



Author: Shuki Likvornik

E-mail: Shuki.Likvornik@Vishay.com

## Vishay Discontinues Standard R-Chip Marking

The marking of Vishay's standard R-chips in the 0603 to 2512 case sizes — i.e. CRCW0603 – CRCW2512 with TCR of  $\pm$  200 ppm/K / 5 %, TCR of  $\pm$  100 ppm/K / 1 %, and TCR of  $\pm$  200 ppm/K / 1 %, 0.0  $\Omega$  — will be discontinued to improve the efficiency of the production process. Reel labels will enable product identification as before, and part numbers will not be changed. There will be no impact to the products' performance or technical and environmental specifications (except the marking).

Excluded from the change are chip arrays (CRA) and marked special R-chips, including the CRCW-IF, CRCW-P, CRCW-HP, RCA, RCG, RCL, D-AP, CRCW-AP, CRCW-TR, and CRCW-HR; shunts (RCWL, RCWE); CRCW lead (Pb)-bearing (SnPb) parts, and military R-chips, which all remain marked.

The following products have never been marked: devices in the 0402 and smaller case sizes, as well as the RCV, RCC, RCS, CRAS, RCA LS, RCA-HP, RCA-IF, and RCA-AU.

For the purpose of automated optical inspection (AOI), unmarked samples with undefined resistance are offered.



## **Marking Pros and Cons**

Marking is sometimes used during the placement process to (re-)confirm that the correct resistance has been selected. This is done using an AOI system. On the other hand, the different appearance of markings (3-digit, 4-digit, and supplier-dependent) requires certain AOI teaching efforts per component, which can otherwise be avoided.

Today, a lot of passive components are already unmarked. Among them are all resistors from all manufacturers in 0402 and smaller case sizes, Vishay's MC series of thin film resistors, which has been on the market for 25 years, and MLCCs.

Product identification can also be (and is) conducted using the reel label. The manufacturer assures that the resistor in the reel is the same as indicated on the reel label (as the manufacturer assures that the resistor's resistance is the same as indicated by the marking).

Contact Information:

THE AMERICAS EUROPE ASIA/PACIFIC

Paulo Adabo Michael Hettrich Victor Goh

Paulo.Adabo@Vishay.com <u>Michael.Hettrich@Vishay.com</u> <u>Victor.Goh@Vishay.com</u> <u>Victor.Goh@Vishay.com</u>