# A72 Series Polypropylene Film/Foil, Axial



#### **Overview**

The A72 Series is constructed of polypropylene film and metal foil or metallized film and metal foil with axial leads of tinned wire. The axial leads are electrically welded to the metal layer on the ends of the capacitor winding. The capacitor is encapsulated in a polyester tape wrapping case with thermosetting resin material. Two different winding constructions are used depending on voltage parameters. Please see the Performance Characteristics for more information.

### **Applications**

Typical applications include switching spikes suppression and resonant capacitors in switched mode power supply (SMPS), and deflection circuits in televisions (S-correction and flyback tuning) as well as applications with high voltage and high current. Not suitable for across-the-line application (see Suppressor Capacitors).

#### **Benefits**

Voltage range: 100 – 2,000 VDC
Capacitance range: 47 pF – 0.33 µF

Diameter: 5 – 22.5 mmLength: 11 – 33 mm

Capacitance tolerance: ±5%, ±10%, ±20%
Climatic category: 55/105/56 IEC 60068-1

• Operating temperature range of -55°C to +105°C

· RoHS compliance and lead-free terminations

• Tape and reel packaging in accordance with IEC 60286-1

Self-healing



### **Part Number System**

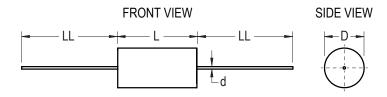
A72	Е	F	1470	AA	00	J
Series	Rated Voltage (VDC)	Length (mm)	Capacitance Code (pF)	Packaging	Internal Use	Capacitance Tolerance
Polypropylene Film/ Foil	E = 100 I = 250 M = 400 P = 630 Q = 1000 S = 1500 U = 2000	F = 11 H= 14 K = 20.5 Q = 28 T = 33	The last three digits represent significant figures. The first digit specifies the total number of zeros to be added.	See Ordering Options Table	00, 02 (Standard)	J = ±5% K = ±10% M = ±20%



### **Ordering Options Table**

Type of Leads and Packaging	Lead Length (mm)	Lead and Packaging Code
Bulk (Bag) – Straight Leads	40 +/-5	AA
Tape & Reel (Standard Reel)		26

### **Dimensions - Millimeters**



I	D		L	d			
Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance		
5.0	Maximum	11.0	Maximum	0.5	±0.05		
6.5	Maximum	16.5	Maximum	0.6	±0.05		
7.0	Maximum	16.5	Maximum	0.6	±0.05		
7.5	Maximum	16.5	Maximum	0.6	±0.05		
8.0	Maximum	16.5	Maximum	0.8	±0.05		
8.0	Maximum	20.5	Maximum	0.8	±0.05		
8.0	Maximum	28.0	Maximum	0.8	±0.05		
8.5	Maximum	16.5	Maximum	0.8	±0.05		
8.5	Maximum	20.5	Maximum	0.8	±0.05		
8.5	Maximum	28.0	Maximum	0.8	±0.05		
9.0	Maximum	16.5	Maximum	0.8	±0.05		
9.0	Maximum	28.0	Maximum	0.8	±0.05		
9.5	Maximum	20.5	Maximum	0.8	±0.05		
9.5	Maximum	28.0	Maximum	0.8	±0.05		
10.0	Maximum	28.0	Maximum	0.8	±0.05		
Note	Note: See Ordering Options Table for lead length (LL / I) options.						

	D	L		(	d
Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
11.0	Maximum	20.5	Maximum	0.8	±0.05
11.0	Maximum	28.0	Maximum	0.8	±0.05
11.5	Maximum	28.0	Maximum	0.8	±0.05
12.5	Maximum	28.0	Maximum	0.8	±0.05
13.0	Maximum	28.0	Maximum	0.8	±0.05
13.5	Maximum	28.0	Maximum	0.8	±0.05
13.5	Maximum	33.0	Maximum	0.8	±0.05
14.0	Maximum	33.0	Maximum	0.8	±0.05
16.0	Maximum	33.0	Maximum	1.0	±0.05
16.5	Maximum	33.0	Maximum	1.0	±0.05
18.0	Maximum	33.0	Maximum	1.0	±0.05
19.0	Maximum	33.0	Maximum	1.0	±0.05
19.5	Maximum	33.0	Maximum	1.0	±0.05
20.0	Maximum	33.0	Maximum	1.0	±0.05
22.5	Maximum	33.0	Maximum	1.0	±0.05
Note	: See Ordering	Options Tab	le for lead len	gth (LL / I) op	tions.



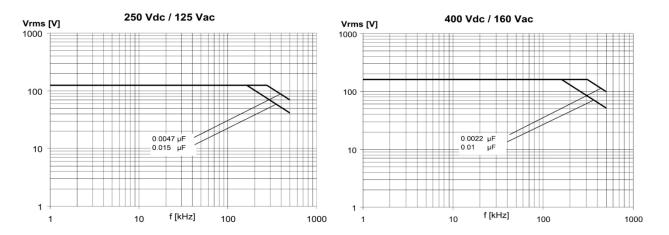
### **Performance Characteristics**

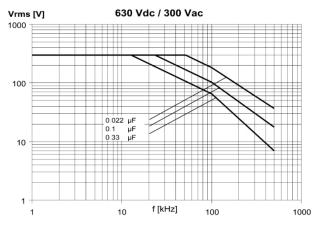
Dielectric	Polypropylene f	Polypropylene film					
Plates	Metal foil for 1 section, metal foil + metallized film for 2 sections						
Winding	Non-inductive t	уре					
Leads	Tinned wire						
Protection	Plastic case, th	ermosetting resin	filled. Box materia	l is solvent resista	nt and flame retard	ant according to U	JL94.
Related Documents	IEC 60384-13						
Sections		1			2		
Voltage Range (VDC)	100	250	400	630	1000	1500	2000
Voltage Range (VAC)	63	125	160	300	400	450	500
Capacitance Range (μF)	0.0047 – 0.01	0.0022 - 0.015	0.000047 – 0.01	0.015 – 0.33	0.0033 – 0.1	0.0022 – 0.068	0.001 – 0.047
Capacitance Values	E6 series (IEC	60063) measured	@ 1 kHz and +20	±1°C			
Capacitance Tolerance	±5%, ±10%, ±2	20%					
Operating temperature Range	-55°C to +105°	С					
Rated Temperature $T_{\rm R}$	+85°C						
Voltage Derating	Above +85°C D	C and AC voltage	derating is 1.25%	/°C			
	55/105/56 IEC 60068-1						
Climatic Category	Average relative humidity ≤ 75%						
Olimatic Category	RH = 95% for 30 days per year						
	RH = 85% for for	urther days limited	by average value	per year			
Test Voltage	2 x VR VDC for	2 s (between tern	ninations) @ +25°0	C ±5°C			
Capacitance Drift	Maximum 0.5%	after a 2 year sto	rage period at a te	mperature of +10°	C to +40°C and a	relative humidity o	f 40% to 60%
Maximum Pulse Steepness	dV/dt according can be multiplie	to Table 1. For peed by the factor V <sub>R</sub>	eak to peak voltage /Vpp	es lower than rate	d voltage (Vpp <v<sub>R</v<sub>	), the specified dv	/dt
Temperature Coefficient	-(150 ±70) ppm	/°C at 1 kHz					
Self Inductance (Lead Length ~ 2 mm)	Maximum 1 nH	per 1 mm lead an	d capacitor length				
			Me	asured at 25°C ±5	5°C		
Dissipation Factor tanδ	Frequ	uency	C ≤ 0	.1 μF		C ≥ 0.1 µF	
บเจอเคสแบบ หลัดเบเ เสเโด	10 I	кНz	0.0	5%		0.05%	
	100 kHz 0.10% –						
Measured at +25°C, 100 VDC 60 seconds							
Insulation Resistance			Minimum	Values Between	Terminals		
การนานเบา การราชเลาโดย			All	Capacitance Valu	ies		
	≥ 100,000 MΩ ( ≥ 500,000 MΩ ) *						

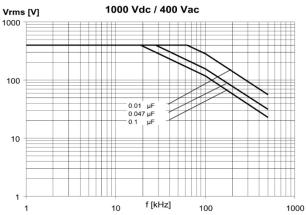
<sup>\*</sup> typical value

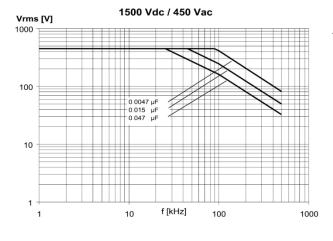


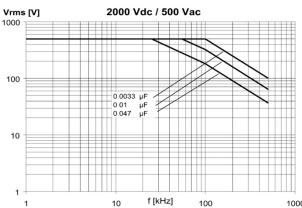
# Maximum Voltage ( $V_{rms}$ ) vs. Frequency (Sinusoidal Waveform/Th $\leq$ +40°C)





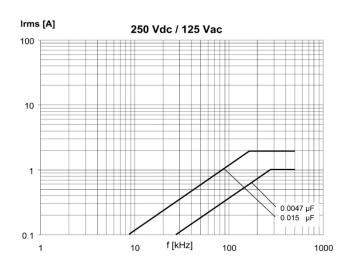


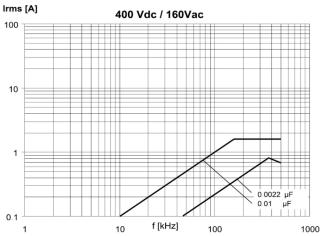


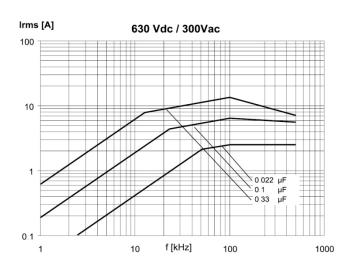


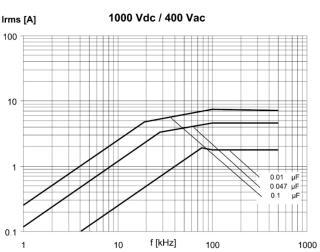


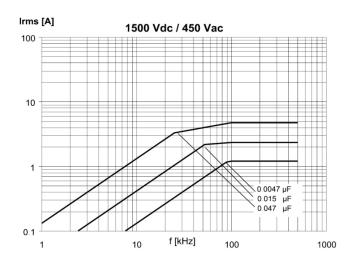
# Maximum Current ( $I_{rms}$ ) vs. Frequency (Sinusoidal Waveform/Th $\leq$ +40°C)

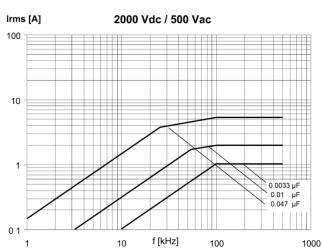














### **Environmental Test Data**

Damp Heat, Steady State Test	Test Conditions:		Performances
	Temperature: Relative humidity (RH): Test duration:	+40°C ±2°C 93% ±2% 56 days	Δ C/C  ≤ 2%, Δ tanδ ≤ 0.0005 @ 1 kHz IR after test ≥ 50% of initial limit
<b>Endurance Test</b>	Test Conditions		Performances
	Temperature: Voltage applied: Test duration:	+85°C ±2°C 1.5 x V <sub>R</sub> (DC) 1,000 hours	$ \Delta$ C/C  ≤ 2%, $\Delta$ tan $\delta$ ≤ 0.0005 @ 1 kHz IR after test ≥ 50% of initial limit
Resistance to Soldering Heat Test	Test Conditions		Performances
	Solder bath temperature: Dipping time (with heat screen):	260°C ±5°C 10 seconds ±1 second	Δ C/C  ≤ 1%, Δ tanδ ≤ 0.0005 @ 1 kHz IR after test ≥ initial limit

### **Environmental Compliance**

All KEMET pulse capacitors are RoHS Compliant.

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

VDC	VAC	Capacitance	Dimensio	ns in mm	dV/dt	Max K	New KEMET	Legacy Part Number
VDC	VAC	Value (µF)	D Max	L Max	(V/µs)	(V²/µs)	Part Number	Legacy Part Number
100	63	0.0047	5.0	11.0	3,000	600,000	72EF1470(1)00(2)	A72EF1470(1)00(2)
100	63	0.0068	5.0	11.0	3,000	600,000	72EF1680(1)00(2)	A72EF1680(1)00(2)
100	63	0.010	5.0	11.0	3,000	600,000	72EF2100(1)00(2)	A72EF2100(1)00(2)
250	125	0.0022	5.0	11.0	5,000	2,500,000	72IF1220(1)00(2)	A72IF1220(1)00(2)
250	125	0.0033	5.0	11.0	5,000	2,500,000	72IF1330(1)00(2)	A72IF1330(1)00(2)
250	125	0.0047	7.0	16.5	4,500	2,250,000	72111470(1)00(2)	A72II1470(1)00(2)
250	125	0.0068	7.0	16.5	4,500	2,250,000	72111680(1)00(2)	A72II1680(1)00(2)
250	125	0.010	7.5	16.5	4,500	2,250,000	72112100(1)00(2)	A72II2100(1)00(2)
250	125	0.015	8.5	16.5	4,500	2,250,000	72112150(1)00(2)	A72II2150(1)00(2)
400	160	0.000047	5.0	11.0	13,000	10,400,000	72MF0047(1)00(2)	A72MF0047(1)00(2)
400	160	0.000068	5.0	11.0	13,000	10,400,000	72MF0068(1)00(2)	A72MF0068(1)00(2)
400	160	0.00010	5.0	11.0	13,000	10,400,000	72MF0100(1)00(2)	A72MF0100(1)00(2)
400	160	0.00015	5.0	11.0	13,000	10,400,000	72MF0150(1)00(2)	A72MF0150(1)00(2)
400	160	0.00022	5.0	11.0	13,000	10,400,000	72MF0220(1)00(2)	A72MF0220(1)00(2)
400	160	0.00033	5.0	11.0	13,000	10,400,000	72MF0330(1)00(2)	A72MF0330(1)00(2)
400	160	0.00047	5.0	11.0	13,000	10,400,000	72MF0470(1)00(2)	A72MF0470(1)00(2)
400	160	0.00068	5.0	11.0	13,000	10,400,000	72MF0680(1)00(2)	A72MF0680(1)00(2)
400	160	0.0010	5.0	11.0	13,000	10,400,000	72MF1100(1)00(2)	A72MF1100(1)00(2)
400	160	0.0015	5.0	11.0	13,000	10,400,000	72MF1150(1)00(2)	A72MF1150(1)00(2)
400	160	0.0022	6.5	16.5	6,500	5,200,000	72MI1220(1)00(2)	A72MI1220(1)00(2)
400	160	0.0033	6.5	16.5	6,500	5,200,000	72MI1330(1)00(2)	A72MI1330(1)00(2)
400	160	0.0047	7.0	16.5	6,500	5,200,000	72MI1470(1)00(2)	A72MI1470(1)00(2)
VDC	VAC	Capacitance Value (μF)	B (mm)	H (mm)	dV/dt (V/µs)	Max K₀ (V²/µs)	New KEMET Part Number	Legacy Part Number

<sup>(1)</sup> Insert lead and packaging code. See Ordering Options Table for available options.

<sup>(2)</sup> J = 5%, K = 10%, M = 20%.



Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Capacitance	Dimensio	ns in mm	dV/dt	Max K	New KEMET	Lagary Dayt Number
VDC	VAC	Value (µF)	D Max	L Max	(V/µs)	(V²/µs)	Part Number	Legacy Part Number
400	160	0.0068	8.0	16.5	6,500	5,200,000	72MI1680(1)00(2)	A72MI1680(1)00(2)
400	160	0.010	9.0	16.5	6,500	5,200,000	72MI2100(1)00(2)	A72MI2100(1)00(2)
630	300	0.015	8.5	20.5	4,300	5,418,000	72PK2150(1)00(2)	A72PK2150(1)00(2)
630	300	0.022	9.5	20.5	4,300	5,418,000	72PK2220(1)00(2)	A72PK2220(1)00(2)
630	300	0.033	9.0	28.0	2,600	3,276,000	72PQ2330(1)00(2)	A72PQ2330(1)00(2)
630	300	0.047	10.0	28.0	2,600	3,276,000	72PQ2470(1)00(2)	A72PQ2470(1)00(2)
630	300	0.068	11.5	28.0	2,600	3,276,000	72PQ2680(1)00(2)	A72PQ2680(1)00(2)
630	300	0.10	13.5	28.0	2,600	3,276,000	72PQ3100(1)00(2)	A72PQ3100(1)00(2)
630	300	0.15	14.0	33.0	1,800	2,268,000	72PT3150(1)00(2)	A72PT3150(1)00(2)
630	300	0.22	16.5	33.0	1,800	2,268,000	72PT3220(1)00(2)	A72PT3220(1)00(2)
630	300	0.33	19.5	33.0	1,800	2,268,000	72PT3330(1)00(2)	A72PT3330(1)00(2)
1,000	400	0.0033	8.5	20.5	14,000	28,000,000	72QK1330(1)02(2)	A72QK1330(1)02(2)
1,000	400	0.0047	9.5	20.5	14,000	28,000,000	72QK1470(1)02(2)	A72QK1470(1)02(2)
1,000	400	0.0068	8.0	28.0	5,000	10,000,000	72QQ1680(1)02(2)	A72QQ1680(1)02(2)
1,000	400	0.010	8.5	28.0	5,000	10,000,000	72QQ2100(1)02(2)	A72QQ2100(1)02(2)
1,000	400	0.015	10.0	28.0	5,000	10,000,000	72QQ2150(1)02(2)	A72QQ2150(1)02(2)
1,000	400	0.022	11.0	28.0	5,000	10,000,000	72QQ2220(1)02(2)	A72QQ2220(1)02(2)
1,000	400	0.033	13.0	28.0	5,000	10,000,000	72QQ2330(1)02(2)	A72QQ2330(1)02(2)
1,000	400	0.047	14.0	33.0	3,700	7,400,000	72QT2470(1)02(2)	A72QT2470(1)02(2)
1,000	400	0.068	16.0	33.0	3,700	7,400,000	72QT2680(1)02(2)	A72QT2680(1)02(2)
1,000	400	0.10	19.0	33.0	3,700	7,400,000	72QT3100(1)02(2)	A72QT3100(1)02(2)
1,500	450	0.0022	8.0	20.5	17,000	51,000,000	72SK1220(1)00(2)	A72SK1220(1)00(2)
1,500	450	0.0033	9.5	20.5	17,000	51,000,000	72SK1330(1)00(2)	A72SK1330(1)00(2)
1,500	450	0.0047	8.5	28.0	6,000	18,000,000	72SQ1470(1)00(2)	A72SQ1470(1)00(2)
1,500	450	0.0068	8.5	28.0	6,000	18,000,000	72SQ1680(1)00(2)	A72SQ1680(1)00(2)
1,500	450	0.010	9.5	28.0	6,000	18,000,000	72SQ2100(1)00(2)	A72SQ2100(1)00(2)
1,500	450	0.015	11.0	28.0	6,000	18,000,000	72SQ2150(1)00(2)	A72SQ2150(1)00(2)
1,500	450	0.022	12.5	28.0	6,000	18,000,000	72SQ2220(1)00(2)	A72SQ2220(1)00(2)
1,500	450	0.033	13.5	33.0	4,500	13,500,000	72ST2330(1)00(2)	A72ST2330(1)00(2)
1,500	450	0.047	16.0	33.0	4,500	13,500,000	72ST2470(1)00(2)	A72ST2470(1)00(2)
1,500	450	0.068	18.0	33.0	4,500	13,500,000	72ST2680(1)00(2)	A72ST2680(1)00(2)
2,000	500	0.0010	8.5	20.5	27,000	108,000,000	72UK1100(1)00(2)	A72UK1100(1)00(2)
2,000	500	0.0015	9.5	20.5	27,000	108,000,000	72UK1150(1)00(2)	A72UK1150(1)00(2)
2,000	500	0.0022	11.0	20.5	27,000	108,000,000	72UK1220(1)00(2)	A72UK1220(1)00(2)
2,000	500	0.0033	9.0	28.0	9,800	39,200,000	72UQ1330(1)00(2)	A72UQ1330(1)00(2)
2,000	500	0.0047	9.5	28.0	9,800	39,200,000	72UQ1470(1)00(2)	A72UQ1470(1)00(2)
2,000	500	0.0068	11.0	28.0	9,800	39,200,000	72UQ1680(1)00(2)	A72UQ1680(1)00(2)
VDC	VAC	Capacitance Value (µF)	B (mm)	H (mm)	dV/dt (V/μs)	Max K <sub>0</sub> (V²/µs)	New KEMET Part Number	Legacy Part Number

<sup>(1)</sup> Insert lead and packaging code. See Ordering Options Table for available options.

<sup>(2)</sup> J = 5%, K = 10%, M = 20%.



### **Soldering Process**

The implementation of the RoHS directive has resulted in the selection of SnAgCu (SAC) alloys or SnCu alloys as primary solder. This has increased the liquidus temperature from that of 183°C for SnPb eutectic alloy to 217 – 221°C for the new alloys. As a result, the heat stress to the components, even in wave soldering, has increased considerably due to higher pre-heat and wave temperatures. Polypropylene capacitors are especially sensitive to heat (the melting point of polypropylene is 160 – 170°C). Wave soldering can be destructive, especially for mechanically small polypropylene capacitors (with lead spacing of 5 mm to 15 mm), and great care has to be taken during soldering. The recommended solder profiles from KEMET should be used. Please consult KEMET with any questions. In general, the wave soldering curve from IEC Publication 61760-1 Edition 2 serves as a solid guideline for successful soldering. Please see Figure 1.

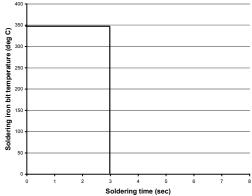
Reflow soldering is not recommended for through-hole film capacitors. Exposing capacitors to a soldering profile in excess of the above the recommended limits may result to degradation or permanent damage to the capacitors.

Do not place the polypropylene capacitor through an adhesive curing oven to cure resin for surface mount components. Insert through-hole parts after the curing of surface mount parts. Consult KEMET to discuss the actual temperature profile in the oven, if through-hole components must pass through the adhesive curing process. A maximum two soldering cycles is recommended. Please allow time for the capacitor surface temperature to return to a normal temperature before the second soldering cycle.

#### **Manual Soldering Recommendations**

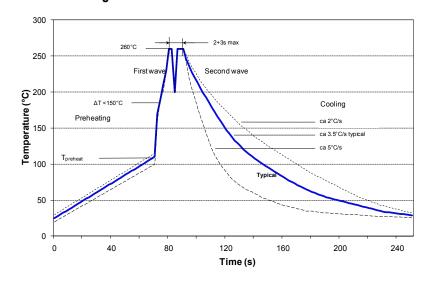
Following is the recommendation for manual soldering with a soldering iron.

# Recommended Soldering Temperature



The soldering iron tip temperature should be set at 350°C (+10°C maximum) with the soldering duration not to exceed more than 3 seconds.

#### **Wave Soldering Recommendations**





### **Soldering Process cont'd**

#### Wave Soldering Recommendations cont'd

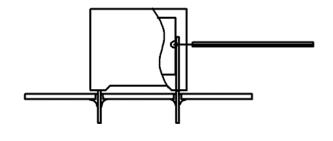
1. The table indicates the maximum set-up temperature of the soldering process Figure 1

Dielectric		imum Pre emperatu	Maximum Peak Soldering Temperature		
Film Material	Capacitor Pitch ≤ 10 mm	Capacitor Pitch = 15 mm	Capacitor Pitch > 15 mm	Capacitor Pitch ≤ 15 mm	Capacitor Pitch > 15 mm
Polyester	130°C	130°C	130°C	270°C	270°C
Polypropylene	100°C	110°C	130°C	260°C	270°C
Paper	130°C	130°C	140°C	270°C	270°C
Polyphenylene Sulphide	150°C	150°C	160°C	270°C	270°C

2. The maximum temperature measured inside the capacitor:

Set the temperature so that inside the element the maximum temperature is below the limit:

Dielectric Film Material	Maximum temperature measured inside the element
Polyester	160°C
Polypropylene	110°C
Paper	160°C
Polyphenylene sulphide	160°C



Temperature monitored inside the capacitor.

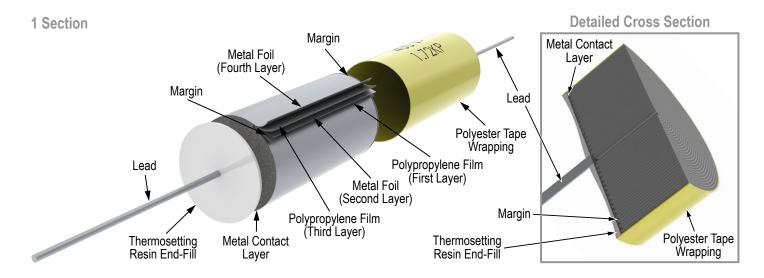
#### **Selective Soldering Recommendations**

Selective dip soldering is a variation of reflow soldering. In this method, the printed circuit board with through-hole components to be soldered is preheated and transported over the solder bath as in normal flow soldering without touching the solder. When the board is over the bath, it is stopped and pre-designed solder pots are lifted from the bath with molten solder only at the places of the selected components, and pressed against the lower surface of the board to solder the components.

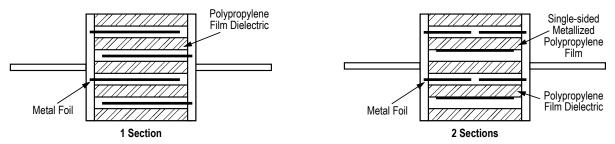
The temperature profile for selective soldering is similar to the double wave flow soldering outlined in this document, **however**, **instead of two baths**, **there is only one bath with a time from 3 to 10 seconds**. In selective soldering, the risk of overheating is greater than in double wave flow soldering, and great care must be taken so that the parts are not overheated.



### Construction

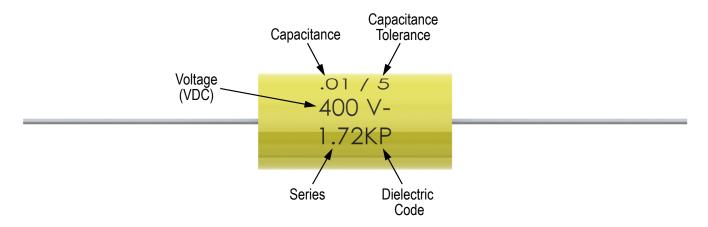


### **Winding Schemes**





# Marking



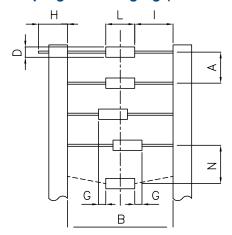
# **Packaging Quantities**

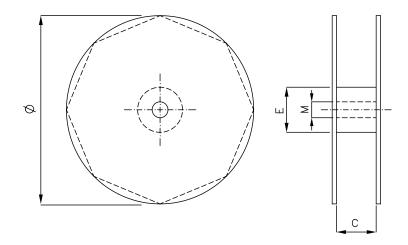
Diameter	Length	Bulk Long Leads	Standard Reel ø 355 mm
5.0	11.0	1,500	3,000
6.5	16.5	2,000	1,200
7.0	16.5	1,750	1,100
7.5	16.5	1,500	1,000
8.0	16.5	1,250	900
8.0	20.5	1,000	900
8.0	28.0	500	900
8.5	16.5	1,000	800
8.5	20.5	750	800
8.5	28.0	500	800
9.0	16.5	1,000	800
9.0	28.0	500	800
9.5	20.5	750	600
9.5	28.0	500	600
10.0	28.0	500	600

Diameter	Length	Bulk Long Leads	Standard Reel ø 355 mm
11.0	20.5	500	400
11.0	28.0	500	400
11.5	28.0	300	400
12.5	28.0	300	400
13.0	28.0	300	400
13.5	28.0	300	300
13.5	33.0	300	300
14.0	33.0	300	300
16.0	33.0	200	250
16.5	33.0	200	250
18.0	33.0	200	200
19.0	33.0	150	150
19.5	33.0	150	150
20.0	33.0	150	150
22.5	33.0	100	_



# Lead Taping & Packaging (IEC 60286-1)





# **Taping Specification**

Description	Symbol	Dimensions (mm)
Component diameter	D	4.5 – 19.5
Body length	L	11 – 33
Component lead spacing	A <sup>(1)</sup>	See Table 1
Reel core diameter	Е	85
Arbor hole diameter	М	30
Reel diameter	Ø	355 maximum
Tape width	Н	6 ±0.5/9 ±1 <sup>(2)</sup>
Body location (lateral deviation)	G	≤ 0.7
Body location (longitudinal deviation)	N	≤ 1.2
Tape spacing	В	See Table 2
Lead length from the component body to the adhesive tape	I	≥ 20
Distance between reel flanges	С	See Table 2

<sup>(1)</sup> Maximum cumulative feed hole error 1.5 mm per 6 parts.

Table 1

Dimensions in mm			
Diameter	A		
≤ 5	5 ±0.5		
5.1 – 9.5	10 ±0.5		
9.6 – 14.7	15 ±0.5		
14.8 – 19.5	20 ±1.0		

### Table 2

Dimensions in mm				
Length	Class	<b>B</b> ±1.5	С	
≤ 11	I	52.4	75	
14 – 20.5	II	63.6	86	
≥ 26	III	73	98	

<sup>(2)</sup>  $9 \pm 1$  for capacitor with  $L \ge 31.5$ .



# **KEMET Corporation World Headquarters**

2835 KEMET Way Simpsonville, SC 29681

Mailing Address: P.O. Box 5928 Greenville, SC 29606

www.kemet.com Tel: 864-963-6300 Fax: 864-963-6521

Corporate Offices Fort Lauderdale, FL Tel: 954-766-2800

#### **North America**

### Southeast

Lake Mary, FL Tel: 407-855-8886

#### Northeast

Wilmington, MA Tel: 978-658-1663

### Central

Novi, MI

Tel: 248-306-9353

#### West

Milpitas, CA Tel: 408-433-9950

#### Mexico

Guadalajara, Jalisco Tel: 52-33-3123-2141

### **Europe**

Southern Europe Sasso Marconi, Italy Tel: 39-051-939111

Skopje, Macedonia Tel: 389-2-55-14-623

### Central Europe Landsberg, Germany Tel: 49-8191-3350800

Kamen, Germany Tel: 49-2307-438110

### Northern Europe Harlow, United Kingdom Tel: 44-1279-460122

Espoo, Finland Tel: 358-9-5406-5000

#### Asia

Northeast Asia Hong Kong Tel: 852-2305-1168

Shenzhen, China Tel: 86-755-2518-1306

Beijing, China Tel: 86-10-5877-1075

Shanghai, China Tel: 86-21-6447-0707

Seoul, South Korea Tel: 82-2-6294-0550

Taipei, Taiwan Tel: 886-2-27528585

### Southeast Asia

Singapore Tel: 65-6701-8033

Penang, Malaysia Tel: 60-4-6430200

Bangalore, India Tel: 91-806-53-76817

Note: KEMET reserves the right to modify minor details of internal and external construction at any time in the interest of product improvement. KEMET does not assume any responsibility for infringement that might result from the use of KEMET Capacitors in potential circuit designs. KEMET is a registered trademark of KEMET Electronics Corporation.



#### **Disclaimer**

All product specifications, statements, information and data (collectively, the "Information") in this datasheet are subject to change. The customer is responsible for checking and verifying the extent to which the Information contained in this publication is applicable to an order at the time the order is placed.

All Information given herein is believed to be accurate and reliable, but it is presented without guarantee, warranty, or responsibility of any kind, expressed or implied.

Statements of suitability for certain applications are based on KEMET Electronics Corporation's ("KEMET") knowledge of typical operating conditions for such applications, but are not intended to constitute – and KEMET specifically disclaims – any warranty concerning suitability for a specific customer application or use. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by KEMET with reference to the use of KEMET's products is given gratis, and KEMET assumes no obligation or liability for the advice given or results obtained.

Although KEMET designs and manufactures its 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.

Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicted or that other measures may not be required.

### **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Film Capacitors category:

Click to view products by Kemet manufacturer:

Other Similar products are found below:

F339X134748MIP2T0 F450KG153J250ALH0J 750-1018 FKP1-1500160010P15 FKP1R031007D00JYSD FKP1R031507E00JYSD FKP1U024707E00KYSD 82DC4100CK60J 82EC1100DQ50K PFR5101J100J11L16.5TA18 PME261JB5220KR19T0 A451GK223M040A A561ED221M450A QXJ2E474KTPT QXL2B333KTPT R49AN347000A1K EEC2G505HQA406 B25668A6676A375 B25673A4282E140 BFC233868148 BFC2370GC222 C3B2AD44400B20K C4ASWBU3220A3EK CB027C0473J-- CB177I0184J-- CB182K0184J-- 23PW210 950CQW5H-F SBDC3470AA10J SCD105K122A3-22 2N3155 A571EH331M450A FKP1-2202KV5P15 FKS3-680040010P10 QXL2E473KTPT 445450-1 B25669A3996J375 46KI322000M1M 46KR415050M1K 4BSNBX4100ZBFJ MKP383510063JKP2T0 MKPY2-.02230020P15 MKT 1813-368-015 4055292001 46KN410000N1K EEC2E106HQA405 EEC2G205HQA402 EEC2G805HQA415 P409CP224M250AH470 82EC2150DQ50K