

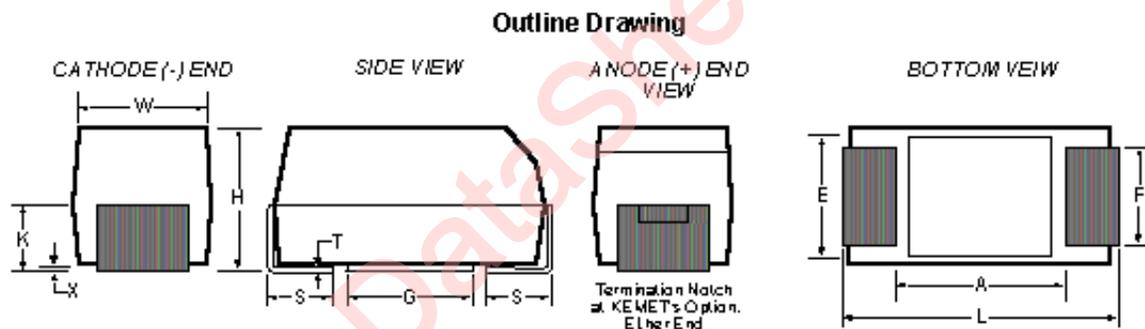
New Product Release

T520 Series – KO Cap – KEMET Organic Capacitor Low ESR Tantalum Chip Capacitor with Polymer Electrode

KEMET introduces the new T520 Series KEMET Organic - KO - Capacitor. The KO Cap is a Tantalum capacitor, with Ta anode and Ta₂O₅ dielectric. However, a conductive, organic, polymer replaces the MnO₂ as the cathode plate of the capacitor. The polymer is 100 times more conductive than the MnO₂. This results in very low ESR (up to 50% less than equivalent standard Ta types) and improved cap retention at high frequency. The KO cap also exhibits a benign failure mode, which eliminates the ignition failures that can occur in standard Tantalum types. Removal of the MnO₂ eliminates the source of oxygen that can fuel the ignition if the capacitor fails short in a circuit that allows high fault current.

The new T520 series captures the best features of multilayer ceramic caps (low ESR and high frequency cap retention), aluminum electrolytics (benign failure mode), and proven solid tantalum technology (volumetric efficiency, surface mount capability, and no wearout mechanism). The KO Cap can reduce component counts, eliminate through-hole assembly by replacing cumbersome leaded aluminum capacitors, and offer a more cost effective solution to high-cost high-cap ceramic capacitors. These benefits allow the designer to save both board space and money.

Outline Drawings



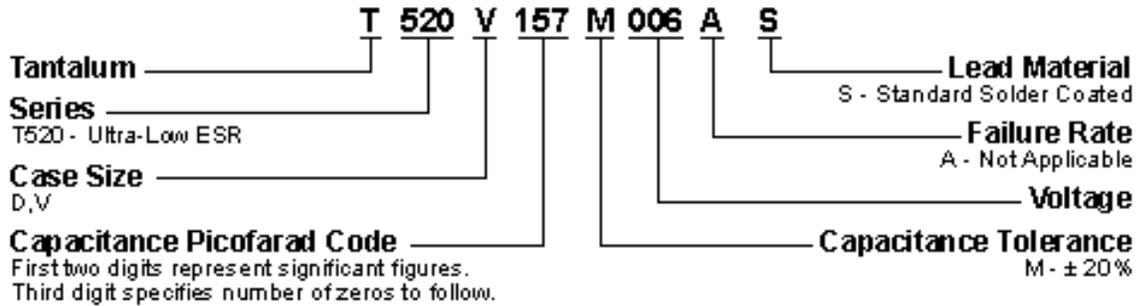
Dimensions - Millimeters

Case Size		L	W	H	K ±0.20	F ±0.1	S ±0.3	X(Ref)	T(Ref)	A(Min)	G(ref)	E(ref)
KEMET	EIA/IECQ											
D	7343	7.3 ± 0.3	4.3 ± 0.3	2.8 ± 0.3	1.5	2.4	1.3	0.10 ± 0.10	0.13	3.8	3.5	3.5
V	7343L	7.3 ± 0.3	4.3 ± 0.3	1.9 ± 0.1	1.1	2.4	1.3	0.05	0.13	3.8	3.5	3.5

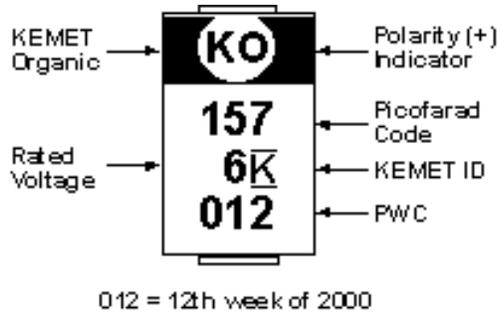
T520 Ratings & Part Number Reference

Cap µF (±20%)	Case Size	KEMET Part Number	DC Leakage µA +25°C Max	DF % 120 Hz + 25°C Max	ESR mW 100kHz 25° Max	Ripple Current mA rms 100 kHz Max		
						25°C	85°C	105°C
4 Volt Rating at +85°C (3.3 Volt Rating at 105°C)								
220	V/7343L	T520V227M004AS	88.0	10%	45	1657	1491	663
6.3 Volt Rating at 85°C (5 Volt Rating at 105°C)								
150	D/7343	T520D157M006AS	94.5	10%	55	1651	1486	660
150	V/7343L	T520V157M006AS	94.5	10%	45	1657	1491	662
220	D/7343	T520D227M006AS	138.6	10%	50	1732	1559	693
330	D/7343	T520D337M006AS	207.9	10%	45	1826	1643	730
10 Volt Rating at +85°C (8 Volt Rating at 105°C)								
100	D/7343	T520D107M010AS	100.0	10%	80	1369	1232	548
150	D/7343	T520D157M010AS	150.0	10%	55	1651	1486	660

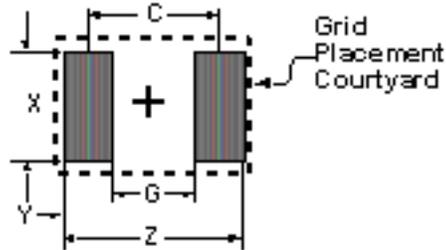
T520 Ordering Information



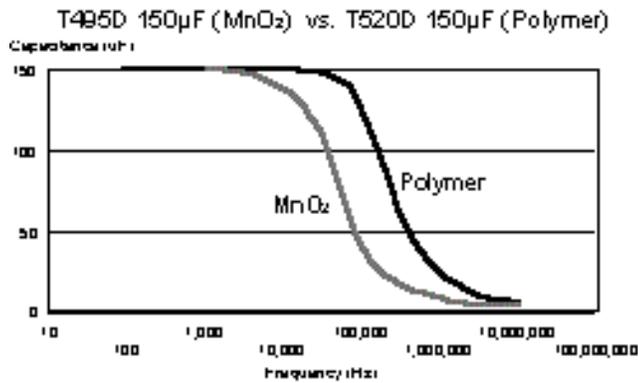
Component Marking



Recommended Mounting Pad Geometries - Millimeters



Capacitance



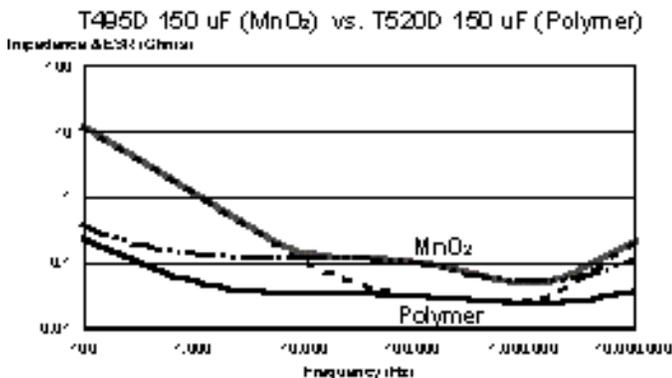
Land Pattern Dimensions for Reflow Solder

KEMET/EIA Size Code	Pad Dimensions				
	Z	G	X	Y (ref)	C (ref)
D/7343, V/7343L	8.90	3.80	2.70	2.55	6.35

Tape & Reel Packaging

Case Codes		Tape & Reel Dimensions				
KEMET	EIA	Tape Width mm	Pitch mm ± 0.1		Reel Quantity	
			Part	Sprocket	180mm (7" dia)	330mm (13" dia)
D	7343	12 \pm 0.3	8	4	500	2500
V	7343L	12 \pm 0.3	8	4	1000	3000

ESR and Impedance



T520 Series Construction

