

SUBJECT: CHIP RESISTORS

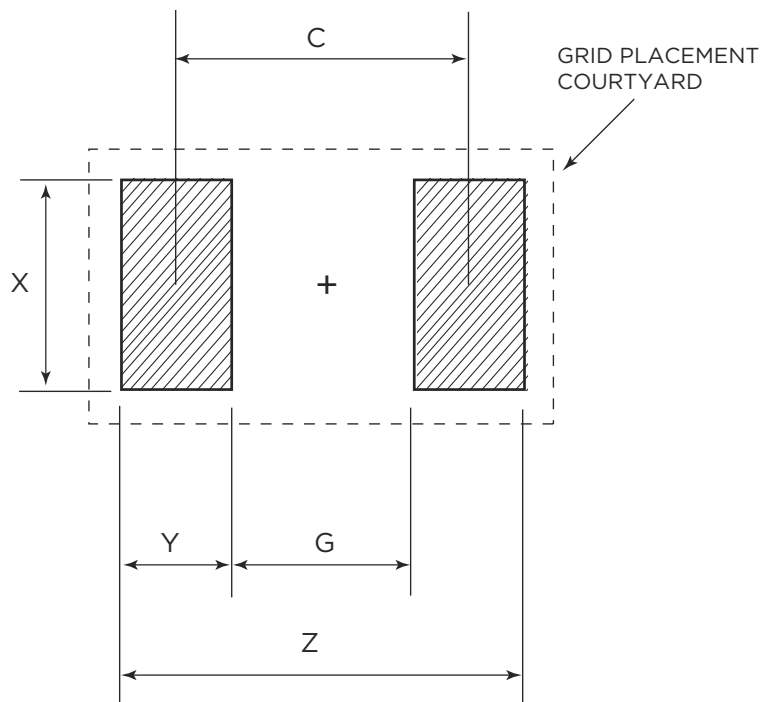
The diagram below provides the land pattern dimensions for Venkel Resistors.

These recommendations represent best design practices based on customer use, feedback and known industry standards. This information is a guideline and variations will occur depending on board design, component density and process.

CHIP RESISTORS:

The figure below provides the land pattern dimensions for chip resistors. These numbers represent industry consensus on the best dimensions based on empirical knowledge of fabricated land patterns.

The dotted line in the figure below shows the grid placement courtyard which is the area required to place land patterns and their respective components in adjacent proximity without interference or shorting. Numbers in the table represent the number of grid elements (each element is 0.5 by 0.5 mm) in accordance with the international grid detailed in IEC publication 97.



Dimensions: mm

Component Identifier (mm) [in]	Z (mm)		G (mm)		X (mm)		Y ref	C ref	Placement Grid (No. of Grid elements)
	min	max	min	max	min	max			
0402 [01005]	0.57	0.63	0.14	0.20	0.19	0.25	0.215	0.38	1x4
0603 [0201]	0.795	0.805	0.295	0.305	0.295	0.305	0.25	0.55	2x4
1005 [0402]	2.00	2.20	0.40	0.60	0.60	0.80	0.90	1.30	2x6
1608 [0603]	2.60	2.80	0.60	0.80	1.00	1.20	1.10	1.70	4x6
2012 [0805]*	3.00	3.20	0.60	0.80	1.20	1.40	1.30	1.90	4x8
3216 [1206]*	4.20	4.40	1.20	1.40	1.40	1.60	1.60	2.80	4x10
3225 [1210]*	4.20	4.40	1.20	1.40	2.40	2.60	1.60	2.80	6x10
5025 [2010] *	6.00	6.20	2.60	2.80	2.40	2.60	1.80	4.40	6x14
6332 [2512] *	7.20	7.40	3.80	4.00	3.00	3.20	1.80	5.60	8X16

NOTE: This pattern is a recommendation for pad design. No guarantee is implied by it.