

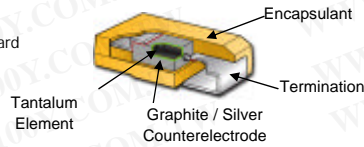
# KEMET Surface Mount Tantalum

Revision C, 01 May 2006

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## Characteristics and Typical Construction

- Variety of features by series
- Pb-Free & RoHS / ELV Compliant version standard
- 3 - 50 Volts
- ± 20% Capacitance tolerance
- Tape & Reel Packaging



## RoHS Restricted Substance Content

**Key for Determining Adherence to 2002/95/EC and 2005/618/EC Content Criteria<sup>1</sup>**

☑ = Meets criteria    ✓ = Pb-Free not Guaranteed, Consult Conversion Schedule<sup>2</sup>    ☒ = Does not meet criteria

KEMET Product	Series	Material and MCV <sup>1</sup> Termination Code	Restricted Material						Compliant Version	
			Cd < 0.01%	Cr <sup>6+</sup> < 0.1%	Pb < 0.1%	Hg < 0.1%	PBB < 0.1%	PBDE < 0.1%	Available since	Standard since
Precision Molded Chip	T491	T or G								
Low ESR, Industrial Grade	T494		☑	☑	☑	☑	☑	☑	Mar-00	n/a - Termination unique for Pb-Free
Low ESR, Surge Robust	T495									
Fail Safe Fused	T496									
High Grade COTS	T497									
High Temperature Tantalum	T498, T499	S <sup>3</sup>	☑	☑	✓	☑	☑	☑	Varies <sup>2</sup>	Varies <sup>2</sup>
Ultra-Low ESR	T510									
Precision Molded Chip	T491	H								
Low ESR, Industrial Grade	T494		☑	☑	☒	☑	☑	☑		
Low ESR, Surge Robust	T495									
Fail Safe Fused	T496									
High Grade COTS	T497									
High Temperature Tantalum	T498, T499	S	☑	☑	☒	☑	☑	☑		
Ultra-Low ESR	T510									
Style CWR11 per MIL-PRF-55365/8	T492	G	☑	☑	☑	☑	☑	☑	Mar-00	n/a - Termination unique for Pb-Free
		B	☑	☑	☑	☑	☑	☑	May-06	n/a - Termination unique for Pb-Free
	T409 (CWR09), T419 (CWR19), T429 (CWR29)	Solder options per catalog	☑	☑	☒	☑	☑	☑		
Commercial-Off-The-Shelf (COTS)	T493	T or B	☑	☑	☑	☑	☑	☑	Oct-05	n/a - Termination unique for Pb-Free
		Solder options per catalog	☑	☑	☒	☑	☑	☑		

<sup>1</sup>MCV = Maximum Concentration Values per 2005/618/EC amending RoHS Directive 2002/95/EC.

<sup>2</sup>Consult the Tantalum Lead-Free Conversion Schedule for clean date KEMET converted to Pb-Free as standard manufacturing by series and case size.

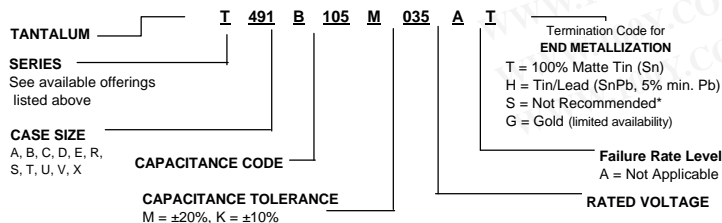
<sup>3</sup>Pb-free supply cannot be guaranteed with the 'S' termination code. Use of this termination code is not recommended for new designs. T498 and T99 series not available with 'S' termination code.

## Soldering Capability Characteristics

Termination Material	Matte Tin Termination	SnPb Termination
Termination Plating (Barrier)	CDA Copper Alloy 752	CDA Copper Alloy 752
Peak Temperature Capability	100% Matte Tin (Copper, Nickel) 260°C	90Sn10Pb (Copper) 260°C
Soldering Process Compatibility	Backward & Forward Compatible	Backward & Forward Compatible
MSL Rating	1	1
Tin Whisker Test Results JESD22-A121 and JESD201 <sup>4</sup>	per Pass	Pass

<sup>4</sup>Per ECA component bulletin CB19, tin whiskering is not considered a reliability risk within the capacitor industry for non-Military / Hi-Rel applications.

## Ordering



\*Pb-free supply cannot be guaranteed with the 'S' termination code. Use of this termination code is not recommended for new designs.

## Identification

Reel level KEMET EZ ID label indicates product content relative to substance restrictions of the RoHS Directive, 2002/95/EC, 2005/618/EC.  
 RoHS-YES = Meets criteria  
 RoHS-NO = Does not meet criteria

