

RMT Ltd. has developed TECs with a new electrical contact option

To simplify TEC manufacturing technology, RMT has developed a new Posts-free TEC option (see Fig. 1a, 1b). In this option TEC electric power is supplied through the contact pads located on the top TEC ceramics. So, it is necessary to make an electrical connection of the contact pads on top ceramics with TEC pellets. This electrical connection is made by creating transition holes (vias) in the top TEC ceramics. A similar technology is already used in RMT for multistage TECs to make an electrical connection between adjacent TEC stages.

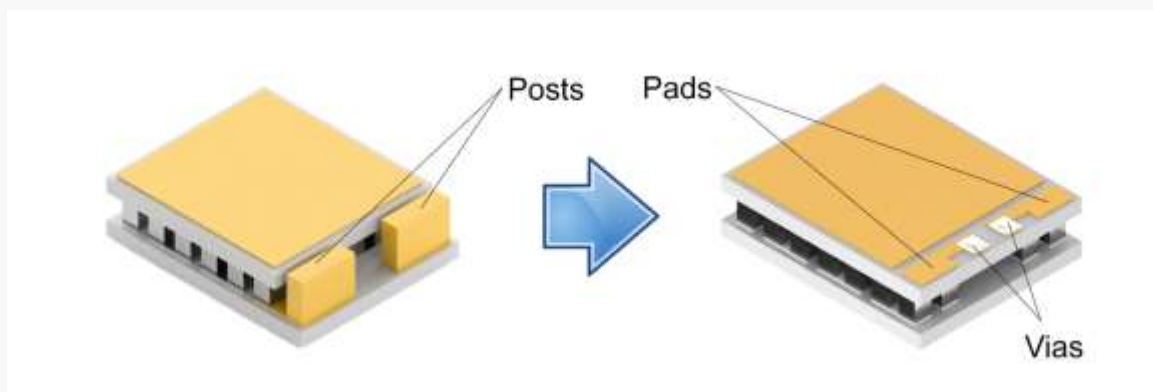


Fig. 1a. TEC option with WB posts

Fig. 1b. New RMT Posts-free TEC option

When re-designing previous TECs (i.e., with wire bonding posts) to a new Posts-free option, it must be taken into account that an additional heat will come to the TEC top ceramics through the wires for TEC power supply. A distinctive feature of the new option is that TEC top and bottom ceramic plates have the same sizes. So, after re-designing overall dimensions of the new option TECs will not change, while their performance can even be improved due to new RMT improved thermoelectric materials and more pellets number available within the same dimensions.

Just now Posts-free option TECs were manufactured and tested only for some TECs of the 1MD03 and 1MD04 series. The application of this option for other RMT TECs, including the 1MD02 and 1MD015 miniature TEC series, should be put into practice individually.

Please contact RMT concerning the Posts-free TEC option, particularly for selection of the most optimal TEC solutions.

Web-link:

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