

## Frequently Asked Questions T521 High Voltage Polymer Series

### 1. What is the KEMET T521 Series capacitor?

KEMET's new T521 series capacitor represents the first 35V rated tantalum polymer surface-mount chip capacitor available in the industry today. The T521 series initial release consists of the EIA low-profile case size 7343-19 (7.3mm x 4.3mm x 1.9mm (max height)) with a capacitance value of 15 $\mu$ F and an ESR rating of 100mOhms.

### 2. What is the rated temperature of the T521 Series?

The T521 Series is rated to 125° C.

### 3. What are the recommended derating conditions for the T521 Series?

Recommended deratings for the T521 Series include a 20% voltage derating for optimal reliability. For applications exceeding 105° C, an additional temperature derating is also recommended. Above 105° C, the voltage should be linearly derated to 2/3 the rated voltage for operation at 125° C.

### 4. What are the target applications for the T521 Series?

The T521 Series was designed to meet the demands of customers interested in tantalum polymer solutions for 24V and 28V power input rails.

### 5. Is the T521 a surge robust device?

Yes. Step Surge Stress Testing (SSST) has confirmed that the T521 Series has a minimum surge robustness of 1.32Vr (46V).

### 6. Is the T521 Series in mass production?

Mass production of the T521 series is scheduled for the first quarter of 2008. Sample quantities are currently available for evaluation.

## **7. Is the T521 Series a sole source item?**

At the time of release, the T521 Series is the first publicly announced offering of a 35V tantalum polymer chip capacitor. KEMET is confident that manufacturers of similar products are aggressively pursuing similar platforms.

## **8. What is unique about the T521 Series?**

Due to limitations in materials and processing, the industry has not been successful in exceeding a 25V rated device in a tantalum polymer solution to date. Through advancements in materials and processes, KEMET has successfully overcome these obstacles. While the details of the T521 Series' success are proprietary, the outcome of KEMET's effort has resulted in a breakthrough technology. This new offering meets the requests of our customers to provide higher voltage ratings in the tantalum polymer product lines.

## **9. Is the T521 Series RoHS compliant and capable of meeting Pb-free (260C) reflow temperatures?**

The T521 series is RoHS compliant and capable of meeting the 260C reflow temperatures—three passes.

## **10. Is the T521 Series moisture sensitive?**

Yes, the T521 series is moisture sensitive. It is rated at MSL Level 3 and will be shipped in moisture bags similar to our other tantalum polymer products.