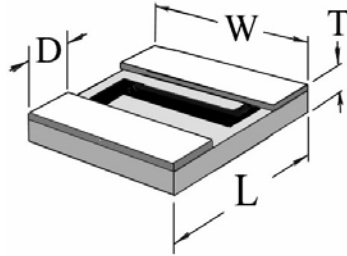


Ratings	Case Size ¹					
	0202	0303	0403	0404	0502	0505
Max. Power (W)	0.040	0.050	.055	0.060	.050	0.100
Max. Voltage ² (V)	50	50	100	100	100	100
Resistance Range (ohms)	1K-500M	1K-10G	1K-200G	1K-300G	1K-10G	1K-500G

Note 1: Other custom case sizes are available.

Note 2: The continuous maximum voltage applied cannot exceed the maximum power rating.

Dimensions



L = Length
 W = Width
 T = Thickness
 D = Pad dimension

Case Size ▼	Length (L) (mils)	Width (W) (mils)	Thickness (T) Max. (mils)	Pad (D) (mils)
0202	20 ± 5	20 ± 3	15	5 (+2,-1)
0303	30 ± 5	30 ± 5	15	5 (+2,-1)
0403	45 ± 5	30 ± 5	20	10 (± 5)
0404	40 (+10,-5)	40 ± 5	20	10 (± 5)
0502	50 (+10,-5)	25 ± 5	20	10 (± 5)
0505	50 (+10,-5)	50 ± 5	20	10 (± 5)

How to build a part number....

Type	Case size	TCR ¹	Value ²	Tolerance ³	Termination
HC					
Wire Bondable Chip	See dimension table above	E = ± 25ppm/°C H = ± 50ppm/°C K = ± 100ppm/°C L = ± 200ppm/°C	Resistance value expressed as a four digit number where the first three numbers are the significant value, and the forth number is the number of zeros.	B = ± 0.1 % C = ± 0.25 % D = ± 0.5 % F = ± 1.0 % G = ± 2.0% J = ± 5.0 % K = ± 10 % L = ± 20 %	G = Wire Bondable (gold)

Note 1: TCR measured from 25°C to 75°C.

Note 2: Value is dependent on case size.

Note 3: Tolerance is measured at 100VDC and dependent on case size & value.

Example: For a 125 Megohm chip resistor with case size of 0202, a TCR of ± 50 ppm/C, a ±1% tolerance - the part number would be:
 HC0202H1256FG



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