

Overview

The KEMET Organic Capacitor is a tantalum capacitor with a Ta anode and Ta₂O₅ dielectric. A conductive organic polymer replaces the traditionally used MnO₂ as the cathode plate of the capacitor. This results in very low ESR, improved capacitance retention at high frequency and improved ripple current handling capability. The polymer technology also exhibits a benign failure mode which eliminates the ignition failures. Tantalum polymers may also be operated at voltages up to 90% of rated voltage for part types with rated voltages of ≤ 10 volts and up to 80% of rated voltage for part types > 10 volts with equivalent or better reliability than traditional MnO₂ tantalum capacitors operated at 50% of rated voltage.

The T543 Series Polymer Tantalum COTS is an upscreened version of KEMET's commercial polymer product offering and captures the best features of multilayer ceramic capacitors (low ESR, high frequency capacitance retention), aluminum electrolytic capacitors (higher capacitance, benign failure mode), and proven solid tantalum technology (volumetric efficiency, surface mount capability, extremely long life). The T543 also offers an option for surge current testing (10 cycles at +25°C and 10 cycles at -55°C/+85°C) and termination finish (SnPb and 100% Sn).

Benefits

- Extremely low ESR
- -55°C to 105°C operating temperature range
- Polymer cathode technology
- High frequency capacitance retention
- Non-ignition failure mode
- Capacitance up to 1,500 µF
- Enhanced derating
- 100% accelerated steady state aging
- 100% surge current tested
- Taped and reeled per EIA 481-1
- Volumetric efficiency and self-healing mechanism
- Termination options (SnPb and 100% Sn)
- Surge options at 25°C and -55°C/85°C
- EIA standard case sizes

Applications

Typical applications include DC/DC converters, switch mode and point of load power supply, radar pulse capacitor and telecommunications (mobile phone and base station). Other general applications include decoupling and filtering in applications requiring low ESR or a benign failure mode.



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

T	543	D	156	K	035	A	H	E	100
Capacitor Class	Series	Case Size	Capacitance Code (pF)	Capacitance Tolerance	Voltage	Failure Rate/Design	Lead Material	Surge	ESR
T = Tantalum	Polymer Tantalum COTS	A, B, C, D, H, L, M, T, U, V, W, X, Y	First two digits represent significant figures. Third digit specifies number of zeros.	K = ±10% M = ±20%	2R5 = 2.5 V 003 = 3 V 004 = 4 V 006 = 6.3 V 010 = 10 V 12R = 12.5 V 016 = 16 V 020 = 20 V 025 = 25 V 035 = 35 V 050 = 50 V 063 = 63 V	A = N/A	H = Standard Solder Coated (SnPb 5% Pb minimum) T = 100% Tin (Sn)	E = None S = 10 cycles 25°C W = 10 cycles -55°C and 85°C	ESR in mΩ

Performance Characteristics

Item	Performance Characteristics
Operating Temperature	-55°C to 105°C
Rated Capacitance Range	5.6 – 1,500 µF @ 120 Hz/25°C
Capacitance Tolerance	K Tolerance (10%), M Tolerance (20%)
Rated Voltage Range	2.5 – 63 V
DF (120 Hz)	Refer to Part Number Electrical Specification Table
ESR (100 kHz)	Refer to Part Number Electrical Specification Table
Leakage Current	≤ 0.1 CV (µA) at rated voltage after 5 minutes

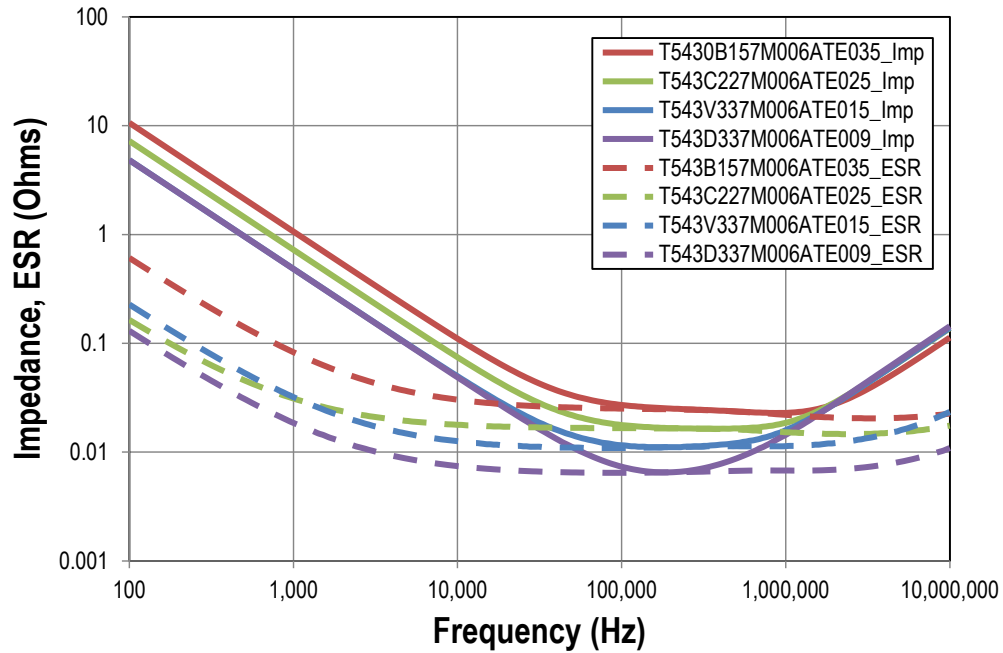
Qualification

Test	Condition	Characteristics				
Endurance	105°C @ rated voltage, 2,000 hours	Δ C/C	Within -20/+10 of initial value			
		DF	Within initial limits			
		DCL	Within 1.25 x initial limit			
		ESR	Within 2.0 x initial limit			
Storage Life	105°C @ 0 volts, 2,000 hours	Δ C/C	Within -20/+10 of initial value			
		DF	Within initial limits			
		DCL	Within 1.25 x initial limit			
		ESR	Within 2.0 x initial limit			
Humidity	60°C, 90% RH, 500 hours	Δ C/C	Within -5%/+35% of initial value			
		DF	Within initial limits			
		DCL	Within 5.0 x initial limit			
		ESR	Within 2.0 x initial limit			
Temperature Stability	Extreme temperature exposure at a succession of continuous steps at +25°C, -55°C, +25°C, +85°C, +105°C, +25° C	+25°C	-55°C	+85°C	+105°C	
		Δ C/C	IL*	+/-20%	+/-20%	+/-30%
		DF	IL	IL	1.2 x IL	1.5 x IL
		DCL	IL	n/a	10 x IL	10 x IL
Surge Voltage	105°C, 1.32 x rated voltage, 1,000 cycles	Δ C/C	Within -20/+10 of initial value			
		DF	Within initial limits			
		DCL	Within initial limits			
		ESR	Within initial limits			
Mechanical Shock/Vibration	MIL-STD-202, Method 213, Condition I, 100 G peak MIL-STD-202, Method 204, Condition D, 10 Hz to 2,000 Hz, 20 G peak	Δ C/C	Within ±10 of initial value			
		DF	Within initial limits			
		DCL	Within initial limits			

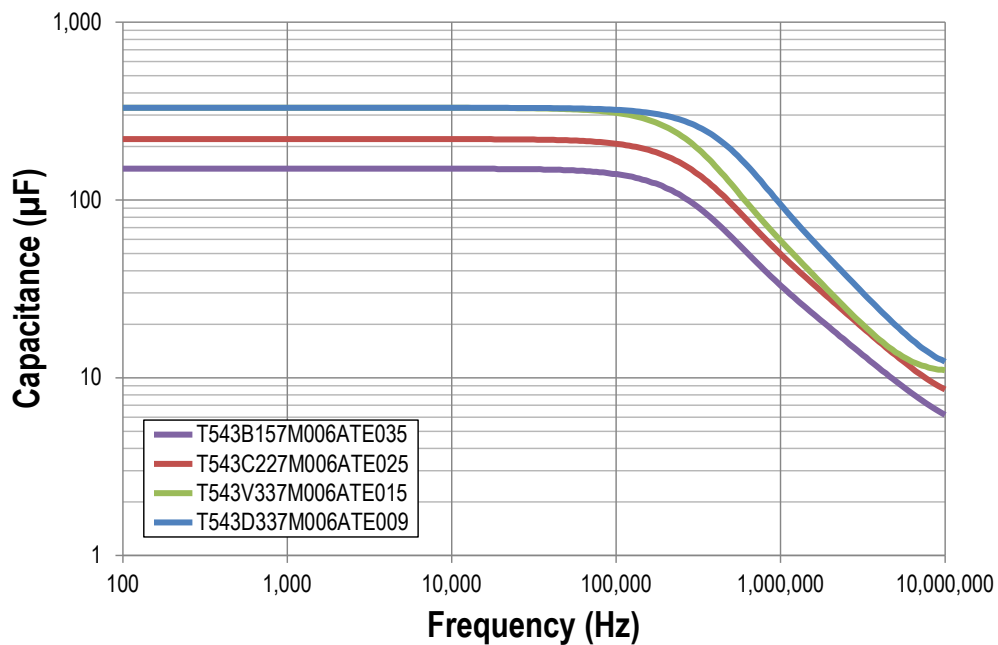
*IL = Initial limit

Electrical Characteristics

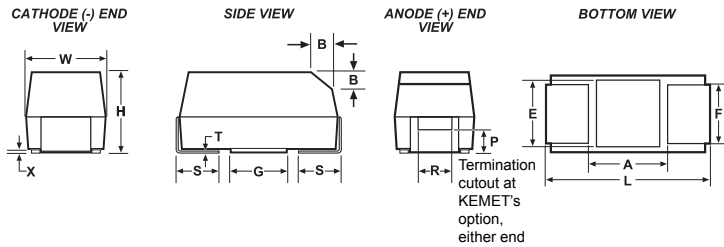
ESR vs. Frequency



Capacitance vs. Frequency



Dimensions – Millimeters



Case Size		Component												
KEMET	EIA	L*	W*	H*	F* ±0.1 ±(0.004)	S* ±0.3 ±(0.012)	B* ±0.15 (Ref) ±0.006	X (Ref)	P (Ref)	R (Ref)	T (Ref)	A (Min)	G (Ref)	E (Ref)
A	3216-18	3.2 ±0.2 (0.126 ±0.008)	1.6 ±0.2 (0.063 ±0.008)	1.6 ±0.2 (0.063 ±0.008)	1.2 (0.047)	0.8 (0.031)	0.4 (0.016)	0.10 ±0.10 (0.004 ±0.004)	0.4 (.016)	0.4 (0.016)	0.13 (0.005)	0.8 (.31)	1.1 (0.043)	1.3 (0.051)
B	3528-21	3.5 ±0.2 (0.138 ±0.008)	2.8 ±0.2 (0.110 ±0.008)	1.9 ±0.2 (0.075 ±0.008)	2.2 (0.087)	0.8 (0.031)	0.4 (0.016)	0.10 ±0.10 (0.004 ±0.004)	0.5 (.020)	1.0 (0.039)	0.13 (0.005)	1.1 (0.043)	1.8 (0.071)	2.2 (0.087)
C	6032-28	6.0 ±0.3 (0.236 ±0.03)	3.2 ±0.3 (0.126 ±0.012)	2.5 ±0.3 (0.098 ±0.012)	2.2 (0.087)	1.3 (0.051)	0.5 (0.020)	0.10 ±0.10 (0.004 ±0.004)	0.9 (.035)	1.0 (0.039)	0.13 (0.005)	2.5 (.098)	2.8 (0.110)	2.4 (0.094)
D	7343-31	7.3 ±0.3 (0.287 ±0.012)	4.3 ±0.3 (0.169 ±0.012)	2.8 ±0.3 (0.110 ±0.012)	2.4 (0.094)	1.3 (0.051)	0.5 (0.020)	0.10 ±0.10 (0.004 ±0.004)	0.9 (0.035)	1.0 (0.039)	0.13 (0.005)	3.8 (.150)	3.5 (0.138)	3.5 (0.138)
H	7360-20	7.3 ±0.3 (0.287 ±0.012)	6.0 ±0.3 (0.236 ±0.012)	2.0 (0.078) Maximum	4.1 (0.161)	1.3 (0.051)	n/a	0.10 ±0.10 (0.004 ±0.004)	n/a	n/a	0.13 (0.005)	3.3 (.130)	3.5 (0.138)	3.5 (0.138)
L	6032-19	6.0 ±0.3 (0.236 ±0.012)	3.2 ±0.2 (0.110 ±0.008)	1.9 (0.075)	2.2 (0.087)	1.3 (0.051)	n/a	0.05 (0.002)	n/a	n/a	0.13 (0.005)	2.5 (.098)	2.8 (0.110)	2.4 (0.094)
M	3528-15	3.5 ±0.2 (0.138 ±0.008)	2.8 ±0.2 (0.110 ±0.008)	1.5 (0.059)	2.2 (0.087)	0.8 (0.031)	n/a	0.05 (0.002)	n/a	n/a	0.13 (0.005)	1.1 (.043)	1.8 (0.071)	2.2 (0.087)
T	3528-12	3.5 ±0.2 (0.138 ±0.008)	2.8 ±0.2 (0.110 ±0.008)	1.2 (0.047)	2.2 (0.087)	0.8 (0.031)	n/a	0.05 (0.002)	n/a	n/a	0.13 (0.005)	1.1 (.043)	1.8 (0.071)	2.2 (0.087)
U	6032-15	6.0 ±0.3 (0.236 ±0.012)	3.2 ±0.2 (0.110 ±0.008)	1.5 (0.059)	2.2 (0.087)	1.3 (0.051)	n/a	0.05 (0.002)	n/a	n/a	0.13 (0.005)	2.5 (.098)	2.8 (0.110)	2.4 (0.094)
V	7343-20	7.3 ±0.3 (0.287 ±0.012)	4.3 ±0.3 (0.169 ±0.012)	2.0 (0.079)	2.4 (0.094)	1.3 (0.051)	n/a	0.05 (0.002)	n/a	n/a	0.13 (0.005)	3.8 (0.150)	3.5 (0.138)	3.5 (0.138)
W	7343-15	7.3 ±0.3 (0.287 ±0.012)	4.3 ±0.3 (0.169 ±0.012)	1.5 (0.059)	2.4 (0.094)	1.3 (0.051)	n/a	0.05 (0.002)	n/a	n/a	0.13 (0.005)	3.8 (0.150)	3.5 (0.138)	3.5 (0.138)
X	7343-43	7.3 ±0.3 (0.287 ±0.012)	4.3 ±0.3 (0.169 ±0.012)	4.0 ±0.3 (0.157 ±0.012)	2.4 (0.094)	1.3 (0.051)	0.5 (0.020)	0.10 ±0.10 (0.004 ±0.004)	1.7 (0.067)	1.0 (0.039)	0.13 (0.005)	3.8 (0.150)	3.5 (0.138)	3.5 (0.138)
Y	7343-40	7.3 ±0.3 (0.287 ±0.012)	4.3 ±0.3 (0.169 ±0.012)	4.0 (0.157)	2.4 (0.094)	1.3 (0.051)	0.5 (0.020)	0.10 ±0.10 (0.004 ±0.004)	1.7 (0.067)	1.0 (0.039)	0.13 (0.005)	3.8 (0.150)	3.5 (0.138)	3.5 (0.138)

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.

* MIL-PRF-55365/8 specified dimensions

Table 1 – Ratings & Part Number Reference

Rated Voltage	Rated Cap	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temp	Moisture Sensitivity
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
2.5	47	A/3216-18	T543A476(1)2R5A(2)(3)(4)	12	8	90	1116	105	3
2.5	56	T/3528-12	T543T566(1)2R5A(2)(3)(4)	14	8	40	1620	105	3
2.5	56	T/3528-12	T543T566(1)2R5A(2)(3)(4)	14	8	70	1225	105	3
2.5	68	A/3216-18	T543A686(1)2R5A(2)(3)(4)	17	8	70	1265	105	3
2.5	68	A/3216-18	T543A686(1)2R5A(2)(3)(4)	17	8	80	1183	105	3
2.5	100	T/3528-12	T543T107(1)2R5A(2)(3)(4)	25	8	40	1620	105	3
2.5	100	T/3528-12	T543T107(1)2R5A(2)(3)(4)	25	8	70	1225	105	3
2.5	100	T/3528-12	T543T107(1)2R5A(2)(3)(4)	25	8	80	1146	105	3
2.5	100	B/3528-21	T543B107(1)2R5A(2)(3)(4)	25	8	25	2254	105	3
2.5	100	B/3528-21	T543B107(1)2R5A(2)(3)(4)	25	8	35	1905	105	3
2.5	100	B/3528-21	T543B107(1)2R5A(2)(3)(4)	25	8	40	1782	105	3
2.5	100	B/3528-21	T543B107(1)2R5A(2)(3)(4)	25	8	70	1347	105	3
2.5	150	U/6032-15	T543U157(1)2R5A(2)(3)(4)	38	8	55	1567	105	3
2.5	220	B/3528-21	T543B227(1)2R5A(2)(3)(4)	55	8	25	2254	105	3
2.5	220	B/3528-21	T543B227(1)2R5A(2)(3)(4)	55	8	30	2058	105	3
2.5	220	B/3528-21	T543B227(1)2R5A(2)(3)(4)	55	8	35	1905	105	3
2.5	220	B/3528-21	T543B227(1)2R5A(2)(3)(4)	55	8	55	1520	105	3
2.5	220	B/3528-21	T543B227(1)2R5A(2)(3)(4)	55	8	70	1347	105	3
2.5	220	U/6032-15	T543U227(1)2R5A(2)(3)(4)	55	8	55	1567	105	3
2.5	220	C/6032-28	T543C227(1)2R5A(2)(3)(4)	55	8	25	2569	105	3
2.5	220	C/6032-28	T543C227(1)2R5A(2)(3)(4)	55	8	45	1915	105	3
2.5	220	W/7343-15	T543W227(1)2R5A(2)(3)(4)	55	10	25	2683	105	3
2.5	220	V/7343-20	T543V227(1)2R5A(2)(3)(4)	55	10	15	3531	105	3
2.5	220	V/7343-20	T543V227(1)2R5A(2)(3)(4)	55	10	25	2735	105	3
2.5	220	V/7343-20	T543V227(1)2R5A(2)(3)(4)	55	10	45	2039	105	3
2.5	220	D/7343-31	T543D227(1)2R5A(2)(3)(4)	55	10	40	2372	105	3
2.5	330	B/3528-21	T543B337(1)2R5A(2)(3)(4)	83	8	35	1905	105	3
2.5	330	B/3528-21	T543B337(1)2R5A(2)(3)(4)	83	8	45	1680	105	3
2.5	330	B/3528-21	T543B337(1)2R5A(2)(3)(4)	83	8	70	1347	105	3
2.5	330	L/6032-19	T543L337(1)2R5A(2)(3)(4)	83	8	12	3536	105	3
2.5	330	L/6032-19	T543L337(1)2R5A(2)(3)(4)	83	8	25	2449	105	3
2.5	330	C/6032-28	T543C337(1)2R5A(2)(3)(4)	83	8	15	3317	105	3
2.5	330	C/6032-28	T543C337(1)2R5A(2)(3)(4)	83	8	18	3028	105	3
2.5	330	C/6032-28	T543C337(1)2R5A(2)(3)(4)	83	8	25	2569	105	3
2.5	330	C/6032-28	T543C337(1)2R5A(2)(3)(4)	83	8	45	1915	105	3
2.5	330	W/7343-15	T543W337(1)2R5A(2)(3)(4)	83	10	15	3464	105	3
2.5	330	W/7343-15	T543W337(1)2R5A(2)(3)(4)	83	10	25	2683	105	3
2.5	330	W/7343-15	T543W337(1)2R5A(2)(3)(4)	83	10	40	2121	105	3
2.5	330	V/7343-20	T543V337(1)2R5A(2)(3)(4)	83	10	15	3531	105	3
2.5	330	V/7343-20	T543V337(1)2R5A(2)(3)(4)	83	10	18	3223	105	3
2.5	330	V/7343-20	T543V337(1)2R5A(2)(3)(4)	83	10	25	2735	105	3
2.5	330	V/7343-20	T543V337(1)2R5A(2)(3)(4)	83	10	40	2162	105	3
2.5	330	D/7343-31	T543D337(1)2R5A(2)(3)(4)	83	10	6	6124	105	3
2.5	330	D/7343-31	T543D337(1)2R5A(2)(3)(4)	83	10	7	5669	105	3
2.5	330	D/7343-31	T543D337(1)2R5A(2)(3)(4)	83	10	25	3000	105	3
2.5	470	C/6032-28	T543C477(1)2R5A(2)(3)(4)	118	8	25	2569	105	3
2.5	470	C/6032-28	T543C477(1)2R5A(2)(3)(4)	118	8	45	1915	105	3
2.5	470	V/7343-20	T543V477(1)2R5A(2)(3)(4)	118	10	18	3223	105	3
2.5	470	D/7343-31	T543D477(1)2R5A(2)(3)(4)	118	10	5	6708	105	3
2.5	470	D/7343-31	T543D477(1)2R5A(2)(3)(4)	118	10	6	6124	105	3
2.5	470	D/7343-31	T543D477(1)2R5A(2)(3)(4)	118	10	7	5669	105	3
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
Rated Voltage	Rated Capacitance	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temperature	Moisture Sensitivity

(1) To complete KEMET part number, insert M for ±20%, K for ±10%. Designates capacitance tolerance.
 (2) To complete KEMET part number, H = Solder Plated, T = 100% Tin (Sn). Designates termination finish.
 (3) To complete KEMET part number, insert E = None, S = 10 cycles +25°C, W = 10 cycles -55°C +85°C. Designates surge current option.
 (4) To complete KEMET part number, insert the ESR in mΩ, for example 50 mΩ = 050. Designates ESR option.
 Refer to Ordering Information for additional detail.

Table 1 – Ratings & Part Number Reference cont'd

Rated Voltage	Rated Cap	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temp	Moisture Sensitivity
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
2.5	470	D/7343-31	T543D477(1)2R5A(2)(3)(4)	118	10	9	5000	105	3
2.5	470	D/7343-31	T543D477(1)2R5A(2)(3)(4)	118	10	10	4743	105	3
2.5	470	D/7343-31	T543D477(1)2R5A(2)(3)(4)	118	10	25	3000	105	3
2.5	560	D/7343-31	T543D567(1)2R5A(2)(3)(4)	140	10	5	6708	105	3
2.5	680	D/7343-31	T543D687(1)2R5A(2)(3)(4)	170	10	6	6124	105	3
2.5	680	D/7343-31	T543D687(1)2R5A(2)(3)(4)	170	10	10	4743	105	3
2.5	680	D/7343-31	T543D687(1)2R5A(2)(3)(4)	170	10	15	3873	105	3
2.5	680	D/7343-31	T543D687(1)2R5A(2)(3)(4)	170	10	40	2372	105	3
2.5	680	Y/7343-40	T543Y687(1)2R5A(2)(3)(4)	170	10	5	6943	105	3
2.5	680	Y/7343-40	T543Y687(1)2R5A(2)(3)(4)	170	10	6	6338	105	3
2.5	680	Y/7343-40	T543Y687(1)2R5A(2)(3)(4)	170	10	10	4909	105	3
2.5	680	Y/7343-40	T543Y687(1)2R5A(2)(3)(4)	170	10	15	4008	105	3
2.5	680	Y/7343-40	T543Y687(1)2R5A(2)(3)(4)	170	10	25	3105	105	3
2.5	680	X/7343-43	T543X687(1)2R5A(2)(3)(4)	170	10	6	6416	105	3
2.5	1000	Y/7343-40	T543Y108(1)2R5A(2)(3)(4)	250	10	5	6943	105	3
2.5	1000	Y/7343-40	T543Y108(1)2R5A(2)(3)(4)	250	10	6	6338	105	3
2.5	1000	Y/7343-40	T543Y108(1)2R5A(2)(3)(4)	250	10	10	4909	105	3
2.5	1000	Y/7343-40	T543Y108(1)2R5A(2)(3)(4)	250	10	15	4008	105	3
2.5	1000	Y/7343-40	T543Y108(1)2R5A(2)(3)(4)	250	10	25	3105	105	3
2.5	1000	X/7343-43	T543X108(1)2R5A(2)(3)(4)	250	10	5	7029	105	3
2.5	1000	X/7343-43	T543X108(1)2R5A(2)(3)(4)	250	10	6	6416	105	3
2.5	1000	X/7343-43	T543X108(1)2R5A(2)(3)(4)	250	10	10	4970	105	3
2.5	1500	X/7343-43	T543X158(1)2R5A(2)(3)(4)	375	10	5	7029	105	3
2.5	1500	X/7343-43	T543X158(1)2R5A(2)(3)(4)	375	10	10	4970	105	3
3	100	B/3528-21	T543B107(1)003A(2)(3)(4)	30	8	35	1905	105	3
3	100	B/3528-21	T543B107(1)003A(2)(3)(4)	30	8	40	1782	105	3
3	100	B/3528-21	T543B107(1)003A(2)(3)(4)	30	8	70	1347	105	3
3	100	B/3528-21	T543B107(1)003A(2)(3)(4)	30	8	80	1260	105	3
3	150	B/3528-21	T543B157(1)003A(2)(3)(4)	45	8	35	1905	105	3
3	150	B/3528-21	T543B157(1)003A(2)(3)(4)	45	8	40	1782	105	3
3	150	B/3528-21	T543B157(1)003A(2)(3)(4)	45	8	70	1347	105	3
3	150	B/3528-21	T543B157(1)003A(2)(3)(4)	45	8	80	1260	105	3
3	330	V/7343-20	T543V337(1)003A(2)(3)(4)	99	10	15	3531	105	3
3	330	V/7343-20	T543V337(1)003A(2)(3)(4)	99	10	25	2735	105	3
3	330	D/7343-31	T543D337(1)003A(2)(3)(4)	99	10	25	3000	105	3
3	470	D/7343-31	T543D477(1)003A(2)(3)(4)	141	10	10	4743	105	3
3	470	D/7343-31	T543D477(1)003A(2)(3)(4)	141	10	25	3000	105	3
3	680	D/7343-31	T543D687(1)003A(2)(3)(4)	204	10	10	4743	105	3
3	680	D/7343-31	T543D687(1)003A(2)(3)(4)	204	10	15	3873	105	3
3	680	D/7343-31	T543D687(1)003A(2)(3)(4)	204	10	25	3000	105	3
3	680	D/7343-31	T543D687(1)003A(2)(3)(4)	204	10	40	2372	105	3
3	1000	X/7343-43	T543X108(1)003A(2)(3)(4)	300	10	10	4970	105	3
3	1000	X/7343-43	T543X108(1)003A(2)(3)(4)	300	10	15	4058	105	3
3	1000	X/7343-43	T543X108(1)003A(2)(3)(4)	300	10	30	2869	105	3
3	1500	X/7343-43	T543X158(1)003A(2)(3)(4)	450	10	8	5557	105	3
4	15	T/3528-12	T543T156(1)004A(2)(3)(4)	6	8	100	1025	105	3
4	33	A/3216-18	T543A336(1)004A(2)(3)(4)	13	8	70	1265	105	3
4	33	A/3216-18	T543A336(1)004A(2)(3)(4)	13	8	80	1183	105	3
4	47	A/3216-18	T543A476(1)004A(2)(3)(4)	19	8	70	1265	105	3
4	47	A/3216-18	T543A476(1)004A(2)(3)(4)	19	8	80	1183	105	3
4	47	T/3528-12	T543T476(1)004A(2)(3)(4)	19	8	70	1225	105	3
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
Rated Voltage	Rated Capacitance	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temperature	Moisture Sensitivity

(1) To complete KEMET part number, insert M for ±20%, K for ±10%. Designates capacitance tolerance.
 (2) To complete KEMET part number, H = Solder Plated, T = 100% Tin (Sn). Designates termination finish.
 (3) To complete KEMET part number, insert E = None, S = 10 cycles +25°C, W = 10 cycles -55°C +85°C. Designates surge current option.
 (4) To complete KEMET part number, insert the ESR in mΩ, for example 50 mΩ = 050. Designates ESR option.
 Refer to Ordering Information for additional detail.

Table 1 – Ratings & Part Number Reference cont'd

Rated Voltage	Rated Cap	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temp	Moisture Sensitivity
V	µF	KEMET/EIA	(See below for part options)	(µA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
4	68	T/3528-12	T543T686(1)004A(2)(3)(4)	27	8	70	1225	105	3
4	68	T/3528-12	T543T686(1)004A(2)(3)(4)	27	8	80	1146	105	3
4	68	B/3528-21	T543B686(1)004A(2)(3)(4)	27	8	35	1905	105	3
4	68	B/3528-21	T543B686(1)004A(2)(3)(4)	27	8	40	1782	105	3
4	68	B/3528-21	T543B686(1)004A(2)(3)(4)	27	8	70	1347	105	3
4	68	B/3528-21	T543B686(1)004A(2)(3)(4)	27	8	80	1260	105	3
4	68	U/6032-15	T543U686(1)004A(2)(3)(4)	27	8	55	1567	105	3
4	100	A/3216-18	T543A107(1)004A(2)(3)(4)	40	8	150	864	105	3
4	100	A/3216-18	T543A107(1)004A(2)(3)(4)	40	8	200	748	105	3
4	100	T/3528-12	T543T107(1)004A(2)(3)(4)	40	8	70	1225	105	3
4	100	T/3528-12	T543T107(1)004A(2)(3)(4)	40	8	150	837	105	3
4	100	B/3528-21	T543B107(1)004A(2)(3)(4)	40	8	35	1905	105	3
4	100	B/3528-21	T543B107(1)004A(2)(3)(4)	40	8	40	1782	105	3
4	100	B/3528-21	T543B107(1)004A(2)(3)(4)	40	8	70	1347	105	3
4	100	B/3528-21	T543B107(1)004A(2)(3)(4)	40	8	80	1260	105	3
4	100	U/6032-15	T543U107(1)004A(2)(3)(4)	40	8	55	1567	105	3
4	150	B/3528-21	T543B157(1)004A(2)(3)(4)	60	8	35	1905	105	3
4	150	B/3528-21	T543B157(1)004A(2)(3)(4)	60	8	40	1782	105	3
4	150	B/3528-21	T543B157(1)004A(2)(3)(4)	60	8	70	1347	105	3
4	150	U/6032-15	T543U157(1)004A(2)(3)(4)	60	8	55	1567	105	3
4	150	C/6032-28	T543C157(1)004A(2)(3)(4)	60	8	15	3317	105	3
4	150	C/6032-28	T543C157(1)004A(2)(3)(4)	60	8	25	2569	105	3
4	150	C/6032-28	T543C157(1)004A(2)(3)(4)	60	8	45	1915	105	3
4	150	C/6032-28	T543C157(1)004A(2)(3)(4)	60	8	100	1285	105	3
4	150	V/7343-20	T543V157(1)004A(2)(3)(4)	60	10	15	3531	105	3
4	150	V/7343-20	T543V157(1)004A(2)(3)(4)	60	10	25	2735	105	3
4	220	B/3528-21	T543B227(1)004A(2)(3)(4)	88	8	35	1905	105	3
4	220	B/3528-21	T543B227(1)004A(2)(3)(4)	88	8	45	1680	105	3
4	220	B/3528-21	T543B227(1)004A(2)(3)(4)	88	8	70	1347	105	3
4	220	L/6032-19	T543L227(1)004A(2)(3)(4)	88	8	12	3536	105	3
4	220	L/6032-19	T543L227(1)004A(2)(3)(4)	88	8	25	2449	105	3
4	220	C/6032-28	T543C227(1)004A(2)(3)(4)	88	8	15	3317	105	3
4	220	C/6032-28	T543C227(1)004A(2)(3)(4)	88	8	18	3028	105	3
4	220	C/6032-28	T543C227(1)004A(2)(3)(4)	88	8	25	2569	105	3
4	220	C/6032-28	T543C227(1)004A(2)(3)(4)	88	8	45	1915	105	3
4	220	C/6032-28	T543C227(1)004A(2)(3)(4)	88	8	55	1732	105	3
4	220	W/7343-15	T543W227(1)004A(2)(3)(4)	88	10	25	2683	105	3
4	220	W/7343-15	T543W227(1)004A(2)(3)(4)	88	10	40	2121	105	3
4	220	V/7343-20	T543V227(1)004A(2)(3)(4)	88	10	15	3531	105	3
4	220	V/7343-20	T543V227(1)004A(2)(3)(4)	88	10	18	3223	105	3
4	220	V/7343-20	T543V227(1)004A(2)(3)(4)	88	10	25	2735	105	3
4	220	V/7343-20	T543V227(1)004A(2)(3)(4)	88	10	40	2162	105	3
4	220	V/7343-20	T543V227(1)004A(2)(3)(4)	88	10	45	2039	105	3
4	220	D/7343-31	T543D227(1)004A(2)(3)(4)	88	10	25	3000	105	3
4	220	D/7343-31	T543D227(1)004A(2)(3)(4)	88	10	65	1861	105	3
4	330	C/6032-28	T543C337(1)004A(2)(3)(4)	132	8	25	2569	105	3
4	330	C/6032-28	T543C337(1)004A(2)(3)(4)	132	8	45	1915	105	3
4	330	V/7343-20	T543V337(1)004A(2)(3)(4)	132	10	18	3223	105	3
4	330	V/7343-20	T543V337(1)004A(2)(3)(4)	132	10	25	2735	105	3
4	330	V/7343-20	T543V337(1)004A(2)(3)(4)	132	10	40	2162	105	3
4	330	D/7343-31	T543D337(1)004A(2)(3)(4)	132	10	5	6708	105	3
V	µF	KEMET/EIA	(See below for part options)	(µA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
Rated Voltage	Rated Capacitance	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temperature	Moisture Sensitivity

(1) To complete KEMET part number, insert M for ±20%, K for ±10%. Designates capacitance tolerance.
 (2) To complete KEMET part number, H = Solder Plated, T = 100% Tin (Sn). Designates termination finish.
 (3) To complete KEMET part number, insert E = None, S = 10 cycles +25°C, W = 10 cycles -55°C +85°C. Designates surge current option.
 (4) To complete KEMET part number, insert the ESR in mΩ, for example 50 mΩ = 050. Designates ESR option.
 Refer to Ordering Information for additional detail.

Table 1 – Ratings & Part Number Reference cont'd

Rated Voltage	Rated Cap	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temp	Moisture Sensitivity
V	µF	KEMET/EIA	(See below for part options)	(µA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
4	330	D/7343-31	T543D337(1)004A(2)(3)(4)	132	10	6	6124	105	3
4	330	D/7343-31	T543D337(1)004A(2)(3)(4)	132	10	7	5669	105	3
4	330	D/7343-31	T543D337(1)004A(2)(3)(4)	132	10	9	5000	105	3
4	330	D/7343-31	T543D337(1)004A(2)(3)(4)	132	10	10	4743	105	3
4	330	D/7343-31	T543D337(1)004A(2)(3)(4)	132	10	12	4330	105	3
4	330	D/7343-31	T543D337(1)004A(2)(3)(4)	132	10	15	3873	105	3
4	330	D/7343-31	T543D337(1)004A(2)(3)(4)	132	10	25	3000	105	3
4	330	D/7343-31	T543D337(1)004A(2)(3)(4)	132	10	40	2372	105	3
4	330	D/7343-31	T543D337(1)004A(2)(3)(4)	132	10	45	2236	105	3
4	470	D/7343-31	T543D477(1)004A(2)(3)(4)	188	10	6	6124	105	3
4	470	D/7343-31	T543D477(1)004A(2)(3)(4)	188	10	10	4743	105	3
4	470	D/7343-31	T543D477(1)004A(2)(3)(4)	188	10	12	4330	105	3
4	470	D/7343-31	T543D477(1)004A(2)(3)(4)	188	10	15	3873	105	3
4	470	D/7343-31	T543D477(1)004A(2)(3)(4)	188	10	18	3536	105	3
4	470	D/7343-31	T543D477(1)004A(2)(3)(4)	188	10	25	3000	105	3
4	470	D/7343-31	T543D477(1)004A(2)(3)(4)	188	10	40	2372	105	3
4	470	Y/7343-40	T543Y477(1)004A(2)(3)(4)	188	10	5	6943	105	3
4	470	Y/7343-40	T543Y477(1)004A(2)(3)(4)	188	10	6	6338	105	3
4	470	Y/7343-40	T543Y477(1)004A(2)(3)(4)	188	10	10	4909	105	3
4	470	Y/7343-40	T543Y477(1)004A(2)(3)(4)	188	10	25	3105	105	3
4	470	Y/7343-40	T543Y477(1)004A(2)(3)(4)	188	10	40	2455	105	3
4	680	D-7343-31	T543D687(1)004A(2)(3)(4)	272	10	25	3000	105	3
4	680	Y/7343-40	T543Y687(1)004A(2)(3)(4)	272	10	5	6943	105	3
4	680	Y/7343-40	T543Y687(1)004A(2)(3)(4)	272	10	10	4909	105	3
4	680	Y/7343-40	T543Y687(1)004A(2)(3)(4)	272	10	15	4008	105	3
4	680	Y/7343-40	T543Y687(1)004A(2)(3)(4)	272	10	25	3105	105	3
4	680	X/7343-43	T543X687(1)004A(2)(3)(4)	272	10	5	7029	105	3
4	680	X/7343-43	T543X687(1)004A(2)(3)(4)	272	10	6	6416	105	3
4	680	X/7343-43	T543X687(1)004A(2)(3)(4)	272	10	10	4970	105	3
4	680	X/7343-43	T543X687(1)004A(2)(3)(4)	272	10	15	4058	105	3
4	680	X/7343-43	T543X687(1)004A(2)(3)(4)	272	10	35	2657	105	3
4	1000	X/7343-43	T543X108(1)004A(2)(3)(4)	400	10	6	6416	105	3
4	1000	X/7343-43	T543X108(1)004A(2)(3)(4)	400	10	10	4970	105	3
6.3	15	T/3528-12	T543T156(1)006A(2)(3)(4)	9	8	100	1025	105	3
6.3	22	A/3216-18	T543A226(1)006A(2)(3)(4)	14	8	90	1116	105	3
6.3	22	A/3216-18	T543A226(1)006A(2)(3)(4)	14	8	100	1058	105	3
6.3	33	A/3216-18	T543A336(1)006A(2)(3)(4)	21	8	70	1265	105	3
6.3	33	A/3216-18	T543A336(1)006A(2)(3)(4)	21	8	80	1183	105	3
6.3	33	A/3216-18	T543A336(1)006A(2)(3)(4)	21	8	120	966	105	3
6.3	33	T/3528-12	T543T336(1)006A(2)(3)(4)	21	8	70	1225	105	3
6.3	33	B/3528-21	T543B336(1)006A(2)(3)(4)	21	8	25	2254	105	3
6.3	33	B/3528-21	T543B336(1)006A(2)(3)(4)	21	8	35	1905	105	3
6.3	33	B/3528-21	T543B336(1)006A(2)(3)(4)	21	8	40	1782	105	3
6.3	33	B/3528-21	T543B336(1)006A(2)(3)(4)	21	8	70	1347	105	3
6.3	33	B/3528-21	T543B336(1)006A(2)(3)(4)	21	8	80	1260	105	3
6.3	33	C/6032-28	T543C336(1)006A(2)(3)(4)	21	8	100	1285	105	3
6.3	47	A/3216-18	T543A476(1)006A(2)(3)(4)	30	8	150	864	105	3
6.3	47	T/3528-12	T543T476(1)006A(2)(3)(4)	30	8	70	1225	105	3
6.3	47	T/3528-12	T543T476(1)006A(2)(3)(4)	30	8	80	1146	105	3
6.3	47	B/3528-21	T543B476(1)006A(2)(3)(4)	30	8	25	2254	105	3
6.3	47	B/3528-21	T543B476(1)006A(2)(3)(4)	30	8	35	1905	105	3
V	µF	KEMET/EIA	(See below for part options)	(µA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
Rated Voltage	Rated Capacitance	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temperature	Moisture Sensitivity

(1) To complete KEMET part number, insert M for ±20%, K for ±10%. Designates capacitance tolerance.
 (2) To complete KEMET part number, H = Solder Plated, T = 100% Tin (Sn). Designates termination finish.
 (3) To complete KEMET part number, insert E = None, S = 10 cycles +25°C, W = 10 cycles -55°C +85°C. Designates surge current option.
 (4) To complete KEMET part number, insert the ESR in mΩ, for example 50 mΩ = 050. Designates ESR option.
 Refer to Ordering Information for additional detail.

Table 1 – Ratings & Part Number Reference cont'd

Rated Voltage	Rated Cap	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temp	Moisture Sensitivity
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
6.3	47	B/3528-21	T543B476(1)006A(2)(3)(4)	30	8	40	1782	105	3
6.3	47	B/3528-21	T543B476(1)006A(2)(3)(4)	30	8	70	1347	105	3
6.3	47	B/3528-21	T543B476(1)006A(2)(3)(4)	30	8	80	1260	105	3
6.3	68	A/3216-18	T543A686(1)006A(2)(3)(4)	43	8	150	864	105	3
6.3	68	T/3528-12	T543T686(1)006A(2)(3)(4)	43	8	70	1225	105	3
6.3	68	T/3528-12	T543T686(1)006A(2)(3)(4)	43	8	150	837	105	3
6.3	68	B/3528-21	T543B686(1)006A(2)(3)(4)	43	8	25	2254	105	3
6.3	68	B/3528-21	T543B686(1)006A(2)(3)(4)	43	8	35	1905	105	3
6.3	68	B/3528-21	T543B686(1)006A(2)(3)(4)	43	8	40	1782	105	3
6.3	68	B/3528-21	T543B686(1)006A(2)(3)(4)	43	8	70	1347	105	3
6.3	68	B/3528-21	T543B686(1)006A(2)(3)(4)	43	8	80	1260	105	3
6.3	68	U/6032-15	T543U686(1)006A(2)(3)(4)	43	8	55	1567	105	3
6.3	68	U/6032-15	T543U686(1)006A(2)(3)(4)	43	8	70	1389	105	3
6.3	68	C/6032-28	T543C686(1)006A(2)(3)(4)	43	8	100	1285	105	3
6.3	100	T/3528-12	T543T107(1)006A(2)(3)(4)	63	8	70	1225	105	3
6.3	100	B/3528-21	T543B107(1)006A(2)(3)(4)	63	8	25	2254	105	3
6.3	100	B/3528-21	T543B107(1)006A(2)(3)(4)	63	8	35	1905	105	3
6.3	100	B/3528-21	T543B107(1)006A(2)(3)(4)	63	8	40	1782	105	3
6.3	100	B/3528-21	T543B107(1)006A(2)(3)(4)	63	8	45	1680	105	3
6.3	100	B/3528-21	T543B107(1)006A(2)(3)(4)	63	8	70	1347	105	3
6.3	100	U/6032-15	T543U107(1)006A(2)(3)(4)	63	8	55	1567	105	3
6.3	100	C/6032-28	T543C107(1)006A(2)(3)(4)	63	8	25	2569	105	3
6.3	100	C/6032-28	T543C107(1)006A(2)(3)(4)	63	8	45	1915	105	3
6.3	100	W/7343-15	T543W107(1)006A(2)(3)(4)	63	10	40	2121	105	3
6.3	100	V/7343-20	T543V107(1)006A(2)(3)(4)	63	10	15	3531	105	3
6.3	100	V/7343-20	T543V107(1)006A(2)(3)(4)	63	10	45	2039	105	3
6.3	120	B/3528-21	T543B127(1)006A(2)(3)(4)	76	8	35	1905	105	3
6.3	150	M/3528-15	T543M157(1)006A(2)(3)(4)	95	8	70	1309	105	3
6.3	150	M/3528-15	T543M157(1)006A(2)(3)(4)	95	8	150	894	105	3
6.3	150	B/3528-21	T543B157(1)006A(2)(3)(4)	95	8	25	2254	105	3
6.3	150	B/3528-21	T543B157(1)006A(2)(3)(4)	95	8	35	1905	105	3
6.3	150	B/3528-21	T543B157(1)006A(2)(3)(4)	95	8	45	1680	105	3
6.3	150	B/3528-21	T543B157(1)006A(2)(3)(4)	95	8	70	1347	105	3
6.3	150	U/6032-15	T543U157(1)006A(2)(3)(4)	95	8	40	1732	105	3
6.3	150	U/6032-15	T543U157(1)006A(2)(3)(4)	95	8	55	1567	105	3
6.3	150	L/6032-19	T543L157(1)006A(2)(3)(4)	95	8	12	3536	105	3
6.3	150	L/6032-19	T543L157(1)006A(2)(3)(4)	95	8	25	2449	105	3
6.3	150	C/6032-28	T543C157(1)006A(2)(3)(4)	95	8	15	3317	105	3
6.3	150	C/6032-28	T543C157(1)006A(2)(3)(4)	95	8	25	2569	105	3
6.3	150	C/6032-28	T543C157(1)006A(2)(3)(4)	95	8	45	1915	105	3
6.3	150	C/6032-28	T543C157(1)006A(2)(3)(4)	95	8	55	1732	105	3
6.3	150	W/7343-15	T543W157(1)006A(2)(3)(4)	95	10	25	2683	105	3
6.3	150	W/7343-15	T543W157(1)006A(2)(3)(4)	95	10	40	2121	105	3
6.3	150	V/7343-20	T543V157(1)006A(2)(3)(4)	95	10	15	3531	105	3
6.3	150	V/7343-20	T543V157(1)006A(2)(3)(4)	95	10	18	3223	105	3
6.3	150	V/7343-20	T543V157(1)006A(2)(3)(4)	95	10	25	2735	105	3
6.3	150	V/7343-20	T543V157(1)006A(2)(3)(4)	95	10	40	2162	105	3
6.3	150	V/7343-20	T543V157(1)006A(2)(3)(4)	95	10	45	2039	105	3
6.3	150	D/7343-31	T543D157(1)006A(2)(3)(4)	95	10	15	3873	105	3
6.3	150	D/7343-31	T543D157(1)006A(2)(3)(4)	95	10	25	3000	105	3
6.3	150	D/7343-31	T543D157(1)006A(2)(3)(4)	95	10	55	2023	105	3
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
Rated Voltage	Rated Capacitance	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temperature	Moisture Sensitivity

(1) To complete KEMET part number, insert M for ±20%, K for ±10%. Designates capacitance tolerance.
 (2) To complete KEMET part number, H = Solder Plated, T = 100% Tin (Sn). Designates termination finish.
 (3) To complete KEMET part number, insert E = None, S = 10 cycles +25°C, W = 10 cycles -55°C +85°C. Designates surge current option.
 (4) To complete KEMET part number, insert the ESR in mΩ, for example 50 mΩ = 050. Designates ESR option.
 Refer to Ordering Information for additional detail.

Table 1 – Ratings & Part Number Reference cont'd

Rated Voltage	Rated Cap	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temp	Moisture Sensitivity
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
6.3	220	B/3528-21	T543B227(1)006A(2)(3)(4)	139	8	35	1905	105	3
6.3	220	B/3528-21	T543B227(1)006A(2)(3)(4)	139	8	45	1680	105	3
6.3	220	B/3528-21	T543B227(1)006A(2)(3)(4)	139	8	70	1347	105	3
6.3	220	C/6032-28	T543C227(1)006A(2)(3)(4)	139	8	15	3317	105	3
6.3	220	C/6032-28	T543C227(1)006A(2)(3)(4)	139	8	18	3028	105	3
6.3	220	C/6032-28	T543C227(1)006A(2)(3)(4)	139	8	25	2569	105	3
6.3	220	C/6032-28	T543C227(1)006A(2)(3)(4)	139	8	45	1915	105	3
6.3	220	V/7343-20	T543V227(1)006A(2)(3)(4)	139	10	18	3223	105	3
6.3	220	V/7343-20	T543V227(1)006A(2)(3)(4)	139	10	25	2735	105	3
6.3	220	V/7343-20	T543V227(1)006A(2)(3)(4)	139	10	40	2162	105	3
6.3	220	D/7343-31	T543D227(1)006A(2)(3)(4)	139	10	5	6708	105	3
6.3	220	D/7343-31	T543D227(1)006A(2)(3)(4)	139	10	6	6124	105	3
6.3	220	D/7343-31	T543D227(1)006A(2)(3)(4)	139	10	7	5669	105	3
6.3	220	D/7343-31	T543D227(1)006A(2)(3)(4)	139	10	9	5000	105	3
6.3	220	D/7343-31	T543D227(1)006A(2)(3)(4)	139	10	10	4743	105	3
6.3	220	D/7343-31	T543D227(1)006A(2)(3)(4)	139	10	15	3873	105	3
6.3	220	D/7343-31	T543D227(1)006A(2)(3)(4)	139	10	18	3536	105	3
6.3	220	D/7343-31	T543D227(1)006A(2)(3)(4)	139	10	25	3000	105	3
6.3	220	D/7343-31	T543D227(1)006A(2)(3)(4)	139	10	40	2372	105	3
6.3	220	D/7343-31	T543D227(1)006A(2)(3)(4)	139	10	50	2121	105	3
6.3	330	V/7343-20	T543V337(1)006A(2)(3)(4)	208	10	15	3531	105	3
6.3	330	V/7343-20	T543V337(1)006A(2)(3)(4)	208	10	18	3223	105	3
6.3	330	V/7343-20	T543V337(1)006A(2)(3)(4)	208	10	25	2735	105	3
6.3	330	V/7343-20	T543V337(1)006A(2)(3)(4)	208	10	40	2162	105	3
6.3	330	V/7343-20	T543V337(1)006A(2)(3)(4)	208	10	45	2039	105	3
6.3	330	D/7343-31	T543D337(1)006A(2)(3)(4)	208	10	6	6124	105	3
6.3	330	D/7343-31	T543D337(1)006A(2)(3)(4)	208	10	9	5000	105	3
6.3	330	D/7343-31	T543D337(1)006A(2)(3)(4)	208	10	10	4743	105	3
6.3	330	D/7343-31	T543D337(1)006A(2)(3)(4)	208	10	15	3873	105	3
6.3	330	D/7343-31	T543D337(1)006A(2)(3)(4)	208	10	18	3536	105	3
6.3	330	D/7343-31	T543D337(1)006A(2)(3)(4)	208	10	25	3000	105	3
6.3	330	D/7343-31	T543D337(1)006A(2)(3)(4)	208	10	40	2372	105	3
6.3	330	D/7343-31	T543D337(1)006A(2)(3)(4)	208	10	45	2236	105	3
6.3	330	Y/7343-40	T543Y337(1)006A(2)(3)(4)	208	10	5	6943	105	3
6.3	330	Y/7343-40	T543Y337(1)006A(2)(3)(4)	208	10	6	6338	105	3
6.3	330	Y/7343-40	T543Y337(1)006A(2)(3)(4)	208	10	10	4909	105	3
6.3	330	Y/7343-40	T543Y337(1)006A(2)(3)(4)	208	10	15	4008	105	3
6.3	330	Y/7343-40	T543Y337(1)006A(2)(3)(4)	208	10	25	3105	105	3
6.3	330	Y/7343-40	T543Y337(1)006A(2)(3)(4)	208	10	40	2455	105	3
6.3	470	W/7343-15	T543W477(1)006A(2)(3)(4)	296	10	55	1809	85	3
6.3	470	V/7343-20	T543V477(1)006A(2)(3)(4)	296	10	55	1844	85	3
6.3	470	D-7343-31	T543D477(1)006A(2)(3)(4)	296	10	15	3873	105	3
6.3	470	D-7343-31	T543D477(1)006A(2)(3)(4)	296	10	25	3000	105	3
6.3	470	D-7343-31	T543D477(1)006A(2)(3)(4)	296	10	30	2739	105	3
6.3	470	Y/7343-40	T543Y477(1)006A(2)(3)(4)	296	10	5	6943	105	3
6.3	470	Y/7343-40	T543Y477(1)006A(2)(3)(4)	296	10	10	4909	105	3
6.3	470	Y/7343-40	T543Y477(1)006A(2)(3)(4)	296	10	15	4008	105	3
6.3	470	Y/7343-40	T543Y477(1)006A(2)(3)(4)	296	10	18	3659	105	3
6.3	470	Y/7343-40	T543Y477(1)006A(2)(3)(4)	296	10	25	3105	105	3
6.3	470	Y/7343-40	T543Y477(1)006A(2)(3)(4)	296	10	35	2624	105	3
6.3	470	X/7343-43	T543X477(1)006A(2)(3)(4)	296	10	5	7029	105	3
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
Rated Voltage	Rated Capacitance	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temperature	Moisture Sensitivity

(1) To complete KEMET part number, insert M for ±20%, K for ±10%. Designates capacitance tolerance.
 (2) To complete KEMET part number, H = Solder Plated, T = 100% Tin (Sn). Designates termination finish.
 (3) To complete KEMET part number, insert E = None, S = 10 cycles +25°C, W = 10 cycles -55°C +85°C. Designates surge current option.
 (4) To complete KEMET part number, insert the ESR in mΩ, for example 50 mΩ = 050. Designates ESR option.
 Refer to Ordering Information for additional detail.

Table 1 – Ratings & Part Number Reference cont'd

Rated Voltage	Rated Cap	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temp	Moisture Sensitivity
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
6.3	470	X/7343-43	T543X477(1)006A(2)(3)(4)	296	10	6	6416	105	3
6.3	470	X/7343-43	T543X477(1)006A(2)(3)(4)	296	10	10	4970	105	3
6.3	470	X/7343-43	T543X477(1)006A(2)(3)(4)	296	10	18	3704	105	3
6.3	470	X/7343-43	T543X477(1)006A(2)(3)(4)	296	10	35	2657	105	3
6.3	470	X/7343-43	T543X477(1)006A(2)(3)(4)	296	10	40	2485	105	3
6.3	680	X/7343-43	T543X687(1)006A(2)(3)(4)	428	10	10	4970	105	3
6.3	680	X/7343-43	T543X687(1)006A(2)(3)(4)	428	10	18	3704	105	3
6.3	1000	H/7360-20	T543H108(1)006A(2)(3)(4)	630	20	55	1844	85	4
6.3	1500	H/7360-20	T543H158(1)006A(2)(3)(4)	945	20	55	1844	85	4
8	33	T/3528-12	T543T336(1)008A(2)(3)(4)	26	8	70	1225	105	3
8	33	T/3528-12	T543T336(1)008A(2)(3)(4)	26	8	80	1146	105	3
8	33	B/3528-21	T543B336(1)008A(2)(3)(4)	26	8	25	2254	105	3
8	33	B/3528-21	T543B336(1)008A(2)(3)(4)	26	8	35	1905	105	3
8	33	B/3528-21	T543B336(1)008A(2)(3)(4)	26	8	40	1782	105	3
8	33	B/3528-21	T543B336(1)008A(2)(3)(4)	26	8	70	1347	105	3
8	33	U/6032-15	T543U336(1)008A(2)(3)(4)	26	8	70	1389	105	3
8	47	B/3528-21	T543B476(1)008A(2)(3)(4)	38	8	35	1905	105	3
8	47	B/3528-21	T543B476(1)008A(2)(3)(4)	38	8	70	1347	105	3
8	150	V/7343-20	T543V157(1)008A(2)(3)(4)	120	10	40	2162	105	3
8	150	D/7343-31	T543D157(1)008A(2)(3)(4)	120	10	25	3000	105	3
8	150	D/7343-31	T543D157(1)008A(2)(3)(4)	120	10	40	2372	105	3
8	150	D/7343-31	T543D157(1)008A(2)(3)(4)	120	10	55	2023	105	3
10	10	A/3216-18	T543A106(1)010A(2)(3)(4)	10	8	80	1183	105	3
10	15	A/3216-18	T543A156(1)010A(2)(3)(4)	15	8	80	1183	105	3
10	22	A/3216-18	T543A226(1)010A(2)(3)(4)	22	8	80	1183	105	3
10	22	B/3528-21	T543B226(1)010A(2)(3)(4)	22	8	80	1260	105	3
10	33	T/3528-12	T543T336(1)010A(2)(3)(4)	33	8	70	1225	105	3
10	33	T/3528-12	T543T336(1)010A(2)(3)(4)	33	8	80	1146	105	3
10	33	B/3528-21	T543B336(1)010A(2)(3)(4)	33	8	25	2254	105	3
10	33	B/3528-21	T543B336(1)010A(2)(3)(4)	33	8	35	1905	105	3
10	33	B/3528-21	T543B336(1)010A(2)(3)(4)	33	8	40	1782	105	3
10	33	B/3528-21	T543B336(1)010A(2)(3)(4)	33	8	70	1347	105	3
10	33	B/3528-21	T543B336(1)010A(2)(3)(4)	33	8	80	1260	105	3
10	33	U/6032-15	T543U336(1)010A(2)(3)(4)	33	8	70	1389	105	3
10	47	B/3528-21	T543B476(1)010A(2)(3)(4)	47	8	35	1905	105	3
10	47	B/3528-21	T543B476(1)010A(2)(3)(4)	47	8	70	1347	105	3
10	47	U/6032-15	T543U476(1)010A(2)(3)(4)	47	8	55	1567	105	3
10	47	C/6032-28	T543C476(1)010A(2)(3)(4)	47	8	100	1285	105	3
10	68	U/6032-15	T543U686(1)010A(2)(3)(4)	68	8	55	1567	105	3
10	68	C/6032-28	T543C686(1)010A(2)(3)(4)	68	8	45	1915	105	3
10	68	W/7343-15	T543W686(1)010A(2)(3)(4)	68	10	25	2683	105	3
10	68	W/7343-15	T543W686(1)010A(2)(3)(4)	68	10	40	2121	105	3
10	68	V/7343-20	T543V686(1)010A(2)(3)(4)	68	10	25	2735	105	3
10	68	V/7343-20	T543V686(1)010A(2)(3)(4)	68	10	40	2162	105	3
10	68	V/7343-20	T543V686(1)010A(2)(3)(4)	68	10	45	2039	105	3
10	68	V/7343-20	T543V686(1)010A(2)(3)(4)	68	10	60	1765	105	3
10	68	V/7343-20	T543V686(1)010A(2)(3)(4)	68	10	100	1367	105	3
10	68	D/7343-31	T543D686(1)010A(2)(3)(4)	68	10	100	1500	105	3
10	100	L/6032-19	T543L107(1)010A(2)(3)(4)	100	8	25	2449	105	3
10	100	C/6032-28	T543C107(1)010A(2)(3)(4)	100	8	25	2569	105	3
10	100	C/6032-28	T543C107(1)010A(2)(3)(4)	100	8	45	1915	105	3
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
Rated Voltage	Rated Capacitance	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temperature	Moisture Sensitivity

(1) To complete KEMET part number, insert M for ±20%, K for ±10%. Designates capacitance tolerance.
 (2) To complete KEMET part number, H = Solder Plated, T = 100% Tin (Sn). Designates termination finish.
 (3) To complete KEMET part number, insert E = None, S = 10 cycles +25°C, W = 10 cycles -55°C +85°C. Designates surge current option.
 (4) To complete KEMET part number, insert the ESR in mΩ, for example 50 mΩ = 050. Designates ESR option.
 Refer to Ordering Information for additional detail.

Table 1 – Ratings & Part Number Reference cont'd

Rated Voltage	Rated Cap	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temp	Moisture Sensitivity
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
10	100	W/7343-15	T543W107(1)010A(2)(3)(4)	100	10	40	2121	105	3
10	100	V/7343-20	T543V107(1)010A(2)(3)(4)	100	10	18	3223	105	3
10	100	V/7343-20	T543V107(1)010A(2)(3)(4)	100	10	25	2735	105	3
10	100	V/7343-20	T543V107(1)010A(2)(3)(4)	100	10	45	2039	105	3
10	100	V/7343-20	T543V107(1)010A(2)(3)(4)	100	10	50	1934	105	3
10	100	D/7343-31	T543D107(1)010A(2)(3)(4)	100	10	18	3536	105	3
10	100	D/7343-31	T543D107(1)010A(2)(3)(4)	100	10	25	3000	105	3
10	100	D/7343-31	T543D107(1)010A(2)(3)(4)	100	10	55	2023	105	3
10	100	D/7343-31	T543D107(1)010A(2)(3)(4)	100	10	80	1677	105	3
10	150	C/6032-28	T543C157(1)010A(2)(3)(4)	150	8	55	1732	105	3
10	150	V/7343-20	T543V157(1)010A(2)(3)(4)	150	10	25	2735	105	3
10	150	V/7343-20	T543V157(1)010A(2)(3)(4)	150	10	40	2162	105	3
10	150	D/7343-31	T543D157(1)010A(2)(3)(4)	150	10	5	6708	105	3
10	150	D/7343-31	T543D157(1)010A(2)(3)(4)	150	10	6	6124	105	3
10	150	D/7343-31	T543D157(1)010A(2)(3)(4)	150	10	10	4743	105	3
10	150	D/7343-31	T543D157(1)010A(2)(3)(4)	150	10	15	3873	105	3
10	150	D/7343-31	T543D157(1)010A(2)(3)(4)	150	10	18	3536	105	3
10	150	D/7343-31	T543D157(1)010A(2)(3)(4)	150	10	25	3000	105	3
10	150	D/7343-31	T543D157(1)010A(2)(3)(4)	150	10	40	2372	105	3
10	150	D/7343-31	T543D157(1)010A(2)(3)(4)	150	10	55	2023	105	3
10	150	Y/7343-40	T543Y157(1)010A(2)(3)(4)	150	10	25	3105	105	3
10	150	Y/7343-40	T543Y157(1)010A(2)(3)(4)	150	10	18	3659	105	3
10	150	Y/7343-40	T543Y157(1)010A(2)(3)(4)	150	10	25	3105	105	3
10	220	V/7343-20	T543V227(1)010A(2)(3)(4)	220	10	25	2735	105	3
10	220	V/7343-20	T543V227(1)010A(2)(3)(4)	220	10	45	2039	105	3
10	220	D/7343-31	T543D227(1)010A(2)(3)(4)	220	10	6	6124	105	3
10	220	D/7343-31	T543D227(1)010A(2)(3)(4)	220	10	10	4743	105	3
10	220	D/7343-31	T543D227(1)010A(2)(3)(4)	220	10	18	3536	105	3
10	220	D/7343-31	T543D227(1)010A(2)(3)(4)	220	10	25	3000	105	3
10	220	D/7343-31	T543D227(1)010A(2)(3)(4)	220	10	40	2372	105	3
10	220	Y/7343-40	T543Y227(1)010A(2)(3)(4)	220	10	6	6338	105	3
10	220	Y/7343-40	T543Y227(1)010A(2)(3)(4)	220	10	10	4909	105	3
10	220	Y/7343-40	T543Y227(1)010A(2)(3)(4)	220	10	40	2455	105	3
10	330	Y/7343-40	T543Y337(1)010A(2)(3)(4)	330	10	15	4008	105	3
10	330	Y/7343-40	T543Y337(1)010A(2)(3)(4)	330	10	35	2624	105	3
10	330	X/7343-43	T543X337(1)010A(2)(3)(4)	330	10	5	7029	105	3
10	330	X/7343-43	T543X337(1)010A(2)(3)(4)	330	10	6	6416	105	3
10	330	X/7343-43	T543X337(1)010A(2)(3)(4)	330	10	10	4970	105	3
10	330	X/7343-43	T543X337(1)010A(2)(3)(4)	330	10	25	3143	105	3
10	330	X/7343-43	T543X337(1)010A(2)(3)(4)	330	10	40	2485	105	3
12.5	10	T/3528-12	T543T106(1)12RA(2)(3)(4)	13	8	150	837	105	3
12.5	15	T/3528-12	T543T156(1)12RA(2)(3)(4)	19	8	80	1146	105	3
12.5	330	X/7343-43	T543X337(1)12RA(2)(3)(4)	413	10	15	4058	105	3
16	10	B/3528-21	T543B106(1)016A(2)(3)(4)	16	8	100	1127	105	3
16	22	C/6032-28	T543C226(1)016A(2)(3)(4)	35	8	80	1436	105	3
16	33	W/7343-15	T543W336(1)016A(2)(3)(4)	53	10	45	2000	105	3
16	33	V/7343-20	T543V336(1)016A(2)(3)(4)	53	10	45	2039	105	3
16	33	V/7343-20	T543V336(1)016A(2)(3)(4)	53	10	60	1765	105	3
16	33	V/7343-20	T543V336(1)016A(2)(3)(4)	53	10	70	1634	105	3
16	47	W/7343-15	T543W476(1)016A(2)(3)(4)	75	10	45	2000	105	3
16	47	V/7343-20	T543V476(1)016A(2)(3)(4)	75	10	45	2039	105	3
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
Rated Voltage	Rated Capacitance	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temperature	Moisture Sensitivity

(1) To complete KEMET part number, insert M for ±20%, K for ±10%. Designates capacitance tolerance.
 (2) To complete KEMET part number, H = Solder Plated, T = 100% Tin (Sn). Designates termination finish.
 (3) To complete KEMET part number, insert E = None, S = 10 cycles +25°C, W = 10 cycles -55°C +85°C. Designates surge current option.
 (4) To complete KEMET part number, insert the ESR in mΩ, for example 50 mΩ = 050. Designates ESR option.
 Refer to Ordering Information for additional detail.

Table 1 – Ratings & Part Number Reference cont'd

Rated Voltage	Rated Cap	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temp	Moisture Sensitivity
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
16	47	V/7343-20	T543V476(1)016A(2)(3)(4)	75	10	70	1634	105	3
16	47	V/7343-20	T543V476(1)016A(2)(3)(4)	75	10	80	1529	105	3
16	47	D/7343-31	T543D476(1)016A(2)(3)(4)	75	10	35	2535	105	3
16	47	D/7343-31	T543D476(1)016A(2)(3)(4)	75	10	65	1861	105	3
16	47	D/7343-31	T543D476(1)016A(2)(3)(4)	75	10	70	1793	105	3
16	68	V/7343-20	T543V686(1)016A(2)(3)(4)	109	10	50	1934	105	3
16	68	V/7343-20	T543V686(1)016A(2)(3)(4)	109	10	90	1441	105	3
16	100	V/7343-20	T543V107(1)016A(2)(3)(4)	160	10	50	1934	105	3
16	100	D/7343-31	T543D107(1)016A(2)(3)(4)	160	10	35	2535	105	3
16	100	D/7343-31	T543D107(1)016A(2)(3)(4)	160	10	50	2121	105	3
16	150	X/7343-43	T543X157(1)016A(2)(3)(4)	240	10	15	4058	105	3
16	150	X/7343-43	T543X157(1)016A(2)(3)(4)	240	10	25	3143	105	3
16	150	X/7343-43	T543X157(1)016A(2)(3)(4)	240	10	40	2485	105	3
16	150	X/7343-43	T543X157(1)016A(2)(3)(4)	240	10	80	1757	105	3
16	220	X/7343-43	T543X227(1)016A(2)(3)(4)	352	10	35	2657	105	3
16	220	X/7343-43	T543X227(1)016A(2)(3)(4)	352	10	80	1757	105	3
16	330	X/7343-43	T543X337(1)016A(2)(3)(4)	528	10	25	3143	105	3
16	330	X/7343-43	T543X337(1)016A(2)(3)(4)	528	10	50	2223	105	3
20	22	V/7343-20	T543V226(1)020A(2)(3)(4)	44	10	40	2162	105	3
20	22	V/7343-20	T543V226(1)020A(2)(3)(4)	44	10	45	2039	105	3
20	22	V/7343-20	T543V226(1)020A(2)(3)(4)	44	10	90	1441	105	3
20	22	D/7343-31	T543D226(1)020A(2)(3)(4)	44	10	40	2372	105	3
20	22	D/7343-31	T543D226(1)020A(2)(3)(4)	44	10	45	2236	105	3
20	22	D/7343-31	T543D226(1)020A(2)(3)(4)	44	10	90	1581	105	3
20	33	D/7343-31	T543D336(1)020A(2)(3)(4)	66	10	60	1936	105	3
20	47	V/7343-20	T543V476(1)020A(2)(3)(4)	94	10	55	1844	105	3
20	47	V/7343-20	T543V476(1)020A(2)(3)(4)	94	10	90	1441	105	3
20	47	D/7343-31	T543D476(1)020A(2)(3)(4)	94	10	55	2023	105	3
20	100	X/7343-43	T543X107(1)020A(2)(3)(4)	200	10	35	2657	105	3
20	100	X/7343-43	T543X107(1)020A(2)(3)(4)	200	10	50	2223	105	3
25	15	V/7343-20	T543V156(1)025A(2)(3)(4)	38	10	90	1441	105	3
25	15	D/7343-31	T543D156(1)025A(2)(3)(4)	38	10	60	1936	105	3
25	15	D/7343-31	T543D156(1)025A(2)(3)(4)	38	10	80	1677	105	3
25	22	V/7343-20	T543V226(1)025A(2)(3)(4)	55	10	60	1765	105	3
25	22	V/7343-20	T543V226(1)025A(2)(3)(4)	55	10	90	1441	105	3
25	33	V/7343-20	T543V336(1)025A(2)(3)(4)	83	10	60	1765	105	3
25	33	D/7343-31	T543D336(1)025A(2)(3)(4)	83	10	60	1936	105	3
25	68	X/7343-43	T543X686(1)025A(2)(3)(4)	170	10	35	2657	105	3
25	68	X/7343-43	T543X686(1)025A(2)(3)(4)	170	10	50	2223	105	3
25	100	X/7343-43	T543X107(1)025A(2)(3)(4)	250	10	60	2029	105	3
35	15	V/7343-20	T543V156(1)035A(2)(3)(4)	53	10	100	1367	105	3
35	15	V/7343-20	T543V156(1)035A(2)(3)(4)	53	10	125	1223	105	3
35	15	D/7343-31	T543D156(1)035A(2)(3)(4)	53	10	100	1500	105	3
35	15	D/7343-31	T543D156(1)035A(2)(3)(4)	53	10	125	1342	105	3
35	33	X/7343-43	T543X336(1)035A(2)(3)(4)	116	10	65	1949	105	3
35	47	X/7343-43	T543X476(1)035A(2)(3)(4)	165	10	30	2869	105	3
35	47	X/7343-43	T543X476(1)035A(2)(3)(4)	165	10	60	2029	105	3
50	5.6	D/7343-31	T543D565(1)050A(2)(3)(4)	28	10	70	1793	105	3
50	5.6	D/7343-31	T543D565(1)050A(2)(3)(4)	28	10	90	1581	105	3
50	10	D/7343-31	T543D106(1)050A(2)(3)(4)	50	10	90	1581	105	3
50	12	X/7343-43	T543X126(1)050A(2)(3)(4)	60	10	45	2343	105	3
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
Rated Voltage	Rated Capacitance	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temperature	Moisture Sensitivity

(1) To complete KEMET part number, insert M for ±20%, K for ±10%. Designates capacitance tolerance.
 (2) To complete KEMET part number, H = Solder Plated, T = 100% Tin (Sn). Designates termination finish.
 (3) To complete KEMET part number, insert E = None, S = 10 cycles +25°C, W = 10 cycles -55°C +85°C. Designates surge current option.
 (4) To complete KEMET part number, insert the ESR in mΩ, for example 50 mΩ = 050. Designates ESR option.
 Refer to Ordering Information for additional detail.

Table 1 – Ratings & Part Number Reference cont'd

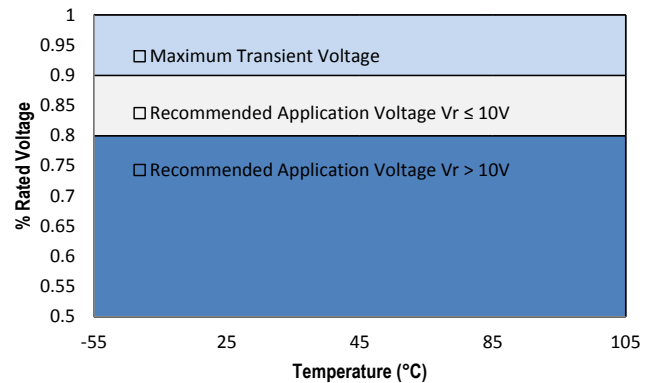
Rated Voltage	Rated Cap	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temp	Moisture Sensitivity
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
50	12	X/7343-43	T543X126(1)050A(2)(3)(4)	60	10	70	1878	105	3
50	18	X/7343-43	T543X186(1)050A(2)(3)(4)	90	10	35	2657	105	3
50	18	X/7343-43	T543X186(1)050A(2)(3)(4)	90	10	70	1878	105	3
50	22	X/7343-43	T543X226(1)050A(2)(3)(4)	110	10	40	2485	105	3
50	22	X/7343-43	T543X226(1)050A(2)(3)(4)	110	10	75	1815	105	3
50	33	X/7343-43	T543X336(1)050A(2)(3)(4)	165	10	40	2485	105	3
50	33	X/7343-43	T543X336(1)050A(2)(3)(4)	165	10	75	1815	105	3
50	10	D/7343-31	T543D106(1)050A(2)(3)(4)	50	10	100	1572	105	3
50	10	D/7343-31	T543D106(1)050A(2)(3)(4)	50	10	120	1435	105	3
50	18	X/7343-43	T543X186(1)050A(2)(3)(4)	90	10	70	1878	105	3
63	4.7	D/7343-31	T543D475(1)063A(2)(3)(4)	30	10	100	1572	105	3
63	4.7	D/7343-31	T543D475(1)063A(2)(3)(4)	30	10	120	1435	105	3
63	10	X/7343-43	T543X106(1)063A(2)(3)(4)	63	10	50	2223	105	3
63	10	X/7343-43	T543X106(1)063A(2)(3)(4)	63	10	75	1815	105	3
63	10	X/7343-43	T543X106(1)063A(2)(3)(4)	63	10	100	1572	105	3
63	10	X/7343-43	T543X106(1)063A(2)(3)(4)	63	10	150	1283	105	3
63	15	X/7343-43	T543X156(1)063A(2)(3)(4)	95	10	50	2223	105	3
V	μF	KEMET/EIA	(See below for part options)	(μA) @ V _R , 20°C Maximum/ 5 Minutes	% @ 20°C 120 Hz Maximum	(mΩ) @ 20°C 100 kHz Maximum	(mA) 45°C 100 kHz	(°C)	Temperature ≤ 260°C
Rated Voltage	Rated Capacitance	Case Code/ Case Size	KEMET Part Number	DC Leakage	DF	ESR	Maximum Allowable Ripple Current	Rated Temperature	Moisture Sensitivity

- (1) To complete KEMET part number, insert M for ±20%, K for ±10%. Designates capacitance tolerance.
 (2) To complete KEMET part number, H = Solder Plated, T = 100% Tin (Sn). Designates termination finish.
 (3) To complete KEMET part number, insert E = None, S = 10 cycles +25°C, W = 10 cycles -55°C +85°C. Designates surge current option.
 (4) To complete KEMET part number, insert the ESR in mΩ, for example 50 mΩ = 050. Designates ESR option.
 Refer to Ordering Information for additional detail.

Derating Guidelines

Voltage Rating	Maximum Recommended Steady State Voltage	Maximum Recommended Transient Voltage (1 ms – 1 μs)
-55°C to 105°C		
$2.5\text{ V} \leq V_R \leq 10\text{ V}$	90% of V_R	V_R
$12.5\text{ V} \leq V_R \leq 63\text{ V}$	80% of V_R	V_R

V_R = Rated Voltage



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		
$\leq 45^\circ\text{C}$	$45^\circ\text{C} < T \leq 85^\circ\text{C}$	$85^\circ\text{C} < T \leq 125^\circ\text{C}$
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.

$$I(max) = \sqrt{P_{max}/R}$$

$$E(max) = Z \sqrt{P_{max}/R}$$

I = rms ripple current (amperes)

E = rms ripple voltage (volts)

P_{max} = maximum power dissipation (watts)

R = ESR at specified frequency (ohms)

Z = Impedance at specified frequency (ohms)

Case Code	EIA Case Code	Maximum Power Dissipation (P_{max}) mWatts @ 45°C with $+30^\circ\text{C}$ Rise
T	3528-12	105
M	3528-15	120
A	3216-18	112
B	3528-21	127
U	6032-15	135
L	6032-19	150
C	6032-28	165
W	7343-15	180
V	7343-20	187
D	7343-31	225
Y	7343-40	241
X	7343-43	247
H	7360-20	187
I	3216-10	95

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

*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)				
		W	L	S	V1	V2	W	L	S	V1	V2	W	L	S	V1	V2
A	3216-18	1.35	2.20	0.62	6.02	2.80	1.23	1.80	0.82	4.92	2.30	1.13	1.42	0.98	4.06	2.04
B	3528-21	2.35	2.21	0.92	6.32	4.00	2.23	1.80	1.12	5.22	3.50	2.13	1.42	1.28	4.36	3.24
C	6032-25	2.35	2.77	2.37	8.92	4.50	2.23	2.37	2.57	7.82	4.00	2.13	1.99	2.73	6.96	3.74
D	7343-31	2.55	2.77	3.67	10.22	5.60	2.43	2.37	3.87	9.12	5.10	2.33	1.99	4.03	8.26	4.84
L	6032-19	2.35	2.77	2.37	8.92	4.50	2.23	2.37	2.57	7.82	4.00	2.13	1.99	2.73	6.96	3.74
M	3528-15	2.35	2.20	0.92	6.32	4.00	2.23	1.80	1.12	5.22	3.50	2.13	1.42	1.28	4.36	3.24
H	7360-20	4.25	2.77	3.67	10.22	7.30	4.13	2.37	3.87	9.12	6.80	4.03	1.99	4.03	8.26	6.54
E ¹	7360-38	4.25	2.77	3.67	10.22	7.30	4.13	2.37	3.87	9.12	6.80	4.03	1.99	4.03	8.26	6.54
Q	7343-12	2.55	2.77	3.67	10.22	5.60	2.43	2.37	3.87	9.12	5.10	2.33	1.99	4.03	8.26	4.84
R ²	2012-12	1.05	1.83	0.15	4.82	2.50	0.93	1.50	0.22	3.72	2.00	0.83	1.12	0.38	2.86	1.74
S ²	3216-12	1.35	2.20	0.62	6.02	2.80	1.23	1.80	0.82	4.92	2.30	1.13	1.42	0.98	4.06	2.04
T	3528-12	2.35	2.20	0.92	6.32	4.00	2.23	1.80	1.12	5.22	3.50	2.13	1.42	1.28	4.36	3.24
U	6032-15	2.35	2.77	2.37	8.92	4.50	2.23	2.37	2.57	7.82	4.00	2.13	1.99	2.73	6.96	3.74
V	7343-20	2.55	2.77	3.67	10.22	5.60	2.43	2.37	3.87	9.12	5.10	2.33	1.99	4.03	8.26	4.84
W	7343-15	2.55	2.77	3.67	10.22	5.60	2.43	2.37	3.87	9.12	5.10	2.33	1.99	4.03	8.26	4.84
X ¹	7343-43	2.55	2.77	3.67	10.22	5.60	2.43	2.37	3.87	9.12	5.10	2.33	1.99	4.03	8.26	4.84
Y ¹	7343-40	2.55	2.77	3.67	10.22	5.60	2.43	2.37	3.87	9.12	5.10	2.33	1.99	4.03	8.26	4.84

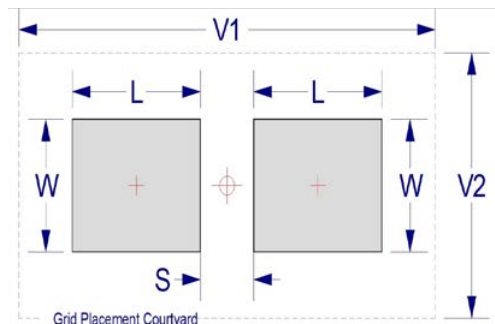
Density Level A: For low-density product applications. Recommended for wave solder applications and provides a wider process window for reflow solder processes.

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).

¹ Height of these chips may create problems in wave soldering.

² Land pattern geometry is too small for silkscreen outline.



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.

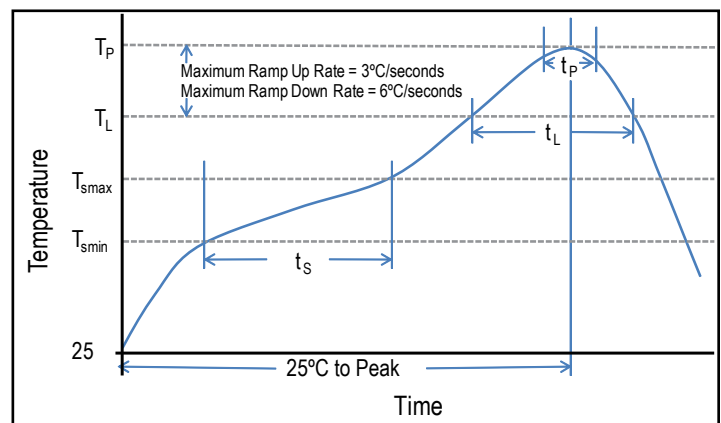
During typical reflow operations, a slight darkening of the gold-colored epoxy may be observed. This slight darkening is normal and not harmful to the product. Marking permanency is not affected by this change.

Profile Feature	SnPb Assembly	Pb-Free Assembly
Preheat/Soak		
Temperature Minimum (T_{Smin})	100°C	150°C
Temperature Maximum (T_{Smax})	150°C	200°C
Time (t_s) from T_{Smin} to T_{Smax}	60 – 120 seconds	60 – 120 seconds
Ramp-up Rate (T_L to T_P)	3°C/seconds maximum	3°C/seconds maximum
Liquidous Temperature (T_L)	183°C	217°C
Time Above Liquidous (t_L)	60 – 150 seconds	60 – 150 seconds
Peak Temperature (T_P)	220°C* 235°C**	250°C* 260°C**
Time within 5°C of Maximum Peak Temperature (t_p)	20 seconds maximum	30 seconds maximum
Ramp-down Rate (T_P to T_L)	6°C/seconds maximum	6°C/seconds maximum
Time 25°C to Peak Temperature	6 minutes maximum	8 minutes maximum

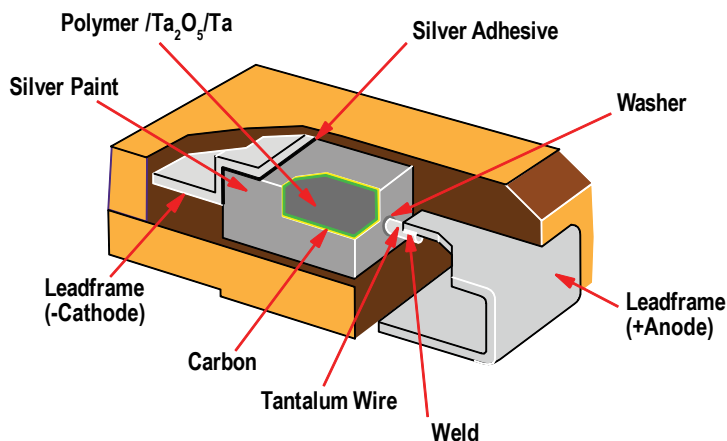
Note: All temperatures refer to the center of the package, measured on the package body surface that is facing up during assembly reflow.

*Case Size D, E, P, Y, and X

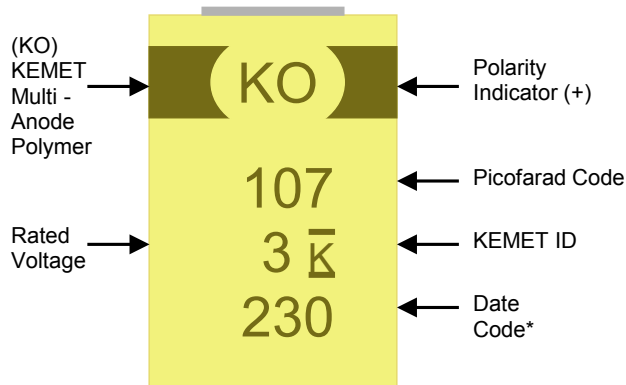
**Case Size A, B, C, H, I, K, M, R, S, T, U, V, W, and Z



Construction



Capacitor Marking



* 230 = 30th week of 2012

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

Storage

All KO-CAP Series are shipped in moisture barrier bags with a desiccant and moisture indicator card. These series are 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.

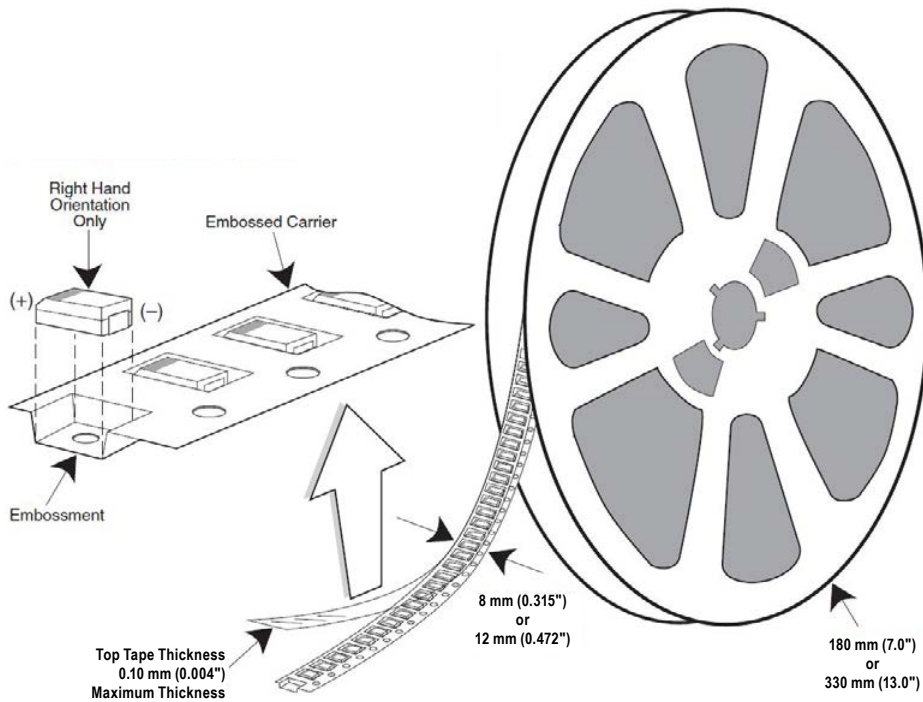


Table 3 – Packaging Quantity

Case Code		Tape Width (mm)	7" Reel*	13" Reel*
KEMET	EIA			
I	3216-10	8	3,000	12,000
S	3216-12	8	2,500	10,000
T	3528-12	8	2,500	10,000
M	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	7343-20	12	1,000	3,000
A	3216-18	8	2,000	9,000
B	3528-21	8	2,000	8,000
C	6032-28	12	500	3,000
D	7343-31	12	500	2,500
Y	7343-40	12	500	2,000
X	7343-43	12	500	2,000
E/T428P	7360-38	12	500	2,000
H	7360-20	12	1,000	2,500

* No C-Spec required for 7" reel packaging. C-7280 required for 13" reel packaging.

Figure 1 – Embossed (Plastic) Carrier Tape Dimensions

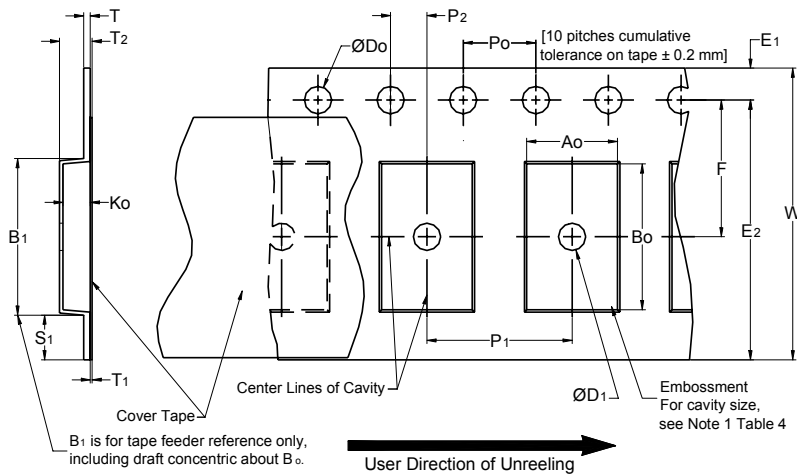


Table 4 – Embossed (Plastic) Carrier Tape Dimensions

Metric will govern

Constant Dimensions — Millimeters (Inches)									
Tape Size	D_0	D_1 Minimum Note 1	E_1	P_0	P_2	R Reference Note 2	S_1 Minimum Note 3	T Maximum	T_1 Maximum
8 mm	1.5 +0.10/-0.0 (0.059 +0.004/-0.0)	1.0 (0.039)	1.75 ±0.10 (0.069 ±0.004)	4.0 ±0.10 (0.157 ±0.004)	2.0 ±0.05 (0.079 ±0.002)	25.0 (0.984)	0.600 (0.024)	0.600 (0.024)	0.100 (0.004)
12 mm		1.5 (0.059)				30 (1.181)			
16 mm									
Variable Dimensions — Millimeters (Inches)									
Tape Size	Pitch	B_1 Maximum Note 4	E_2 Minimum	F	P_1	T_2 Maximum	W Maximum	A_0, B_0 & K_0	
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)	Note 5	
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)		
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)		

- 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.
- The tape, with or without components, shall pass around R without damage (see Figure 5).
- If $S_1 < 1.0$ mm, there may not be enough area for cover tape to be properly applied (see EIA Standard 481–D, paragraph 4.3, section b).
- B_1 dimension is a reference dimension for tape feeder clearance only.
- The cavity defined by A_0 , B_0 and K_0 shall surround the component with sufficient clearance that:
 - the component does not protrude above the top surface of the carrier tape.
 - the component can be removed from the cavity in a vertical direction without mechanical restriction, after the top cover tape has been removed.
 - 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).
 - 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).
 - see Addendum in EIA Standard 481–D 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° to 180° from the plane of the carrier tape. During peeling, the carrier and/or cover tape shall be pulled at a velocity of 300 ±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

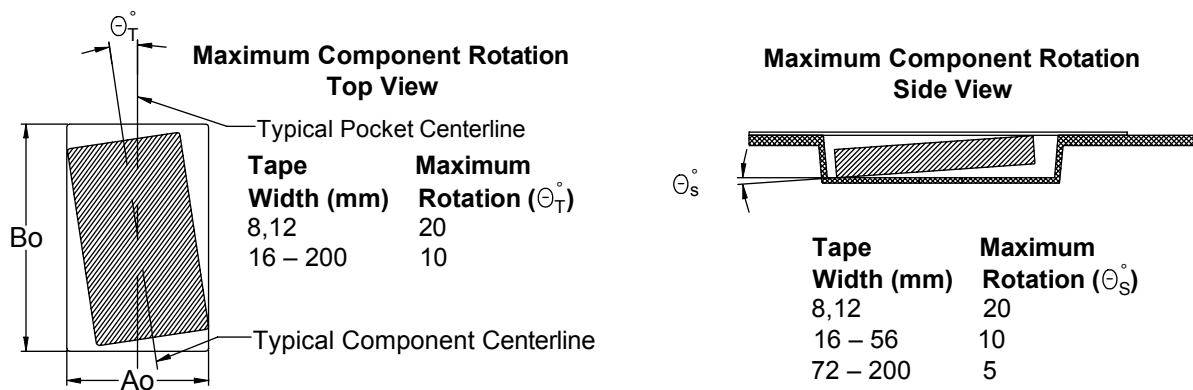


Figure 3 – Maximum Lateral Movement

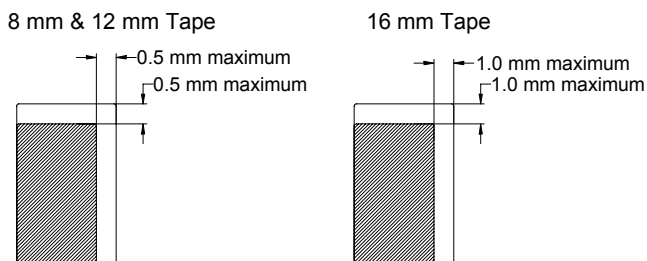


Figure 4 – Bending Radius

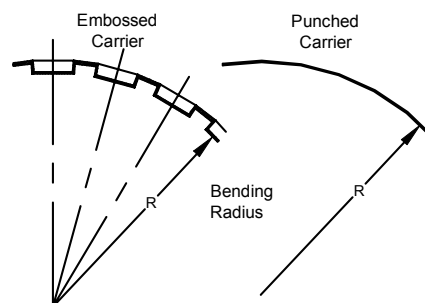
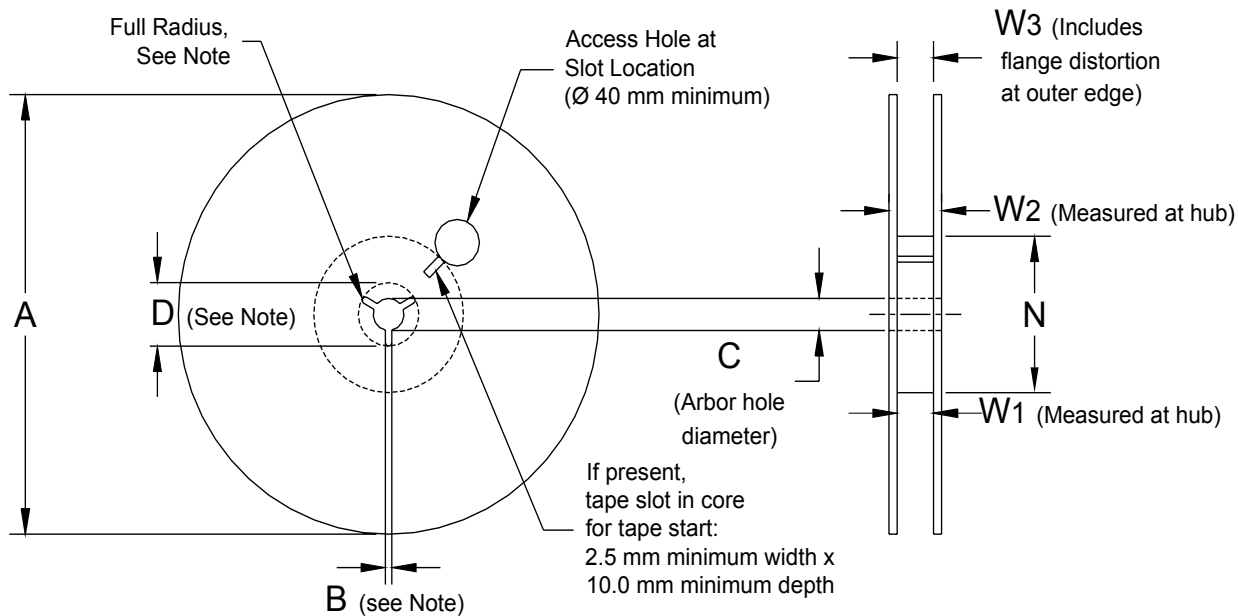


Figure 5 – Reel Dimensions



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	C	D Minimum
8 mm	178 ±0.20 (7.008 ±0.008) or 330 ±0.20 (13.000 ±0.008)	1.5 (0.059)	13.0 +0.5/-0.2 (0.521 +0.02/-0.008)	20.2 (0.795)
12 mm				
16 mm				
Variable Dimensions — Millimeters (Inches)				
Tape Size	N Minimum	W ₁	W ₂ Maximum	W ₃
8 mm	50 (1.969)	8.4 +1.5/-0.0 (0.331 +0.059/-0.0)	14.4 (0.567)	Shall accommodate tape width without interference
12 mm		12.4 +2.0/-0.0 (0.488 +0.078/-0.0)	18.4 (0.724)	
16 mm		16.4 +2.0/-0.0 (0.646 +0.078/-0.0)	22.4 (0.882)	

Figure 6 – Tape Leader & Trailer Dimensions

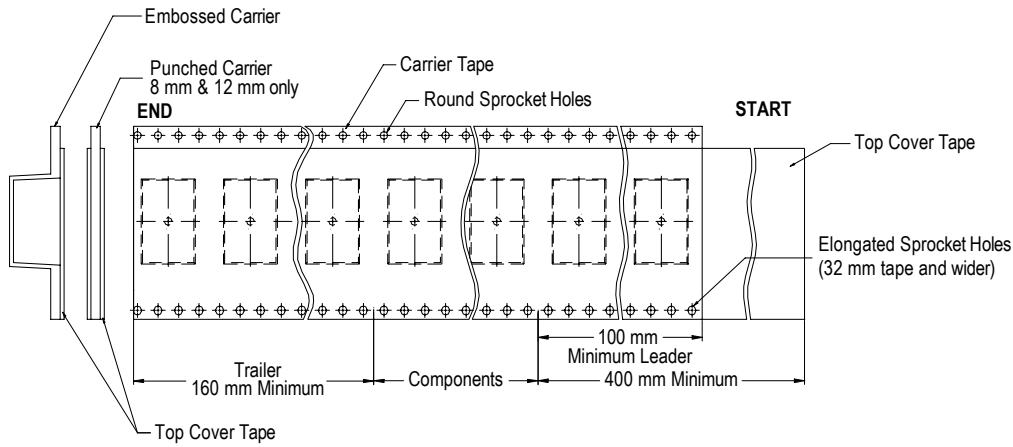
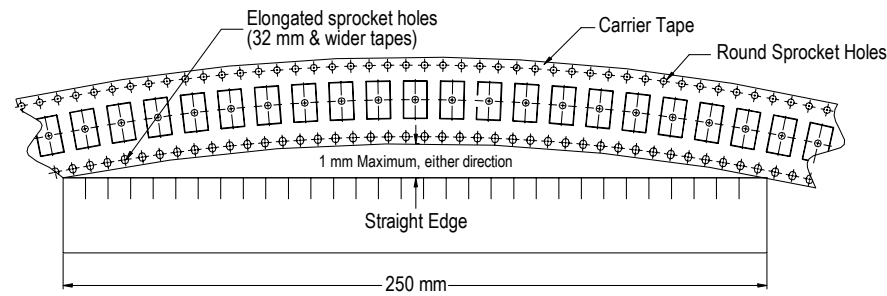


Figure 7 – Maximum Camber



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