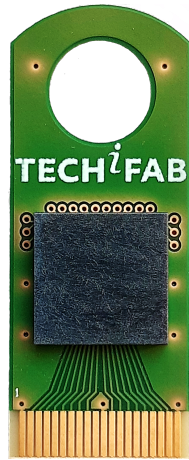


# TiF-MEMRiSTOR Chip Carrier 08

## – Data Sheet –



### • Description

The TiF-MEMRiSTOR Chip Carrier 08 contains a  $\text{BiFeO}_3$  (TiF)-Memristor Chip with 6 single memristors packaged in a plastic lid closed printed circuit board as carrier. The novel Memristor device provides a non-linear behavior in parameter space  $U(t) \sim I(t)$  as well as a temporal dependency of both variables. The latter provides a stationary and persistent memristor state, which can be utilized to store information. Memristors on the TiF-MEMRiSTOR Chip Carrier 08 typically show a current-voltage single-hysteresis. The TiF-MEMRiSTOR Chip Carrier 08 has a size of  $14.1 \text{ mm} \times 35.8 \text{ mm} \times 3.0 \text{ mm}$  (maximum height including lid) and can be plugged into the TiF-MEMRiSTOR Measure Kit. Inserting and removing the TiF-MEMRiSTOR Chip Carrier 08 is facilitated by its grip hole on the upper side.

### Scope of Delivery

(i) TiF-MEMRiSTOR Chip Carrier 08, (ii) Data Sheet

### Main Features

**Easy Plug and Unplug** The TiF-MEMRiSTOR Chip Carrier 08 has an ergonomically formed grip hole on the upper side for easy plugging into and unplugging from the TiF-MEMRiSTOR Measure Kit.

**Reverse Polarity Detection** The TiF-MEMRiSTOR Chip Carrier 08 provides a reverse polarity detection, when used inside the TiF-MEMRiSTOR Measure Kit. It allows the user to identify, if the TiF-MEMRiSTOR Chip Carrier 08 was plugged correctly into the Measure Kit.

**Multiple Memristors in one package** The TiF-MEMRiSTOR Chip Carrier 08 holds 6 single memristors in one package.

### Basic Operation

- Carrier 08 can be analyzed with the TiF-MEMRiSTOR Measure Kit.
- For further information on how to operate the TiF-MEMRiSTOR Chip Carrier 08 within the TiF-MEMRiSTOR Measure Kit please see the Quick Start Guide for TiF-MEMRiSTOR Measure Kit.

### Technical Specification

The 6 single TiF-Memristors in the TiF-MEMRiSTOR Chip Carrier 08 show a typical current-voltage single-hysteresis. Maximum values for voltage and current, should not exceed the values indicated in Table 1.

Table 1: Maximum Ratings  
(at ambient conditions,  $T = 25^\circ\text{C}$ )

Item	Value
Maximum forward voltage	6 V
Maximum reverse voltage	6 V
Maximum current	0.01 mA

## Precautions

Special precautions shall be undertaken to prevent the TiF-MEMRiSTOR Chip Carrier 08 from damage:

- Electrostatic Discharge (ESD)
- Temperature and Heat
- Sun Irradiation

Please read the Quick Start Guide of the TiF-Memristor Measure Kit to characterize the 6 single memristors of the TiF-MEMRiSTOR Chip Carrier 08 properly using the TiF-MEMRiSTOR Measure Kit.

Several light grey, wavy lines that sweep across the lower half of the page from left to right, creating a sense of motion or flow.

TECHiFAB GmbH  
Bautzner Landstraße 45  
01454 Radeberg Germany  
phone: +49 351 2695-220  
mail: kontakt@techifab.de