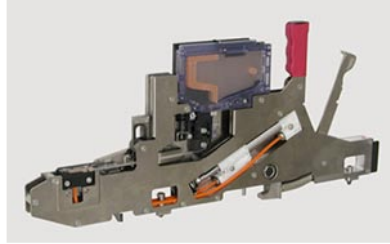


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Kamaya Electric, KOA, Hokuriku Electrical Construction, and Taiyo Yuden:
Jointly Propose Recommended Dimensions
for Chip Resistors, toward Spread of Bulk Mounting



Kamaya Electric, KOA, Hokuriku Electrical Construction, and Taiyo Yuden have jointly proposed new recommended parts dimension tolerances for 1.6 x 0.8 x 0.45mm size and 1.0 x 0.5 x 0.35mm size, which account for about 80% by volume of the rectangular chip fixed resistor market, as part of efforts to promote the spread of the bulk mounting method that helps lower total mounting costs while also reducing the environmental burden.

In the past, use of the bulk mounting method for chip resistors was beset by issues with the bulk feeder, such as errors that caused frequent stoppages of mounting machines and the lengthy time required for recovery from those errors, as well as by parts issues where adsorption rate used as benchmarks for mounting reliability varied widely from one manufacturer to another, which made it difficult to maintain stable standards, all of which impeded the spread of the bulk mounting method.

In response, Taiyo Yuden used a whole new concept for development of a unit-type bulk feeder for chip resistors that resolved these lingering issues. In addition, Kamaya Electric, KOA, and Hokuriku Electrical Construction each performed tests using the unit-type bulk feeder for their own chip resistors, to resolve the issues from the perspective of parts dimensions. The result was proposals for new recommended parts dimension tolerances that achieve stable adsorption rate at a high standard.

Results of evaluation tests on rectangular chip fixed resistors with the new recommended dimension tolerances, using Taiyo Yuden's newly developed unit-type bulk feeder for chip resistors, showed that the three companies achieved a high standard of 99.99% or more for the adsorption rate in all of their rectangular chip fixed resistors.

On December 16, 2005, details of the new recommended dimension tolerances for resistors were presented, alongside a report on multilayer ceramic capacitors, to the Bulk Mounting Survey Research Group of JEITA's Electronic Components Packaging Standards Committee, which praised the results. The companies plan to continue calling for cooperation in this area, and to prepare the environment for bulk mounting of electronic components.

The recommended parts dimension tolerances are available for general viewing on each of the companies' web pages.

[Conventional dimensions and recommended tolerances]

Case size		Conventional dimension tolerance	New recommended dimension tolerance
1.0 x 0.5 x 0.35mm	Length and tolerance	1.00±0.05mm	1.00±0.05mm
	Width and tolerance	0.50±0.05mm	0.50+0.05mm -0.03mm
	Height and tolerance	0.35±0.05mm	0.35+0mm -0.05mm
1.6 x 0.8 x 0.45mm	Length and tolerance	1.60±0.10mm	1.60+0.10mm -0.05mm
	Width and tolerance	0.80±0.10mm	0.80+0.10mm -0.02mm
	Height and tolerance	0.45±0.10mm	0.45+0.04mm -0.02mm