# **T522 Reduced Leakage Polymer Tantalum**



#### Overview

The KEMET Organic Capacitor (KO-CAP) is a tantalum capacitor with a Ta anode and Ta<sub>2</sub>O<sub>5</sub> dielectric. A conductive organic polymer replaces the traditionally used MnO<sub>2</sub> as the cathode plate of the capacitor. This results in very low ESR and improved capacitance retention at high frequency. The KO-CAP also exhibits a benign failure mode which eliminates the ignition failures that can occur in standard MnO<sub>2</sub> tantalum types. KO-CAPs may also be operated at steady state voltages up to

90% of rated voltage for part types with rated voltages of  $\leq$  10.

The T522 Reduced Leakage Polymer Tantalum Series is designed to meet the needs of leakage-sensitive applications such as battery supported circuits. The T522 Series offers the lowest leakage values available in polymer tantalum capacitors with upper leakage limits that are up to 70% lower than other polymer series.

#### **Benefits**

- ESR: 25 to 40 mΩ
- -55°C to 105°C operating temperature range
- Polymer cathode technology
- · High frequency capacitance retention
- · Non-ignition failure mode
- Capacitance: 150 to 470 μF
- Voltage: 6.3 V
- 100% accelerated steady state aging
- 100% surge current tested
- · Low profile designs
- Volumetric efficiency
- · Self-healing mechanism
- · EIA standard case sizes

## **Applications**

Typical applications include battery-dependent applications such as handheld consumer electronics, global tracking systems, energy harvesting, wireless sensors and other applications that seek high capacitance, low profile, safety and low power consumption.



## **Environmental Compliance**

RoHS Compliant (6/6) according to Directive 2002/95/EC when ordered with 100% Sn solder.



RoHS Compliant

#### **SPICE**

For a detailed analysis of specific part numbers, please visit www.kemet.com for a free download of KEMET's SPICE software. The KEMET SPICE program is freeware intended to aid design engineers in analyzing the performance of these capacitors over frequency, temperature, ripple, and DC bias conditions.



# **Ordering Information**

Т	522	V	157	M	006	Α	T	E025	
Capacitor Class	Series	Case Size	Capacitance Code (pF)	Capacitance Tolerance	Voltage	Failure Rate/ Design	Lead Material	ESR Code	Packaging (C-Spec)
T = Tantalum	520 = Reduced Leakage Polymer	V, Y	First two digits represent significant figures. Third digit specifies number of zeros.	M = ±20%	006 = 6.3 V	A = N/A	T = 100% Matte Tin (Sn) Plated H = Tin/Lead (SnPb) Solder Coated (5% Pb minimum)	E = ESR Last three digits specify ESR in $m\Omega$ . (025 = 25 $m\Omega$ )	Blank = 7" Reel 7280 = 13" Reel

## **Performance Characteristics**

Item	Performance Characteristics		
Operating Temperature	-55°C to 105°C		
Rated Capacitance Range	150 – 470 uF @ 120 Hz/25°C		
Capacitance Tolerance	M Tolerance (20%)		
Rated Voltage Range	6.3 V		
DF (120 Hz)	≤ 10%		
ESR (100 kHz)	Refer to Part Number Electrical Specification Table 1		
Leakage Current	≤ 0.03 CV (µA) at rated voltage after 10 minutes		



## **Qualification**

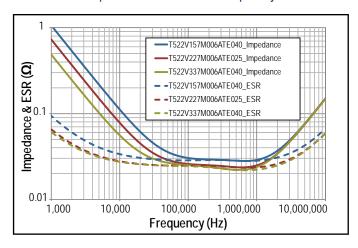
Test	Condition			Characteristics				
		Δ C/C	Within -20/+	10% of initial va	lue			
Endurance	105°C @ reted veltere 2 000 become		DF	Within initial limits				
Liludiance	105°C @ rated voltage, 2,000 hours		DCL	Within 1.5 x	initial limit			
			ESR	Within 2.0 x	initial limit			
			Δ C/C	Within -20/+	10% of initial va	lue		
Ctorogo Life	105°C @ 0 volto 2 000 hours		DF	Within initial	limits			
Storage Life	105°C @ 0 volts, 2,000 hours		DCL	Within 1.5 x	initial limit			
			ESR	Within 2.0 x	initial limit			
			Δ C/C	Within -5%/+	-35% of initial va	alue		
Llumidity	60° C 000/ DLI 500 hours reted valtage		DF	Within initial limits				
Humidity	60° C, 90% RH, 500 hours, rated voltage	DCL	Within 5.0 x	initial limit				
			ESR	Within 2.0 x initial limit				
			+25°C	-55°C	+85°C	+105°C		
Tomporatura Stability	Extreme temperature exposure at a succession of continuous steps at +25°C,	Δ C/C	IL*	±20%	±20%	±30%		
Temperature Stability	-55°C, +25°C, +85°C, +105°/125°C, +25°C	DF	IL	IL	1.2 x IL	1.5 x IL		
		IL	n/a	10 x IL	10 x IL			
			Δ C/C	Within -20%/	+10% of initial	value		
Curao Voltogo	105°C, 1.32 x rated voltage, 33 Ω Resistance, 1	000 avalas	DF	Within initial limits Within initial limits				
Surge Voltage	105 C, 1.52 x falled voltage, 55 tz Resistance, 1	,000 cycles	DCL					
		ESR	Within initial limits					
	MIL-STD-202, Method 213, Condition I, 100 G	peak.	ΔC/C	Within ±10%	of initial value			
Mechanical Shock/Vibration	MIL-STD-202, Method 204, Condition D, 10 Hz	DF	Within initial	Within initial limits				
	20 G peak		DCL	Within initial	Within initial limits			

<sup>\*</sup>IL = Initial limit

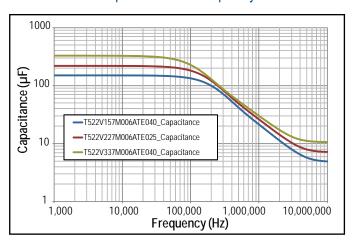


#### **Electrical Characteristics**

## Impedance & ESR vs. Frequency

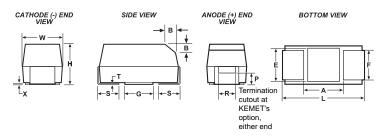


## Capacitance vs. Frequency



## **Dimensions – Millimeters (Inches)**

Metric will govern



Case	Size		Component											
KEMET	EIA	L*	W*	H*			B* ± 0.15 (Ref) ± .006	X (Ref)	P (Ref)	R (Ref)	T (Ref)	A (Min)	G (Ref)	E (Ref)
V	7343-19	7.3 ±0.3 (0.287 ±0.012)	4.3 ±0.3 (0.169 ±0.012)	1.9 (.075)	2.4 (.094)	1.3 (.051)	n/a	0.05 (.002)	n/a	n/a	0.13 (.005)	3.8 (.150)	3.5 (.138)	3.5 (.138)
Υ	7343-40	7.3 ±0.3 (0.287 ±0.012)	4.3 ±0.3 (0.169 ±0.012)	4.0 (.157) maximum	2.4 (.094)	1.3 (.051)	0.5 (.020)	0.10 ± 0.10 (.004 ± .004)	1.7 (.067)	1.0 (.039)	0.13 (.005)	3.8 (.150)	3.5 (.138)	3.5 (.138)

 $Notes: (Ref) - Dimensions\ provided\ for\ reference\ only.\ No\ dimensions\ are\ provided\ for\ B,\ P\ or\ R\ because\ low\ profile\ cases\ do\ not\ have\ a\ bevel\ or\ a\ notch.$ 

<sup>\*</sup> MIL-PRF-55365/8 specified dimensions



## **Table 1 – Ratings & Part Number Reference**

Rated Voltage	Rated Cap	Case Code/ Case Size	KEMET Part Number	<b>DC</b> Leakage	DF	ESR	Maximum Allowable Ripple Current	Moisture Sensitivity	Rated Temp
VDC	μF	KEMET/EIA	(See below for part options)	μΑ @ +20°C Max/10 Min.	% @ +20°C 120 Hz Max	mΩ @ +20°C 100 kHz Max	(mA) +45°C 100 kHz	Temperature ≤ 260°C	(°C)
6.3	150	V/7343-19	T522V157M006A(1)E025	28	10	25	2700	3	105
6.3	150	V/7343-19	T522V157M006A(1)E040	28	10	40	2200	3	105
6.3	220	V/7343-19	T522V227M006A(1)E025	42	10	25	2700	3	105
6.3	220	V/7343-19	T522V227M006A(1)E040	42	10	40	2200	3	105
6.3	330	V/7343-19	T522V337M006A(1)E040	62	10	40	2200	3	105
6.3	470	Y/7343-40	T522Y477M006A(1)E035	89	10	35	2600	3	105
VDC	μF	KEMET/EIA	(See below for part options)	μΑ @ +20°C Max/10 Min.	% @ +20°C 120 Hz Max	mΩ @ +20°C 100 kHz Max	(mA) +45°C 100 kHz	Temperature ≤ 260°C	(°C)
Rated Voltage	Rated Cap	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Moisture Sensitivity	Rated Temp

Other part number options:

Higher voltage ratings and tighter tolerance product including ESR may be substituted within the same size at KEMET's option. Voltage substitutions will be marked with the higher voltage rating. Substitutions can include better than series.

<sup>(1)</sup> Standard with tin terminations (14th character = T). Tin/lead terminations is also available (14th character = H).

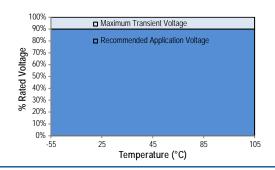
Also available on large (13 inch) reels. Add 7280 to the end of the part number.



## **Derating Guidelines**

	Voltage Rating	Maximum Recommended Steady State Voltage	Maximum Recommended  Transient Voltage  (1 ms – 1 μs)
I		-55°C to 105	5°C
ſ	6.3 V	90% of V <sub>R</sub>	$V_{R}$





## Ripple Current/Ripple Voltage

Permissible AC ripple voltage and current are related to equivalent series resistance (ESR) and the power dissipation capabilities of the device. Permissible AC ripple voltage which may be applied is limited by two criteria:

- 1. The positive peak AC voltage plus the DC bias voltage, if any, must not exceed the DC voltage rating of the capacitor.
- 2. The negative peak AC voltage in combination with bias voltage, if any, must not exceed the allowable limits specified for reverse voltage. See the Reverse Voltage section for allowable limits.

The maximum power dissipation by case size can be determined using the table at right. The maximum power dissipation rating stated in the table must be reduced with increasing environmental operating temperatures. Refer to the table below for temperature compensation requirements.

· · · · · · · · · · · · · · · · · · ·	Temperature Compensation Multipliers for Maximum Power Dissipation							
≤ 45°C	45° C < T ≤ 85°C	85°C < T ≤ 125°C						
1.00 0.70 0.25								

T= Environmental Temperature

Using the P max of the device, the maximum allowable rms ripple current or voltage may be determined.

 $I(max) = \sqrt{P max/R}$  $E(max) = \sqrt{P max*R}$ 

I = rms ripple current (amperes)

E = rms ripple voltage (volts)

KEMET Series and Case Code	EIA Case Code	Maximum Power Dissipation (P max) mWatts @ 45°C with +30°C Rise		
T520T	3528-12	105		
T520M	3528-15	120		
T520A	3216-18	112		
T520B	3528-21	127		
T520U	6032-15	135		
T520L	3528-19	150		
T520C	6032-28	165		
T520W	7343-15	180		
T520V /T522V	7343-19	187		
T520D	7343-31	225		
T520Y/T522Y	7343-40	241		
T520X	7343-43	247		
T520H	7360-20	187		

The maximum power dissipation rating must be reduced with increasing environmental operating temperatures. Refer to the Temperature Compensation Multiplier table for details.



## **Reverse Voltage**

Polymer tantalum capacitors are polar devices and may be permanently damaged or destroyed if connected in the wrong polarity. These devices will withstand a small degree of transient voltage reversal for short periods as shown in the below table.

Temperature	Permissible Transient Reverse Voltage
25°C	15% of Rated Voltage
55°C	10% of Rated Voltage
85°C	5% of Rated Voltage
105°C	3% of Rated Voltage
125°C*	1% of Rated Voltage

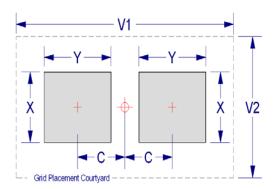
<sup>\*</sup>For series rated to 125°C

# **Table 2 – Land Dimensions/Courtyard**

KEMET	Metric Size Code	Density Level A: Maximum (Most) Land Protrusion (mm)			Density Level B: Median (Nominal) Land Protrusion (mm)				Density Level C: Minimum (Least) Land Protrusion (mm)							
Case	EIA	Х	Υ	С	V1	V2	Х	Υ	С	V1	V2	Х	Υ	С	V1	V2
V	7343–19	2.55	3.75	2.70	10.20	5.50	2.45	3.35	2.60	9.10	5.00	2.35	2.95	2.50	8.20	4.70
Y¹	7343-40	2.55	3.75	2.70	10.20	5.50	2.45	3.35	2.60	9.10	5.00	2.35	2.95	2.50	8.20	4.70

Density Level A: For low-density product applications. Recommended for wave solder applications and provides a wider process window for reflow solder processes. Density Level B: For products with a moderate level of component density. Provides a robust solder attachment condition for reflow solder processes. Density Level C: For high component density product applications. Before adapting the minimum land pattern variations the user should perform qualification testing based on the conditions outlined in IPC Standard 7351 (IPC–7351).

<sup>&</sup>lt;sup>1</sup> Height of these chips may create problems in wave soldering.





## **Soldering Process**

KEMET's families of surface mount capacitors are compatible with wave (single or dual), convection, IR, or vapor phase reflow techniques. Preheating of these components is recommended to avoid extreme thermal stress. KEMET's recommended profile conditions for convection and IR reflow reflect the profile conditions of the IPC/J-STD-020D standard for moisture sensitivity testing. The devices can safely withstand a maximum of three reflow passes at these conditions.

Please note that although the X/7343–43 case size can withstand wave soldering, the tall profile (4.3 mm maximum) dictates care in wave process development.

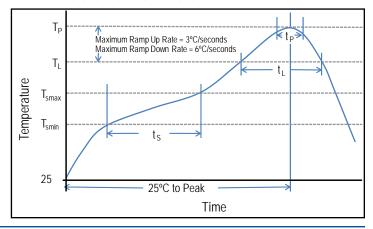
Hand soldering should be performed with care due to the difficulty in process control. If performed, care should be taken to avoid contact of the soldering iron to the molded case. The iron should be used to heat the solder pad, applying solder between the pad and the termination, until reflow occurs. Once reflow occurs, the iron should be removed immediately. "Wiping" the edges of a chip and heating the top surface is not recommended.

During typical reflow operations, a slight darkening of the gold-colored epoxy may be observed. This slight darkening is normal and not harmful to the product. Marking permanency is not affected by this change.

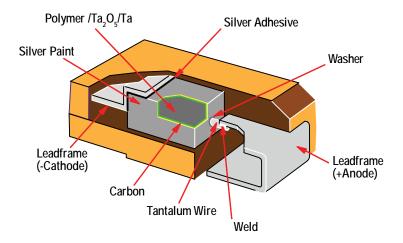
Profile Feature	SnPb Assembly	Pb-Free Assembly
Preheat/Soak		
Temperature Minimum (T <sub>Smin</sub> )	100°C	150°C
Temperature Maximum (T <sub>Smax</sub> )	150°C	200°C
Time $(t_s)$ from $T_{smin}$ to $T_{smax}$ )	60 - 120 seconds	60 – 120 seconds
Ramp-up Rate (T <sub>L</sub> to T <sub>P</sub> )	3°C/seconds maximum	3°C/seconds maximum
Liquidous Temperature (T <sub>L</sub> )	183°C	217°C
Time Above Liquidous (t <sub>L</sub> )	60 - 150 seconds	60 – 150 seconds
Peak Temperature (T <sub>P</sub> )	220°C* 235°C**	250°C* 260°C**
Time within 5°C of Maximum Peak Temperature (t <sub>p</sub> )	20 seconds maximum	30 seconds maximum
Ramp-down Rate (T <sub>P</sub> to T <sub>L</sub> )	6°C/seconds maximum	6°C/seconds maximum
Time 25°C to Peak Temperature	6 minutes maximum	8 minutes maximum

Note: All temperatures refer to the center of the package, measured on the package body surface that is facing up during assembly reflow.

<sup>\*\*</sup>Case Size A, B, C, H, I, K, M, R, S, T, U, V, W and Z



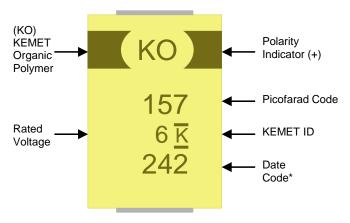
#### Construction



<sup>\*</sup>Case Size D, E, P, Y and X



## **Capacitor Marking**



 $*242 = 42^{nd}$  week of 2012

Date Code *						
1 <sup>st</sup> digit = Last number of Year	9 = 2009 0 = 2010 1 = 2011 2 = 2012 3 = 2013 4 = 2014					
2 <sup>nd</sup> and 3 <sup>rd</sup> digit = Week of the Year	01 = 1 <sup>st</sup> week of the Year to $52 = 52$ <sup>nd</sup> week of the Year					

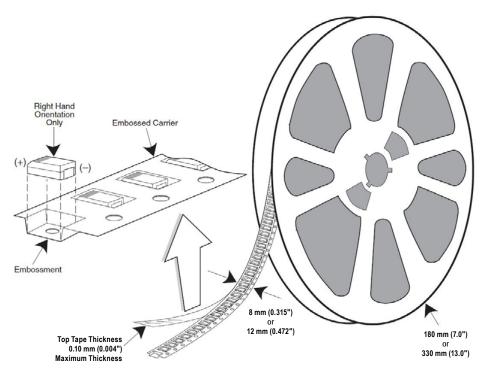
## **Storage**

All KO-CAP Series are shipped in moisture barrier bags with a desiccant and moisture indicator card. This series is classified as MSL3 (Moisture Sensitivity Level 3). Product contained within the moisture barrier bags should be stored in normal working environments with temperatures not to exceed 40°C and humidity not in excess of 60% RH.



## **Tape & Reel Packaging Information**

KEMET's molded tantalum and aluminum chip capacitor families are packaged in 8 and 12 mm plastic tape on 7" and 13" reels in accordance with *EIA Standard 481*–1: Embossed Carrier Taping of Surface Mount Components for Automatic Handling. This packaging system is compatible with all tape-fed automatic pick-and-place systems.



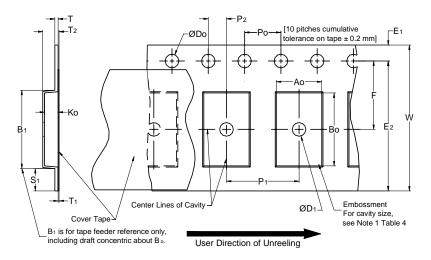
**Table 3 – Packaging Quantity** 

Case Code		Tape Width (mm)	7" Reel*	13" Reel*
KEMET	EIA			
R	2012-12	8	2,500	10,000
I	3216-10	8	3,000	12,000
S	3216-12	8	2,500	10,000
Т	3528-12	8	2,500	10,000
М	3528-15	8	2,000	8,000
U	6032-15	12	1,000	5,000
L	6032-19	12	1,000	5,000
W	7343-15	12	1,000	3,000
Z	7343-17	12	1,000	3,000
V	7343-19	12	1,000	3,000
Α	3216-18	8	2,000	9,000
В	3528-21	8	2,000	8,000
С	6032-28	12	500	3,000
D	7343-31	12	500	2,500
Υ	7343-40	12	500	2,000
Х	7343-43	12	500	2,000
E/T428P	7360-38	12	500	2,000
Н	7360-20	12	1,000	2,500

<sup>\*</sup> No C-Spec required for 7" reel packaging. C-7280 required for 13" reel packaging.



## Figure 1 – Embossed (Plastic) Carrier Tape Dimensions



## **Table 4 – Embossed (Plastic) Carrier Tape Dimensions**

Metric will govern

Constant Dimensions — Millimeters (Inches)									
Tape Size	D <sub>0</sub>	D <sub>1</sub> Minimum Note 1	E <sub>1</sub>	P <sub>0</sub>	P <sub>2</sub>	R Reference Note 2	S <sub>1</sub> Minimum Note 3	T Maximum	T <sub>1</sub> Maximum
8 mm		1.0 (0.039)				25.0 (0.984)			
12 mm	1.5 +0.10/-0.0 (0.059 +0.004/-0.0)	1.5	1.75 ±0.10 (0.069 ±0.004)	4.0 ±0.10 (0.157 ±0.004)	2.0 ±0.05 (0.079 ±0.002)	30	0.600 (0.024)	0.600 (0.024)	0.100 (0.004)
16 mm		(0.059)				(1.181)			
			Variable Dir	nensions — N	lillimeters (Inc	hes)			
Tape Size	Pitch	B <sub>1</sub> Maximum Note 4	E <sub>2</sub> Minimum	F	P <sub>1</sub>	T <sub>2</sub> Maximum	W Maximum	A <sub>0</sub> ,B <sub>0</sub>	. & K <sub>0</sub>
8 mm	Single (4 mm)	4.35 (0.171)	6.25 (0.246)	3.5 ±0.05 (0.138 ±0.002)	4.0 ±0.10 (0.157 ±0.004)	2.5 (0.098)	8.3 (0.327)		
12 mm	Single (4 mm) & Double (8 mm)	8.2 (0.323)	10.25 (0.404)	5.5 ±0.05 (0.217 ±0.002)	8.0 ±0.10 (0.315 ±0.004)	4.6 (0.181)	12.3 (0.484)	Note 5	
16 mm	Triple (12 mm)	12.1 (0.476)	14.25 (0.561)	5.5 ±0.05 (0.217 ±0.002)	8.0 ±0.10 (0.315 ±0.004)	4.6 (0.181)	16.3 (0.642)		

- 1. The embossment hole location shall be measured from the sprocket hole controlling the location of the embossment. Dimensions of embossment location and hole location shall be applied independent of each other.
- 2. The tape, with or without components, shall pass around R without damage (see Figure 5).
- 3. If S, < 1.0 mm, there may not be enough area for cover tape to be properly applied (see EIA Standard 481–1, paragraph 4.3, section b).
- 4. B, dimension is a reference dimension for tape feeder clearance only.
- 5. The cavity defined by  $A_0$ ,  $B_0$  and  $K_0$  shall surround the component with sufficient clearance that:
  - (a) the component does not protrude above the top surface of the carrier tape.
  - (b) the component can be removed from the cavity in a vertical direction without mechanical restriction, after the top cover tape has been removed.
  - (c) rotation of the component is limited to 20° maximum for 8 and 12 mm tapes and 10° maximum for 16 mm tapes (see Figure 2).
  - (d) lateral movement of the component is restricted to 0.5 mm maximum for 8 mm and 12 mm wide tape and to 1.0 mm maximum for 16 mm tape (see Figure 3).
  - (e) see Addendum in EIA Standard 481–1 for standards relating to more precise taping requirements.



## **Packaging Information Performance Notes**

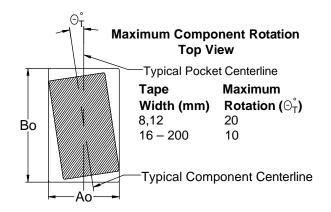
- 1. Cover Tape Break Force: 1.0 Kg minimum.
- 2. Cover Tape Peel Strength: The total peel strength of the cover tape from the carrier tape shall be:

Tape Width	Peel Strength
8 mm	0.1 to 1.0 Newton (10 to 100 gf)
12 and 16 mm	0.1 to 1.3 Newton (10 to 130 gf)

The direction of the pull shall be opposite the direction of the carrier tape travel. The pull angle of the carrier tape shall be 165 $^{\circ}$  to 180 $^{\circ}$  from the plane of the carrier tape. During peeling, the carrier and/or cover tape shall be pulled at a velocity of 300  $\pm$ 10 mm/minute.

**3. Labeling:** Bar code labeling (standard or custom) shall be on the side of the reel opposite the sprocket holes. *Refer to EIA Standards 556 and 624.* 

## Figure 2 – Maximum Component Rotation



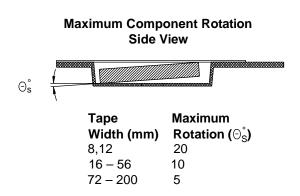


Figure 3 – Maximum Lateral Movement

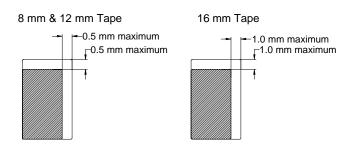


Figure 4 - Bending Radius

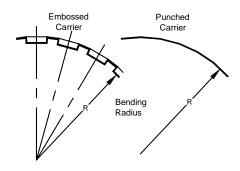
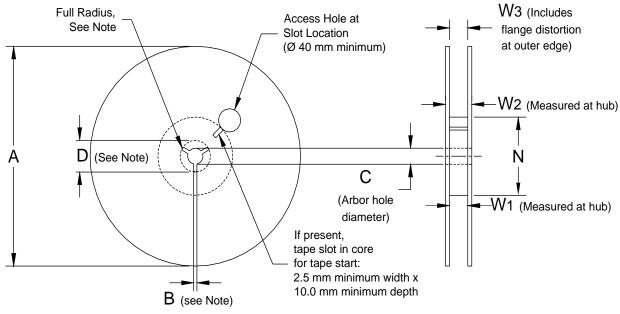




Figure 5 – Reel Dimensions



Note: Drive spokes optional; if used, dimensions B and D shall apply.

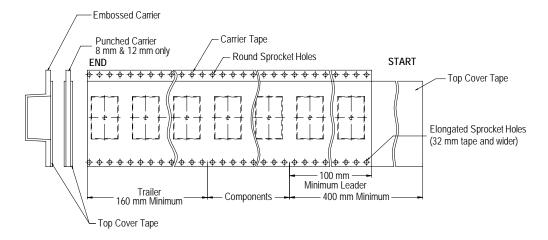
Table 5 - Reel Dimensions

Metric will govern

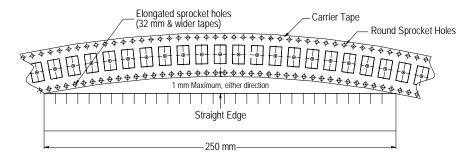
Constant Dimensions — Millimeters (Inches)						
Tape Size	A	B Minimum	С	D Minimum		
8 mm	178 ±0.20 (7.008 ±0.008)					
12 mm	(7.006 ±0.006) Or	1.5 (0.059)	13.0 +0.5/-0.2 (0.521 +0.02/-0.008)	20.2 (0.795)		
16 mm	330 ±0.20 (13.000 ±0.008)	(0.000)	(0.021 - 0.027 0.000)	(0.730)		
	Variable Dimensions — Millimeters (Inches)					
Tape Size	N Minimum	W <sub>1</sub>	W <sub>2</sub> Maximum	W <sub>3</sub>		
8 mm	50 (1.969)	8.4 +1.5/-0.0 (0.331 +0.059/-0.0)	14.4 (0.567)			
12 mm		12.4 +2.0/-0.0 (0.488 +0.078/-0.0)	18.4 (0.724)	Shall accommodate tape width without interference		
16 mm	. ,	16.4 +2.0/-0.0 (0.646 +0.078/-0.0)	22.4 (0.882)			



## Figure 6 - Tape Leader & Trailer Dimensions



## Figure 7 – Maximum Camber





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#### Other KEMET Resources

Tools			
Resource	Location		
Configure A Part: CapEdge	http://capacitoredge.kemet.com		
SPICE & FIT Software	http://www.kemet.com/spice		
Search Our FAQs: KnowledgeEdge	http://www.kemet.com/keask		
Electrolytic LifeCalculator	http://www.kemet.com:8080/elc		

Product Information			
Resource	Location		
Products	http://www.kemet.com/products		
Technical Resources (Including Soldering Techniques)	http://www.kemet.com/technicalpapers		
RoHS Statement	http://www.kemet.com/rohs		
Quality Documents	http://www.kemet.com/qualitydocuments		

Product Request			
Resource Location			
Sample Request	http://www.kemet.com/sample		
Engineering Kit Request	http://www.kemet.com/kits		

Contact			
Resource	Location		
Website	www.kemet.com		
Contact Us	http://www.kemet.com/contact		
Investor Relations	http://www.kemet.com/ir		
Call Us	1-877-MyKEMET		
Twitter	http://twitter.com/kemetcapacitors		

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Although we design and manufacture our products to the most stringent quality and safety standards, given the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage.

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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

#### Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов:
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001:
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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