R74 Series Single Metallized Polypropylene Film, Radial, AC Applications (Automotive Grade)

Overview

The R74 Series is constructed of metallized polypropylene film with radial leads of tinned wire. The radial leads are electrically welded to the metal layer on the ends of the capacitor winding. The capacitor is encapsulated in a self-extinguishing solvent resistant plastic case with thermosetting resin material meeting the UL 94V–0 requirements. Four different winding constructions are used depending on voltage parameters. Please see the Performance Characteristics for more information.

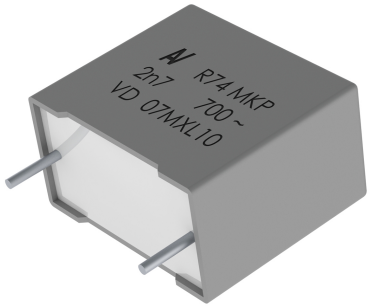
Automotive Grade devices are available (up to lead spacing 22.5 mm) and meet the demanding Automotive Electronics Council's AEC–Q200 qualification requirements.

Applications

Typical applications include electronic lighting such as automotive headlamps and ballasts, as well as pulse applications with high AC voltage and high current. Not suitable for across-the-line application (see Suppressor Capacitors).

Benefits

- Voltage range: 250 – 900 VAC
- Capacitance range: 470 pF – 3.3 µF
- Lead Spacing: 10 – 37.5 mm
- Capacitance tolerance: ±5%, ±10%
- 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 60286–2
- Self-healing
- Automotive (AEC–Q200) grades available up to lead spacing 22.5 mm



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Part Number System

R74	5	N	2180	AA	00	J
Series	Rated Voltage (VAC)	Lead Spacing (mm)	Capacitance Code (pF)	Packaging	Internal Use	Capacitance Tolerance
Metallized Polypropylene	L = 250 N = 400 5 = 500 6 = 600 7 = 700 9 = 900	F = 10 I = 15 N = 22.5 R = 27.5 W = 37.5	The last three digits represent significant figures. The first digit specifies the total number of zeros to be added.	See Ordering Options Table	00 30 60	J = ±5% K = ±10%

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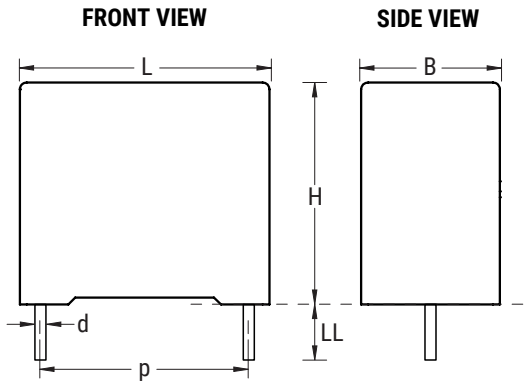
Ordering Options Table

Lead Spacing Nominal (mm)	Type of Leads and Packaging	Lead Length (mm)	Lead and Packaging Code
10 15 22.5	**Standard Lead and Packaging Options**		
	Bulk (Bag) – Short Leads	4 +2/-0	AA
	Ammo Pack	H_0= 18.5 +/-0.5	DQ
	Other Lead and Packaging Options		
	Tape & Reel (Standard Reel)	H_0=18.5 +/- 0.5	GY
	Tape & Reel (Large Reel)	H_0=18.5 +/- 0.5	CK
	Bulk (Bag)–Short Leads	3.5 +0.5/-0	JB
	Bulk (Bag)–Short Leads	4.0 +0.5/-0	JE
	Bulk (Bag)–Short Leads	3.2 +0.3/-0.2	JH
	Bulk (Bag)–Long Leads	18 +1/-1	JM
	Bulk (Bag)–Long Leads	30 +5/-0	40
	Bulk (Bag)–Long Leads	25 +2/-1	50
27.5	**Standard Lead and Packaging Options**		
	Bulk (Tray) – Straight Leads	4 +2/-0	AA
	Other Lead and Packaging Options		
	Tape & Reel (Large Reel)	H_0=18.5 +/-0.5	CK
	Bulk (Bag)–Short Leads	3.5 +0.5/-0	JB
	Bulk (Bag)–Short Leads	4.0 +0.5/-0	JE
	Bulk (Bag)–Short Leads	3.2 +0.3/-0.2	JH
	Bulk (Bag)–Long Leads	18 +1/-1	JM
	Bulk (Bag)–Long Leads	30 +5/-0	40
	Bulk (Bag) – Long Leads	25 +2/-1	50
37.5	**Standard Lead and Packaging Options**		
	Bulk (Tray) – Straight Leads	4 +2/-0	AA
	Other Lead and Packaging Options		
	Bulk (Bag)–Short Leads	3.5 +0.5/-0	JB
	Bulk (Bag)–Short Leads	4.0 +0.5/-0	JE
	Bulk (Bag)–Short Leads	3.2 +0.3/-0.2	JH
	Bulk (Bag)–Long Leads	18 +1/-1	JM
	Bulk (Bag)–Long Leads	30 +5/-0	40
	Bulk (Bag) – Long Leads	25 +2/-1	50

Dimensions – Millimeters

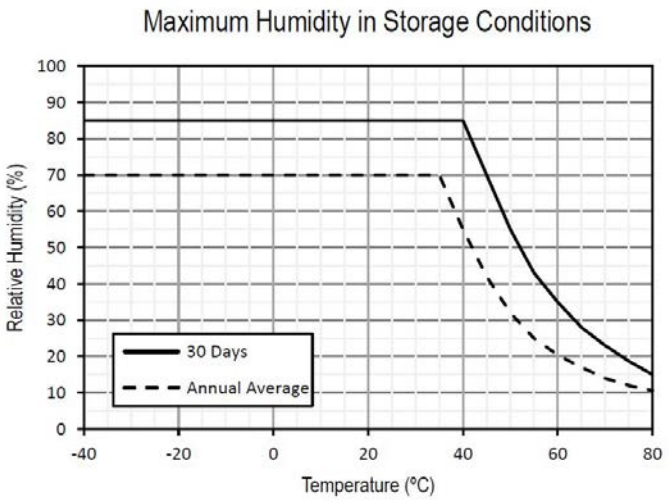


p		B		H		L		d	
Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
10.0	+/- 0.4	4.0	+0.2	9.0	+0.1	13.0	+0.2	0.6	+/- 0.05
10.0	+/- 0.4	5.0	+0.2	11.0	+0.1	13.0	+0.2	0.6	+/- 0.05
10.0	+/-0.4	6.0	+0.2	12.0	+0.1	13.0	+0.2	0.6	+/- 0.05
15.0	+/- 0.4	4.0	+0.2	10.0	+0.1	18.0	+0.3	0.8	+/- 0.05
15.0	+/- 0.4	5.0	+0.2	11.0	+0.1	18.0	+0.3	0.8	+/- 0.05
15.0	+/- 0.4	6.0	+0.2	12.0	+0.1	18.0	+0.3	0.8	+/- 0.05
15.0	+/- 0.4	7.5	+0.2	13.5	+0.1	18.0	+0.5	0.8	+/- 0.05
15.0	+/- 0.4	8.5	+0.2	14.5	+0.1	18.0	+0.5	0.8	+/- 0.05
15.0	+/- 0.4	9.0	+0.2	12.5	+0.1	18.0	+0.5	0.8	+/- 0.05
15.0	+/- 0.4	10.0	+0.2	16.0	+0.1	18.0	+0.5	0.8	+/- 0.05
15.0	+/- 0.4	11.0	+0.2	19.0	+0.1	18.0	+0.5	0.8	+/- 0.05
15.0	+/- 0.4	13.0	+0.2	12.0	+0.1	18.0	+0.5	0.8	+/- 0.05
22.5	+/- 0.4	6.0	+0.2	15.0	+0.1	26.5	+0.3	0.8	+/- 0.05
22.5	+/- 0.4	7.0	+0.2	16.0	+0.1	26.5	+0.3	0.8	+/- 0.05
22.5	+/- 0.4	8.5	+0.2	17.0	+0.1	26.5	+0.3	0.8	+/- 0.05
22.5	+/- 0.4	10.0	+0.2	18.5	+0.1	26.5	+0.3	0.8	+/- 0.05
22.5	+/- 0.4	11.0	+0.2	20.0	+0.1	26.5	+0.3	0.8	+/- 0.05
22.5	+/- 0.4	13.0	+0.2	22.0	+0.1	26.5	+0.3	0.8	+/- 0.05
27.5	+/- 0.4	9.0	+0.2	17.0	+0.1	32.0	+0.3	0.8	+/- 0.05
27.5	+/- 0.4	11.0	+0.2	20.0	+0.1	32.0	+0.3	0.8	+/- 0.05
27.5	+/- 0.4	13.0	+0.2	22.0	+0.1	32.0	+0.3	0.8	+/- 0.05
27.5	+/- 0.4	14.0	+0.2	28.0	+0.1	32.0	+0.3	0.8	+/- 0.05
27.5	+/- 0.4	18.0	+0.2	33.0	+0.1	32.0	+0.3	0.8	+/- 0.05
27.5	+/- 0.4	22.0	+0.2	37.0	+0.1	32.0	+0.3	0.8	+/- 0.05
37.5	+/- 0.4	11.0	+0.3	22.0	+0.1	41.5	+0.3	1.0	+/- 0.05
37.5	+/- 0.4	13.0	+0.3	24.0	+0.1	41.5	+0.3	1.0	+/- 0.05
37.5	+/- 0.4	16.0	+0.3	28.5	+0.1	41.5	+0.3	1.0	+/- 0.05
37.5	+/- 0.4	19.0	+0.3	32.0	+0.1	41.5	+0.3	1.0	+/- 0.05
37.5	+/- 0.4	20.0	+0.3	40.0	+0.1	41.5	+0.3	1.0	+/- 0.05
37.5	+/- 0.4	24.0	+0.3	44.0	+0.1	41.5	+0.3	1.0	+/- 0.05
37.5	+/- 0.4	30.0	+0.3	45.0	+0.1	41.5	+0.3	1.0	+/- 0.05

Note: See Ordering Options Table for lead length (LL/Ho) options.

Performance Characteristics

Dielectric	Polypropylene film					
Plates	Metal layer deposited by evaporation under vacuum					
Winding	Non-inductive type					
Leads	Tinned wire					
Protection	Plastic case, thermosetting resin filled. Box material is solvent resistant and flame retardant according to UL94.					
Related Documents	IEC 60384-16, IEC 60384-17					
Sections	1	2		3		4
Rated Voltage V_R (VDC)	630	1300	1600	2000	2000	2200
Rated Voltage V_R (VAC)	250	400	500	600	700	900
Capacitance Range (µF)	0.01 – 0.15	0.0022 – 3.3	0.001 – 2.2	0.00047 – 1	0.001 –0.47	0.001 –0.47
Capacitance Values	E12 series (IEC 60063) measured @ 1kHz and +20 ±1°C					
Capacitance Tolerance	±5%, ±10%					
Operating Temperature Range	–55°C to +105°C					
Rated Temperature T_R	+85°C					
Voltage Derating	Above +85°C DC and AC voltage derating is 1.25%/°C					
Climatic Category	55/105/56 IEC 60068-1					
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package					
	Average relative humidity per year ≤ 70%					
	RH ≤ 85% for 30 days randomly distributed throughout the year					
	Dew is absent					
	Temperature: –40 to 80°C (see "Maximum Humidity in Storage Conditions" graph below)					
Test Voltage	1.6 x V_R VDC for 2 seconds (between terminations) @ +25°C ±5°C					



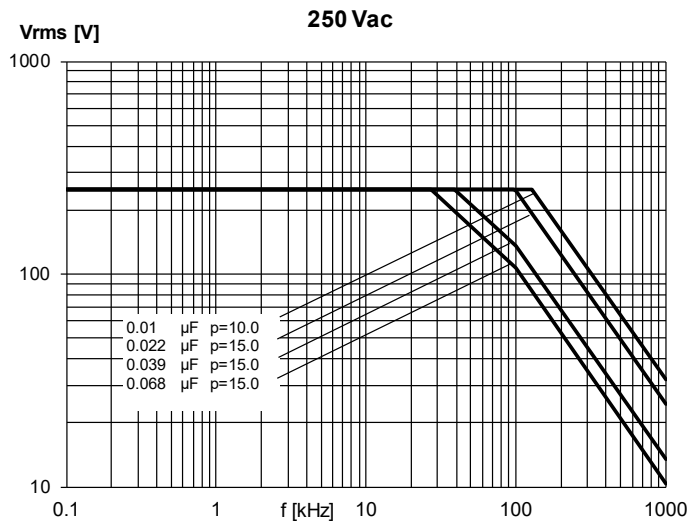
Performance Characteristics cont'd

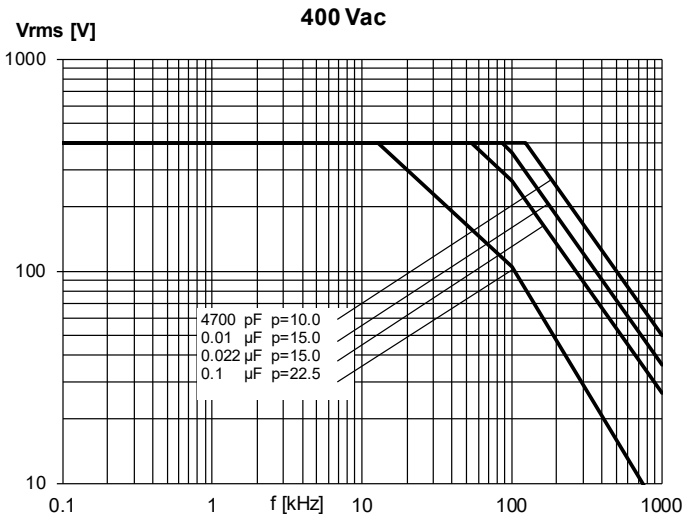
Capacitance Drift	Maximum 0.5% after a 2 year storage period at a temperature of +10°C to +40°C and a relative humidity of 40% to 60%					
Maximum Pulse Steepness	dV/dt according to Table 1. For peak to peak voltages lower than rated voltage (Vpp <V_R), the specified dv/dt can be multiplied by the factor V_R/Vpp					
Temperature Coefficient	-(200 ±100) ppm/°C at 1 kHz					
Self Inductance (Lead Length ~ 2 mm)	Lead Spacing (mm)	10	15	22.5	27.5	37.5
	L (nH) ≈	9	10	18	18	20
	Maximum 1 nH per 1 mm lead and capacitor length.					
Dissipation Factor tanδ	Maximum Values @ 25°C ±5°C					
	Frequency	C ≤ 2.2 nF	2.2 nF < C ≤ 0.027 µF	0.027 µF < C ≤ 0.1 µF	0.1 µF < C ≤ 1 µF	C > 1 µF
	1 kHz	0.01%	0.01%	0.04%	0.05%	0.06%
	10 kHz	0.02%	0.02%	0.06%	0.08%	-
	100 kHz	0.03%	0.08%	0.25%	-	-
Insulation Resistance	Measured @ +25°C ±5°C, 100 VDC 60 seconds					
	Minimum Values Between Terminals					
	C ≤ 0.33 µF			C > 0.33 µF		
	≥ 100,000 MΩ			≥ 30,000 MΩ • µF		

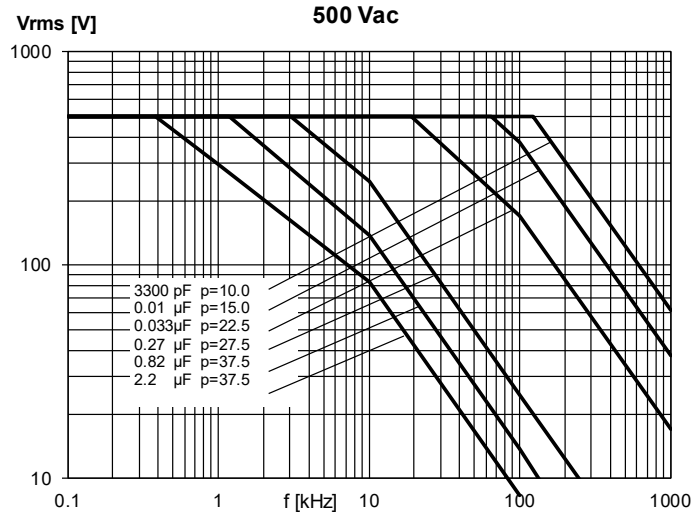
Qualification

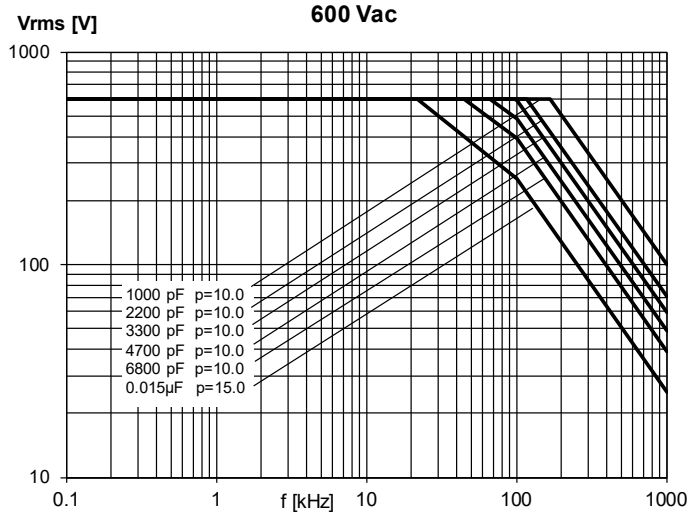
Automotive Grade products meet or exceed the requirements outlined by the Automotive Electronics Council. Details regarding test methods and conditions are referenced in document AEC–Q200, Stress Test Qualification for Passive Components. For additional information regarding the Automotive Electronics Council and AEC–Q200, please visit their website at www.aecouncil.com.

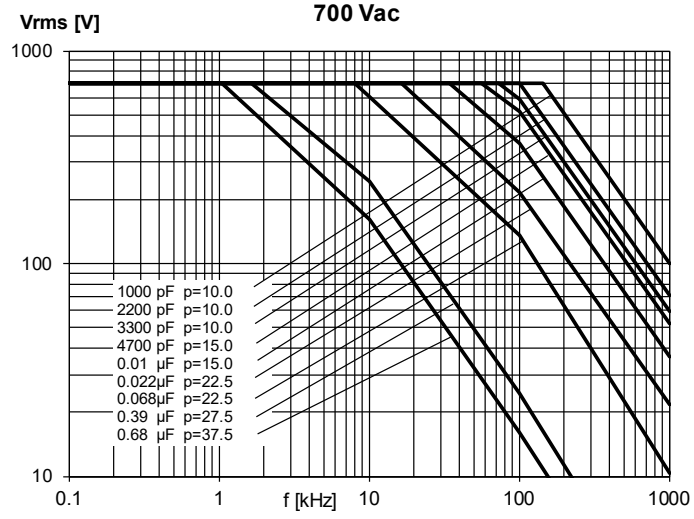
Maximum Voltage (V_{rms}) vs. Frequency (Sinusoidal Waveform/Th ≤ 85°C)

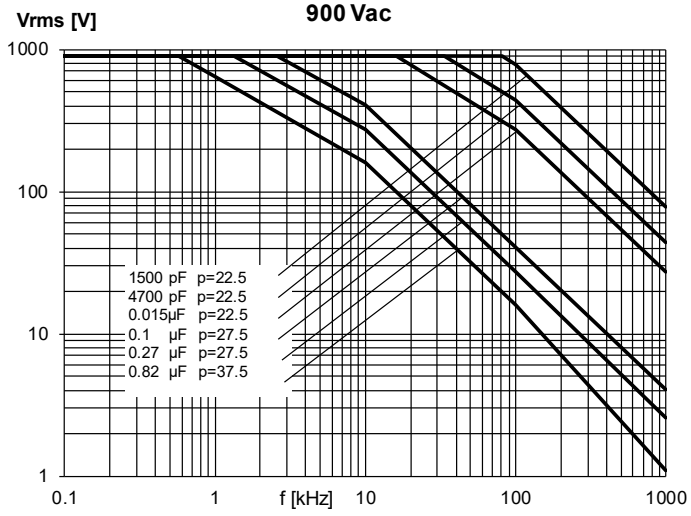




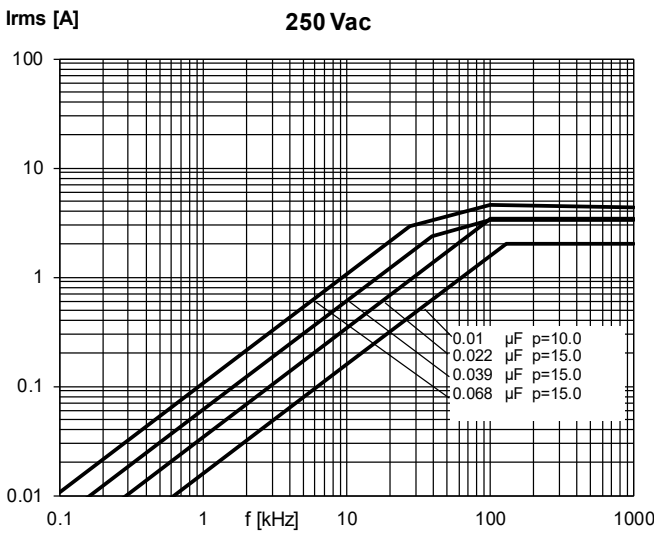


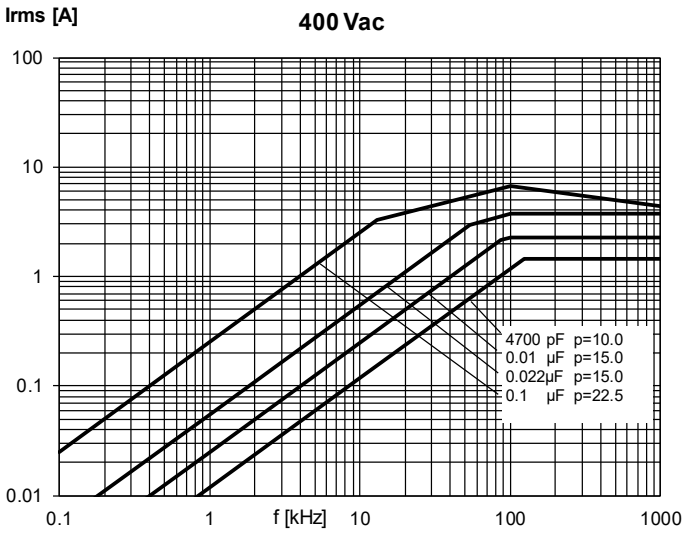


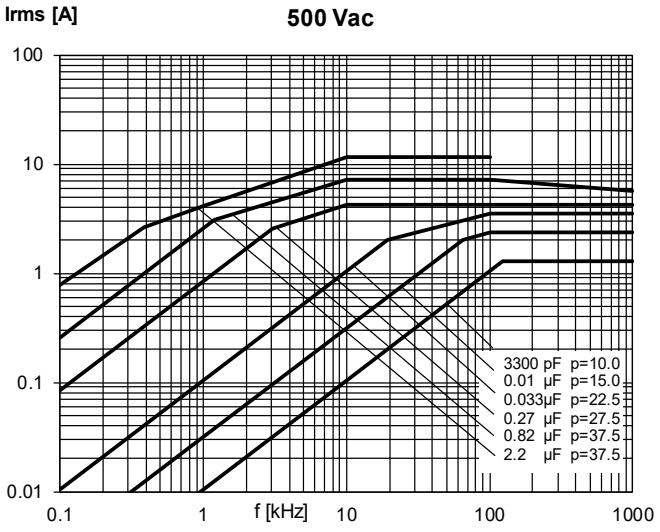


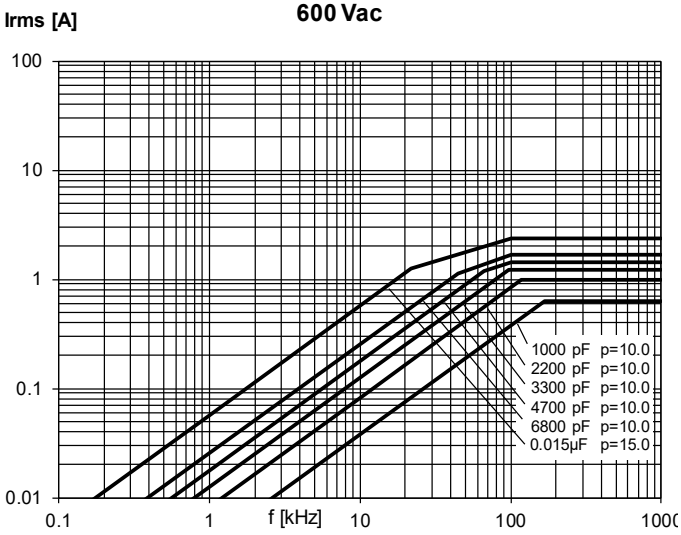


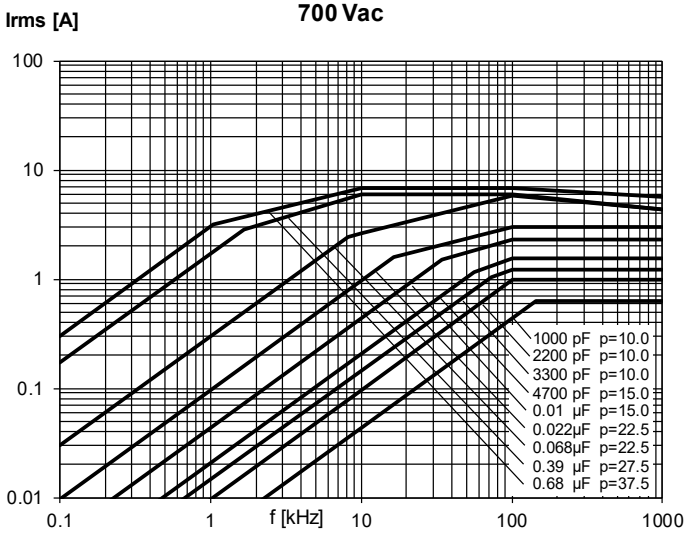
Maximum Current (I_{rms}) vs. Frequency (Sinusoidal Waveform/Th ≤ 85°C)

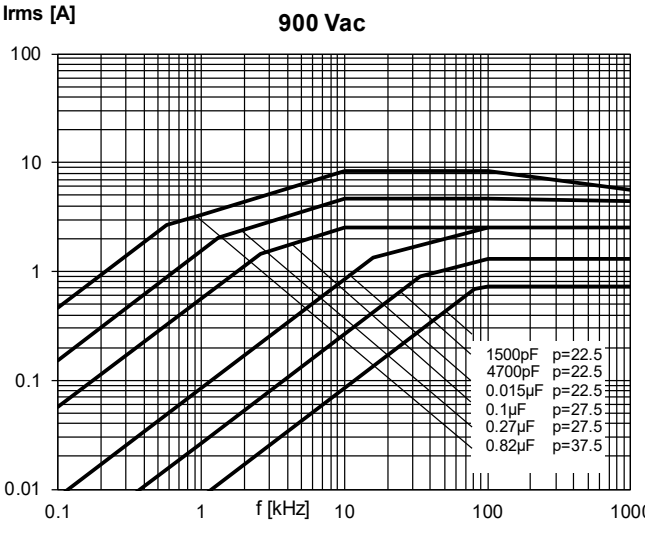












Environmental Test Data

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 ≤ 0.001 @ 1 kHz IR after test ≥ 50% of initial limit
Endurance Test	**Test Conditions**		**Performances**
	Temperature: Voltage applied: Test duration:	+85°C ±2°C 1.25 x V_R (AC) @ 50 Hz 2,000 hours	|Δ C/C| ≤ 5%, Δ tanδ ≤ 0.0015 @ 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 ≤ 0.001 @ 1 kHz IR after test ≥ initial limit

Environmental Compliance

All KEMET pulse capacitors are RoHS Compliant.

Table 1 – Ratings & Part Number Reference

VAC	VDC	Capacitance Value (µF)	Dimensions in mm			Lead Spacing (p)	dV/dt (V/µs)	Max K_0 (V^2/µs)	New KEMET Part Number	Legacy Part Number
			B	H	L					
250	630	0.010	4.0	9.0	13.0	10.0	300	378,000	74LF2100(1)00(2)	R74LF2100(1)00(2)
250	630	0.012	4.0	9.0	13.0	10.0	300	378,000	74LF2120(1)00(2)	R74LF2120(1)00(2)
250	630	0.015	5.0	11.0	13.0	10.0	300	378,000	74LF2150(1)00(2)	R74LF2150(1)00(2)
250	630	0.018	5.0	11.0	13.0	10.0	300	378,000	74LF2180(1)00(2)	R74LF2180(1)00(2)
250	630	0.022	6.0	12.0	13.0	10.0	300	378,000	74LF2220(1)00(2)	R74LF2220(1)00(2)
250	630	0.027	6.0	12.0	13.0	10.0	300	378,000	74LF2270(1)00(2)	R74LF2270(1)00(2)
250	630	0.015	5.0	11.0	18.0	15.0	250	315,000	74LI2150(1)00(2)	R74LI2150(1)00(2)
250	630	0.018	5.0	11.0	18.0	15.0	250	315,000	74LI2180(1)00(2)	R74LI2180(1)00(2)
250	630	0.022	5.0	11.0	18.0	15.0	250	315,000	74LI2220(1)00(2)	R74LI2220(1)00(2)
250	630	0.027	5.0	11.0	18.0	15.0	250	315,000	74LI2270(1)00(2)	R74LI2270(1)00(2)
250	630	0.033	5.0	11.0	18.0	15.0	250	315,000	74LI2330(1)00(2)	R74LI2330(1)00(2)
250	630	0.039	6.0	12.0	18.0	15.0	250	315,000	74LI2390(1)00(2)	R74LI2390(1)00(2)
250	630	0.047	6.0	12.0	18.0	15.0	250	315,000	74LI2470(1)00(2)	R74LI2470(1)00(2)
250	630	0.056	7.5	13.5	18.0	15.0	250	315,000	74LI2560(1)00(2)	R74LI2560(1)00(2)
250	630	0.068	7.5	13.5	18.0	15.0	250	315,000	74LI2680(1)00(2)	R74LI2680(1)00(2)
250	630	0.068	9.0	12.5	18.0	15.0	250	315,000	74LI2680(1)60(2)	R74LI2680(1)60(2)
250	630	0.082	8.5	14.5	18.0	15.0	250	315,000	74LI2820(1)00(2)	R74LI2820(1)00(2)
250	630	0.082	13.0	12.0	18.0	15.0	250	315,000	74LI2820(1)60(2)	R74LI2820(1)60(2)
250	630	0.10	8.5	14.5	18.0	15.0	250	315,000	74LI3100(1)00(2)	R74LI3100(1)00(2)
250	630	0.10	13.0	12.0	18.0	15.0	250	315,000	74LI3100(1)60(2)	R74LI3100(1)60(2)
250	630	0.12	10.0	16.0	18.0	15.0	250	315,000	74LI3120(1)00(2)	R74LI3120(1)00(2)
250	630	0.15	11.0	19.0	18.0	15.0	250	315,000	74LI3150(1)00(2)	R74LI3150(1)00(2)
400	1,300	0.0022	4.0	9.0	13.0	10.0	2,200	5,720,000	74NF1220(1)00(2)	R74NF1220(1)00(2)
400	1,300	0.0027	4.0	9.0	13.0	10.0	2,200	5,720,000	74NF1270(1)00(2)	R74NF1270(1)00(2)
400	1,300	0.0033	4.0	9.0	13.0	10.0	2,200	5,720,000	74NF1330(1)00(2)	R74NF1330(1)00(2)
400	1,300	0.0039	5.0	11.0	13.0	10.0	2,200	5,720,000	74NF1390(1)00(2)	R74NF1390(1)00(2)
400	1,300	0.0047	5.0	11.0	13.0	10.0	2,200	5,720,000	74NF1470(1)00(2)	R74NF1470(1)00(2)
400	1,300	0.0056	5.0	11.0	13.0	10.0	2,200	5,720,000	74NF1560(1)00(2)	R74NF1560(1)00(2)
400	1,300	0.0068	6.0	12.0	13.0	10.0	2,200	5,720,000	74NF1680(1)00(2)	R74NF1680(1)00(2)
400	1,300	0.0082	6.0	12.0	13.0	10.0	2,200	5,720,000	74NF1820(1)00(2)	R74NF1820(1)00(2)
400	1,300	0.0068	5.0	11.0	18.0	15.0	2,000	5,200,000	74NI1680(1)00(2)	R74NI1680(1)00(2)
400	1,300	0.0082	5.0	11.0	18.0	15.0	2,000	5,200,000	74NI1820(1)00(2)	R74NI1820(1)00(2)
400	1,300	0.010	5.0	11.0	18.0	15.0	2,000	5,200,000	74NI2100(1)00(2)	R74NI2100(1)00(2)
400	1,300	0.012	6.0	12.0	18.0	15.0	2,000	5,200,000	74NI2120(1)00(2)	R74NI2120(1)00(2)
400	1,300	0.015	6.0	12.0	18.0	15.0	2,000	5,200,000	74NI2150(1)00(2)	R74NI2150(1)00(2)
400	1,300	0.018	7.5	13.5	18.0	15.0	2,000	5,200,000	74NI2180(1)00(2)	R74NI2180(1)00(2)
400	1,300	0.022	7.5	13.5	18.0	15.0	2,000	5,200,000	74NI2220(1)00(2)	R74NI2220(1)00(2)
400	1,300	0.022	9.0	12.5	18.0	15.0	2,000	5,200,000	74NI2220(1)60(2)	R74NI2220(1)60(2)
400	1,300	0.027	8.5	14.5	18.0	15.0	2,000	5,200,000	74NI2270(1)00(2)	R74NI2270(1)00(2)
400	1,300	0.027	13.0	12.0	18.0	15.0	2,000	5,200,000	74NI2270(1)60(2)	R74NI2270(1)60(2)
400	1,300	0.033	8.5	14.5	18.0	15.0	2,000	5,200,000	74NI2330(1)00(2)	R74NI2330(1)00(2)
400	1,300	0.033	13.0	12.0	18.0	15.0	2,000	5,200,000	74NI2330(1)60(2)	R74NI2330(1)60(2)
400	1,300	0.039	10.0	16.0	18.0	15.0	2,000	5,200,000	74NI2390(1)00(2)	R74NI2390(1)00(2)
400	1,300	0.039	13.0	12.0	18.0	15.0	2,000	5,200,000	74NI2390(1)60(2)	R74NI2390(1)60(2)
400	1,300	0.047	10.0	16.0	18.0	15.0	2,000	5,200,000	74NI2470(1)00(2)	R74NI2470(1)00(2)
400	1,300	0.056	11.0	19.0	18.0	15.0	2,000	5,200,000	74NI2560(1)00(2)	R74NI2560(1)00(2)
400	1,300	0.039	6.0	15.0	26.5	22.5	800	2,080,000	74NN2390(1)00(2)	R74NN2390(1)00(2)
400	1,300	0.047	7.0	16.0	26.5	22.5	800	2,080,000	74NN2470(1)00(2)	R74NN2470(1)00(2)
400	1,300	0.056	7.0	16.0	26.5	22.5	800	2,080,000	74NN2560(1)00(2)	R74NN2560(1)00(2)
400	1,300	0.068	8.5	17.0	26.5	22.5	800	2,080,000	74NN2680(1)00(2)	R74NN2680(1)00(2)
400	1,300	0.082	10.0	18.5	26.5	22.5	800	2,080,000	74NN2820(1)00(2)	R74NN2820(1)00(2)
400	1,300	0.10	10.0	18.5	26.5	22.5	800	2,080,000	74NN3100(1)00(2)	R74NN3100(1)00(2)
400	1,300	0.12	11.0	20.0	26.5	22.5	800	2,080,000	74NN3120(1)00(2)	R74NN3120(1)00(2)
400	1,300	0.15	13.0	22.0	26.5	22.5	800	2,080,000	74NN3150(1)00(2)	R74NN3150(1)00(2)
400	1,300	0.15	9.0	17.0	32.0	27.5	380	988,000	74NR3150(1)00(2)	R74NR3150(1)00(2)
400	1,300	0.18	9.0	17.0	32.0	27.5	380	988,000	74NR3180(1)00(2)	R74NR3180(1)00(2)
400	1,300	0.22	11.0	20.0	32.0	27.5	380	988,000	74NR3220(1)00(2)	R74NR3220(1)00(2)
400	1,300	0.27	11.0	20.0	32.0	27.5	380	988,000	74NR3270(1)00(2)	R74NR3270(1)00(2)
400	1,300	0.33	13.0	22.0	32.0	27.5	380	988,000	74NR3330(1)00(2)	R74NR3330(1)00(2)
400	1,300	0.39	13.0	22.0	32.0	27.5	380	988,000	74NR3390(1)00(2)	R74NR3390(1)00(2)
VAC	**VDC**	**Capacitance Value (µF)**	**B (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (p)**	**dV/dt (V/µs)**	**Max K_0 (V^2/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) Insert lead and packaging code. See Ordering Options Table for available options.
(2) J = 5%, K = ±10%

Table 1 – Ratings & Part Number Reference cont'd

VAC	VDC	Capacitance Value (µF)	Dimensions in mm			Lead Spacing (p)	dV/dt (V/µs)	Max K_0 (V^2/µs)	New KEMET Part Number	Legacy Part Number
			B	H	L					
400	1,300	0.47	14.0	28.0	32.0	27.5	380	988,000	74NR3470(1)00(2)	R74NR3470(1)00(2)
400	1,300	0.56	14.0	28.0	32.0	27.5	380	988,000	74NR3560(1)00(2)	R74NR3560(1)00(2)
400	1,300	0.68	14.0	28.0	32.0	27.5	380	988,000	74NR3680(1)00(2)	R74NR3680(1)00(2)
400	1,300	0.82	18.0	33.0	32.0	27.5	380	988,000	74NR3820(1)00(2)	R74NR3820(1)00(2)
400	1,300	1.0	18.0	33.0	32.0	27.5	380	988,000	74NR4100(1)00(2)	R74NR4100(1)00(2)
400	1,300	0.47	11.0	22.0	41.5	37.5	180	468,000	74NW3470(1)00(2)	R74NW3470(1)00(2)
400	1,300	0.56	13.0	24.0	41.5	37.5	180	468,000	74NW3560(1)20(2)	R74NW3560(1)20(2)
400	1,300	0.68	13.0	24.0	41.5	37.5	180	468,000	74NW3680(1)00(2)	R74NW3680(1)00(2)
400	1,300	0.82	16.0	28.5	41.5	37.5	180	468,000	74NW3820(1)00(2)	R74NW3820(1)00(2)
400	1,300	1.0	16.0	28.5	41.5	37.5	180	468,000	74NW4100(1)00(2)	R74NW4100(1)00(2)
400	1,300	1.2	19.0	32.0	41.5	37.5	180	468,000	74NW4120(1)00(2)	R74NW4120(1)00(2)
400	1,300	1.5	20.0	40.0	41.5	37.5	180	468,000	74NW4150(1)20(2)	R74NW4150(1)20(2)
400	1,300	1.8	20.0	40.0	41.5	37.5	180	468,000	74NW4180(1)00(2)	R74NW4180(1)00(2)
400	1,300	2.2	24.0	44.0	41.5	37.5	180	468,000	74NW4220(1)00(2)	R74NW4220(1)00(2)
400	1,300	2.7	24.0	44.0	41.5	37.5	180	468,000	74NW4270(1)00(2)	R74NW4270(1)00(2)
400	1,300	3.3	30.0	45.0	41.5	37.5	180	468,000	74NW4330(1)00(2)	R74NW4330(1)00(2)
500	1,600	0.0010	4.0	9.0	13.0	10.0	6,000	19,200,000	745F1100(1)00(2)	R745F1100(1)00(2)
500	1,600	0.0012	4.0	9.0	13.0	10.0	6,000	19,200,000	745F1120(1)00(2)	R745F1120(1)00(2)
500	1,600	0.0015	4.0	9.0	13.0	10.0	6,000	19,200,000	745F1150(1)00(2)	R745F1150(1)00(2)
500	1,600	0.0018	4.0	9.0	13.0	10.0	6,000	19,200,000	745F1180(1)00(2)	R745F1180(1)00(2)
500	1,600	0.0022	5.0	11.0	13.0	10.0	6,000	19,200,000	745F1220(1)00(2)	R745F1220(1)00(2)
500	1,600	0.0027	5.0	11.0	13.0	10.0	6,000	19,200,000	745F1270(1)00(2)	R745F1270(1)00(2)
500	1,600	0.0033	6.0	12.0	13.0	10.0	6,000	19,200,000	745F1330(1)00(2)	R745F1330(1)00(2)
500	1,600	0.0039	6.0	12.0	13.0	10.0	6,000	19,200,000	745F1390(1)00(2)	R745F1390(1)00(2)
500	1,600	0.0047	6.0	12.0	13.0	10.0	6,000	19,200,000	745F1470(1)00(2)	R745F1470(1)00(2)
500	1,600	0.0056	6.0	12.0	13.0	10.0	6,000	19,200,000	745F1560(1)00(2)	R745F1560(1)00(2)
500	1,600	0.0068	6.0	12.0	13.0	10.0	6,000	19,200,000	745F1680(1)00(2)	R745F1680(1)00(2)
500	1,600	0.0082	6.0	12.0	13.0	10.0	6,000	19,200,000	745F1820(1)00(2)	R745F1820(1)00(2)
500	1,600	0.0015	4.0	10.0	18.0	15.0	4,500	14,400,000	745I1150(1)30(2)	R745I1150(1)30(2)
500	1,600	0.0015	5.0	11.0	18.0	15.0	4,500	14,400,000	745I1150(1)00(2)	R745I1150(1)00(2)
500	1,600	0.0018	4.0	10.0	18.0	15.0	4,500	14,400,000	745I1180(1)30(2)	R745I1180(1)30(2)
500	1,600	0.0018	5.0	11.0	18.0	15.0	4,500	14,400,000	745I1180(1)00(2)	R745I1180(1)00(2)
500	1,600	0.0022	4.0	10.0	18.0	15.0	4,500	14,400,000	745I1220(1)30(2)	R745I1220(1)30(2)
500	1,600	0.0022	5.0	11.0	18.0	15.0	4,500	14,400,000	745I1220(1)00(2)	R745I1220(1)00(2)
500	1,600	0.0027	4.0	10.0	18.0	15.0	4,500	14,400,000	745I1270(1)30(2)	R745I1270(1)30(2)
500	1,600	0.0027	5.0	11.0	18.0	15.0	4,500	14,400,000	745I1270(1)00(2)	R745I1270(1)00(2)
500	1,600	0.0033	4.0	10.0	18.0	15.0	4,500	14,400,000	745I1330(1)30(2)	R745I1330(1)30(2)
500	1,600	0.0033	5.0	11.0	18.0	15.0	4,500	14,400,000	745I1330(1)00(2)	R745I1330(1)00(2)
500	1,600	0.0039	4.0	10.0	18.0	15.0	4,500	14,400,000	745I1390(1)30(2)	R745I1390(1)30(2)
500	1,600	0.0039	5.0	11.0	18.0	15.0	4,500	14,400,000	745I1390(1)00(2)	R745I1390(1)00(2)
500	1,600	0.0047	4.0	10.0	18.0	15.0	4,500	14,400,000	745I1470(1)30(2)	R745I1470(1)30(2)
500	1,600	0.0047	5.0	11.0	18.0	15.0	4,500	14,400,000	745I1470(1)00(2)	R745I1470(1)00(2)
500	1,600	0.0056	5.0	11.0	18.0	15.0	4,500	14,400,000	745I1560(1)00(2)	R745I1560(1)00(2)
500	1,600	0.0068	6.0	12.0	18.0	15.0	4,500	14,400,000	745I1680(1)00(2)	R745I1680(1)00(2)
500	1,600	0.0082	6.0	12.0	18.0	15.0	4,500	14,400,000	745I1820(1)00(2)	R745I1820(1)00(2)
500	1,600	0.010	6.0	12.0	18.0	15.0	4,500	14,400,000	745I2100(1)00(2)	R745I2100(1)00(2)
500	1,600	0.012	7.5	13.5	18.0	15.0	4,500	14,400,000	745I2120(1)00(2)	R745I2120(1)00(2)
500	1,600	0.015	7.5	13.5	18.0	15.0	4,500	14,400,000	745I2150(1)00(2)	R745I2150(1)00(2)
500	1,600	0.015	13.0	12.0	18.0	15.0	4,500	14,400,000	745I2150(1)60(2)	R745I2150(1)60(2)
500	1,600	0.018	8.5	14.5	18.0	15.0	4,500	14,400,000	745I2180(1)00(2)	R745I2180(1)00(2)
500	1,600	0.018	13.0	12.0	18.0	15.0	4,500	14,400,000	745I2180(1)60(2)	R745I2180(1)60(2)
500	1,600	0.022	10.0	16.0	18.0	15.0	4,500	14,400,000	745I2220(1)00(2)	R745I2220(1)00(2)
500	1,600	0.022	13.0	12.0	18.0	15.0	4,500	14,400,000	745I2220(1)60(2)	R745I2220(1)60(2)
500	1,600	0.027	10.0	16.0	18.0	15.0	4,500	14,400,000	745I2270(1)00(2)	R745I2270(1)00(2)
500	1,600	0.033	11.0	19.0	18.0	15.0	4,500	14,400,000	745I2330(1)00(2)	R745I2330(1)00(2)
500	1,600	0.018	6.0	15.0	26.5	22.5	1,800	5,760,000	745N2180(1)00(2)	R745N2180(1)00(2)
500	1,600	0.022	6.0	15.0	26.5	22.5	1,800	5,760,000	745N2220(1)00(2)	R745N2220(1)00(2)
500	1,600	0.027	7.0	16.0	26.5	22.5	1,800	5,760,000	745N2270(1)00(2)	R745N2270(1)00(2)
500	1,600	0.033	7.0	16.0	26.5	22.5	1,800	5,760,000	745N2330(1)00(2)	R745N2330(1)00(2)
500	1,600	0.039	8.5	17.0	26.5	22.5	1,800	5,760,000	745N2390(1)00(2)	R745N2390(1)00(2)
VAC	**VDC**	**Capacitance Value (µF)**	**B (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (p)**	**dV/dt (V/µs)**	**Max K_0 (V^2/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) Insert lead and packaging code. See Ordering Options Table for available options.
(2) J = 5%, K = ±10%

Table 1 – Ratings & Part Number Reference cont'd

VAC	VDC	Capacitance Value (µF)	Dimensions in mm			Lead Spacing (p)	dV/dt (V/µs)	Max K_0 (V^2/µs)	New KEMET Part Number	Legacy Part Number
			B	H	L					
500	1,600	0.047	10.0	18.5	26.5	22.5	1,800	5,760,000	745N2470(1)00(2)	R745N2470(1)00(2)
500	1,600	0.056	10.0	18.5	26.5	22.5	1,800	5,760,000	745N2560(1)00(2)	R745N2560(1)00(2)
500	1,600	0.068	11.0	20.0	26.5	22.5	1,800	5,760,000	745N2680(1)00(2)	R745N2680(1)00(2)
500	1,600	0.082	13.0	22.0	26.5	22.5	1,800	5,760,000	745N2820(1)00(2)	R745N2820(1)00(2)
500	1,600	0.10	13.0	22.0	26.5	22.5	1,800	5,760,000	745N3100(1)00(2)	R745N3100(1)00(2)
500	1,600	0.10	9.0	17.0	32.0	27.5	500	1,600,000	745R3100(1)00(2)	R745R3100(1)00(2)
500	1,600	0.12	9.0	17.0	32.0	27.5	500	1,600,000	745R3120(1)00(2)	R745R3120(1)00(2)
500	1,600	0.15	9.0	17.0	32.0	27.5	500	1,600,000	745R3150(1)00(2)	R745R3150(1)00(2)
500	1,600	0.18	11.0	20.0	32.0	27.5	500	1,600,000	745R3180(1)00(2)	R745R3180(1)00(2)
500	1,600	0.22	11.0	20.0	32.0	27.5	500	1,600,000	745R3220(1)00(2)	R745R3220(1)00(2)
500	1,600	0.27	13.0	22.0	32.0	27.5	500	1,600,000	745R3270(1)00(2)	R745R3270(1)00(2)
500	1,600	0.33	14.0	28.0	32.0	27.5	500	1,600,000	745R3330(1)00(2)	R745R3330(1)00(2)
500	1,600	0.39	14.0	28.0	32.0	27.5	500	1,600,000	745R3390(1)00(2)	R745R3390(1)00(2)
500	1,600	0.47	14.0	28.0	32.0	27.5	500	1,600,000	745R3470(1)00(2)	R745R3470(1)00(2)
500	1,600	0.56	18.0	33.0	32.0	27.5	500	1,600,000	745R3560(1)00(2)	R745R3560(1)00(2)
500	1,600	0.68	18.0	33.0	32.0	27.5	500	1,600,000	745R3680(1)00(2)	R745R3680(1)00(2)
500	1,600	0.82	22.0	37.0	32.0	27.5	500	1,600,000	745R3820(1)00(2)	R745R3820(1)00(2)
500	1,600	1.0	22.0	37.0	32.0	27.5	500	1,600,000	745R4100(1)00(2)	R745R4100(1)00(2)
500	1,600	0.33	11.0	22.0	41.5	37.5	300	960,000	745W3330(1)00(2)	R745W3330(1)00(2)
500	1,600	0.39	13.0	24.0	41.5	37.5	300	960,000	745W3390(1)20(2)	R745W3390(1)20(2)
500	1,600	0.47	13.0	24.0	41.5	37.5	300	960,000	745W3470(1)00(2)	R745W3470(1)00(2)
500	1,600	0.56	16.0	28.5	41.5	37.5	300	960,000	745W3560(1)20(2)	R745W3560(1)20(2)
500	1,600	0.68	16.0	28.5	41.5	37.5	300	960,000	745W3680(1)00(2)	R745W3680(1)00(2)
500	1,600	0.82	19.0	32.0	41.5	37.5	300	960,000	745W3820(1)20(2)	R745W3820(1)20(2)
500	1,600	1.0	19.0	32.0	41.5	37.5	300	960,000	745W4100(1)00(2)	R745W4100(1)00(2)
500	1,600	1.2	20.0	40.0	41.5	37.5	300	960,000	745W4120(1)20(2)	R745W4120(1)20(2)
500	1,600	1.5	20.0	40.0	41.5	37.5	300	960,000	745W4150(1)00(2)	R745W4150(1)00(2)
500	1,600	1.8	24.0	44.0	41.5	37.5	300	960,000	745W4180(1)00(2)	R745W4180(1)00(2)
500	1,600	2.2	30.0	45.0	41.5	37.5	300	960,000	745W4220(1)20(2)	R745W4220(1)20(2)
600	2,000	0.00047	4.0	9.0	13.0	10.0	10,000	40,000,000	746F0470(1)00(2)	R746F0470(1)00(2)
600	2,000	0.00068	4.0	9.0	13.0	10.0	10,000	40,000,000	746F0680(1)00(2)	R746F0680(1)00(2)
600	2,000	0.00082	4.0	9.0	13.0	10.0	10,000	40,000,000	746F0820(1)00(2)	R746F0820(1)00(2)
600	2,000	0.0010	4.0	9.0	13.0	10.0	10,000	40,000,000	746F1100(1)00(2)	R746F1100(1)00(2)
600	2,000	0.0012	4.0	9.0	13.0	10.0	10,000	40,000,000	746F1120(1)00(2)	R746F1120(1)00(2)
600	2,000	0.0015	4.0	9.0	13.0	10.0	10,000	40,000,000	746F1150(1)00(2)	R746F1150(1)00(2)
600	2,000	0.0018	4.0	9.0	13.0	10.0	10,000	40,000,000	746F1180(1)00(2)	R746F1180(1)00(2)
600	2,000	0.0022	5.0	11.0	13.0	10.0	10,000	40,000,000	746F1220(1)00(2)	R746F1220(1)00(2)
600	2,000	0.0027	5.0	11.0	13.0	10.0	10,000	40,000,000	746F1270(1)00(2)	R746F1270(1)00(2)
600	2,000	0.0033	6.0	12.0	13.0	10.0	10,000	40,000,000	746F1330(1)00(2)	R746F1330(1)00(2)
600	2,000	0.0039	6.0	12.0	13.0	10.0	10,000	40,000,000	746F1390(1)00(2)	R746F1390(1)00(2)
600	2,000	0.0047	6.0	12.0	13.0	10.0	10,000	40,000,000	746F1470(1)00(2)	R746F1470(1)00(2)
600	2,000	0.0056	6.0	12.0	13.0	10.0	10,000	40,000,000	746F1560(1)00(2)	R746F1560(1)00(2)
600	2,000	0.0068	6.0	12.0	13.0	10.0	10,000	40,000,000	746F1680(1)00(2)	R746F1680(1)00(2)
600	2,000	0.0082	6.0	12.0	13.0	10.0	10,000	40,000,000	746F1820(1)00(2)	R746F1820(1)00(2)
600	2,000	0.0023	4.0	10.0	18.0	15.0	9,500	38,000,000	746I1230(1)00(2)	R746I1230(1)00(2)
600	2,000	0.0027	4.0	10.0	18.0	15.0	9,500	38,000,000	746I1270(1)00(2)	R746I1270(1)00(2)
600	2,000	0.0039	5.0	11.0	18.0	15.0	9,500	38,000,000	746I1390(1)00(2)	R746I1390(1)00(2)
600	2,000	0.0047	5.0	11.0	18.0	15.0	9,500	38,000,000	746I1470(1)00(2)	R746I1470(1)00(2)
600	2,000	0.0068	6.0	12.0	18.0	15.0	9,500	38,000,000	746I1680(1)00(2)	R746I1680(1)00(2)
600	2,000	0.012	8.5	14.5	18.0	15.0	9,500	38,000,000	746I2120(1)00(2)	R746I2120(1)00(2)
600	2,000	0.015	8.5	14.5	18.0	15.0	9,500	38,000,000	746I2150(1)00(2)	R746I2150(1)00(2)
600	2,000	0.018	10.0	16.0	18.0	15.0	9,500	38,000,000	746I2180(1)00(2)	R746I2180(1)00(2)
700	2,000	0.00047	4.0	9.0	13.0	10.0	10,000	40,000,000	747F0470(1)00(2)	R747F0470(1)00(2)
700	2,000	0.00056	4.0	9.0	13.0	10.0	10,000	40,000,000	747F0560(1)00(2)	R747F0560(1)00(2)
700	2,000	0.00062	4.0	9.0	13.0	10.0	10,000	40,000,000	747F0620(1)00(2)	R747F0620(1)00(2)
700	2,000	0.00068	4.0	9.0	13.0	10.0	10,000	40,000,000	747F0680(1)00(2)	R747F0680(1)00(2)
700	2,000	0.00082	4.0	9.0	13.0	10.0	10,000	40,000,000	747F0820(1)00(2)	R747F0820(1)00(2)
700	2,000	0.00091	4.0	9.0	13.0	10.0	10,000	40,000,000	747F0910(1)00(2)	R747F0910(1)00(2)
700	2,000	0.0010	4.0	9.0	13.0	10.0	10,000	40,000,000	747F1100(1)00(2)	R747F1100(1)00(2)
700	2,000	0.0012	4.0	9.0	13.0	10.0	10,000	40,000,000	747F1120(1)00(2)	R747F1120(1)00(2)
VAC	**VDC**	**Capacitance Value (µF)**	**B (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (p)**	**dV/dt (V/µs)**	**Max K_0 (V^2/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) Insert lead and packaging code. See Ordering Options Table for available options.
(2) J = 5%, K = ±10%

Table 1 – Ratings & Part Number Reference cont'd

VAC	VDC	Capacitance Value (µF)	Dimensions in mm			Lead Spacing (p)	dV/dt (V/µs)	Max K_0 (V^2/µs)	New KEMET Part Number	Legacy Part Number
			B	H	L					
700	2,000	0.0015	4.0	9.0	13.0	10.0	10,000	40,000,000	747F1150(1)00(2)	R747F1150(1)00(2)
700	2,000	0.0018	4.0	9.0	13.0	10.0	10,000	40,000,000	747F1180(1)00(2)	R747F1180(1)00(2)
700	2,000	0.0022	5.0	11.0	13.0	10.0	10,000	40,000,000	747F1220(1)00(2)	R747F1220(1)00(2)
700	2,000	0.0027	5.0	11.0	13.0	10.0	10,000	40,000,000	747F1270(1)00(2)	R747F1270(1)00(2)
700	2,000	0.0033	6.0	12.0	13.0	10.0	10,000	40,000,000	747F1330(1)00(2)	R747F1330(1)00(2)
700	2,000	0.0036	6.0	12.0	13.0	10.0	10,000	40,000,000	747F1360(1)00(2)	R747F1360(1)00(2)
700	2,000	0.0039	6.0	12.0	13.0	10.0	10,000	40,000,000	747F1390(1)00(2)	R747F1390(1)00(2)
700	2,000	0.0047	6.0	12.0	13.0	10.0	10,000	40,000,000	747F1470(1)00(2)	R747F1470(1)00(2)
700	2,000	0.0056	6.0	12.0	13.0	10.0	10,000	40,000,000	747F1560(1)00(2)	R747F1560(1)00(2)
700	2,000	0.00047	4.0	10.0	18.0	15.0	9,500	38,000,000	747I0470(1)30(2)	R747I0470(1)30(2)
700	2,000	0.00068	4.0	10.0	18.0	15.0	9,500	38,000,000	747I0680(1)30(2)	R747I0680(1)30(2)
700	2,000	0.00082	4.0	10.0	18.0	15.0	9,500	38,000,000	747I0820(1)30(2)	R747I0820(1)30(2)
700	2,000	0.0010	4.0	10.0	18.0	15.0	9,500	38,000,000	747I1100(1)30(2)	R747I1100(1)30(2)
700	2,000	0.0010	5.0	11.0	18.0	15.0	9,500	38,000,000	747I1100(1)00(2)	R747I1100(1)00(2)
700	2,000	0.0012	4.0	10.0	18.0	15.0	9,500	38,000,000	747I1120(1)30(2)	R747I1120(1)30(2)
700	2,000	0.0012	5.0	11.0	18.0	15.0	9,500	38,000,000	747I1120(1)00(2)	R747I1120(1)00(2)
700	2,000	0.0015	4.0	10.0	18.0	15.0	9,500	38,000,000	747I1150(1)30(2)	R747I1150(1)30(2)
700	2,000	0.0015	5.0	11.0	18.0	15.0	9,500	38,000,000	747I1150(1)00(2)	R747I1150(1)00(2)
700	2,000	0.0018	4.0	10.0	18.0	15.0	9,500	38,000,000	747I1180(1)30(2)	R747I1180(1)30(2)
700	2,000	0.0018	5.0	11.0	18.0	15.0	9,500	38,000,000	747I1180(1)00(2)	R747I1180(1)00(2)
700	2,000	0.0022	4.0	10.0	18.0	15.0	9,500	38,000,000	747I1220(1)30(2)	R747I1220(1)30(2)
700	2,000	0.0022	5.0	11.0	18.0	15.0	9,500	38,000,000	747I1220(1)00(2)	R747I1220(1)00(2)
700	2,000	0.0027	5.0	11.0	18.0	15.0	9,500	38,000,000	747I1270(1)00(2)	R747I1270(1)00(2)
700	2,000	0.0033	5.0	11.0	18.0	15.0	9,500	38,000,000	747I1330(1)00(2)	R747I1330(1)00(2)
700	2,000	0.0039	6.0	12.0	18.0	15.0	9,500	38,000,000	747I1390(1)00(2)	R747I1390(1)00(2)
700	2,000	0.0047	6.0	12.0	18.0	15.0	9,500	38,000,000	747I1470(1)00(2)	R747I1470(1)00(2)
700	2,000	0.0056	6.0	12.0	18.0	15.0	9,500	38,000,000	747I1560(1)00(2)	R747I1560(1)00(2)
700	2,000	0.0068	7.5	13.5	18.0	15.0	9,500	38,000,000	747I1680(1)00(2)	R747I1680(1)00(2)
700	2,000	0.0082	7.5	13.5	18.0	15.0	9,500	38,000,000	747I1820(1)00(2)	R747I1820(1)00(2)
700	2,000	0.0082	9.0	12.5	18.0	15.0	9,500	38,000,000	747I1820(1)60(2)	R747I1820(1)60(2)
700	2,000	0.010	8.5	14.5	18.0	15.0	9,500	38,000,000	747I2100(1)00(2)	R747I2100(1)00(2)
700	2,000	0.010	13.0	12.0	18.0	15.0	9,500	38,000,000	747I2100(1)60(2)	R747I2100(1)60(2)
700	2,000	0.012	10.0	16.0	18.0	15.0	9,500	38,000,000	747I2120(1)00(2)	R747I2120(1)00(2)
700	2,000	0.012	13.0	12.0	18.0	15.0	9,500	38,000,000	747I2120(1)60(2)	R747I2120(1)60(2)
700	2,000	0.015	10.0	16.0	18.0	15.0	9,500	38,000,000	747I2150(1)00(2)	R747I2150(1)00(2)
700	2,000	0.018	11.0	19.0	18.0	15.0	9,500	38,000,000	747I2180(1)00(2)	R747I2180(1)00(2)
700	2,000	0.0082	6.0	15.0	26.5	22.5	4,500	18,000,000	747N1820(1)00(2)	R747N1820(1)00(2)
700	2,000	0.010	6.0	15.0	26.5	22.5	4,500	18,000,000	747N2100(1)00(2)	R747N2100(1)00(2)
700	2,000	0.012	6.0	15.0	26.5	22.5	4,500	18,000,000	747N2120(1)00(2)	R747N2120(1)00(2)
700	2,000	0.015	6.0	15.0	26.5	22.5	4,500	18,000,000	747N2150(1)00(2)	R747N2150(1)00(2)
700	2,000	0.018	7.0	16.0	26.5	22.5	4,500	18,000,000	747N2180(1)00(2)	R747N2180(1)00(2)
700	2,000	0.022	8.5	17.0	26.5	22.5	4,500	18,000,000	747N2220(1)00(2)	R747N2220(1)00(2)
700	2,000	0.027	8.5	17.0	26.5	22.5	4,500	18,000,000	747N2270(1)00(2)	R747N2270(1)00(2)
700	2,000	0.033	10.0	18.5	26.5	22.5	4,500	18,000,000	747N2330(1)00(2)	R747N2330(1)00(2)
700	2,000	0.039	10.0	18.5	26.5	22.5	4,500	18,000,000	747N2390(1)00(2)	R747N2390(1)00(2)
700	2,000	0.047	11.0	20.0	26.5	22.5	4,500	18,000,000	747N2470(1)00(2)	R747N2470(1)00(2)
700	2,000	0.056	13.0	22.0	26.5	22.5	4,500	18,000,000	747N2560(1)00(2)	R747N2560(1)00(2)
700	2,000	0.068	13.0	22.0	26.5	22.5	4,500	18,000,000	747N2680(1)00(2)	R747N2680(1)00(2)
700	2,000	0.039	9.0	17.0	32.0	27.5	700	2,800,000	747R2390(1)00(2)	R747R2390(1)00(2)
700	2,000	0.047	9.0	17.0	32.0	27.5	700	2,800,000	747R2470(1)00(2)	R747R2470(1)00(2)
700	2,000	0.056	9.0	17.0	32.0	27.5	700	2,800,000	747R2560(1)00(2)	R747R2560(1)00(2)
700	2,000	0.068	11.0	20.0	32.0	27.5	700	2,800,000	747R2680(1)00(2)	R747R2680(1)00(2)
700	2,000	0.082	11.0	20.0	32.0	27.5	700	2,800,000	747R2820(1)00(2)	R747R2820(1)00(2)
700	2,000	0.10	13.0	22.0	32.0	27.5	700	2,800,000	747R3100(1)00(2)	R747R3100(1)00(2)
700	2,000	0.12	13.0	22.0	32.0	27.5	700	2,800,000	747R3120(1)00(2)	R747R3120(1)00(2)
700	2,000	0.15	14.0	28.0	32.0	27.5	700	2,800,000	747R3150(1)00(2)	R747R3150(1)00(2)
700	2,000	0.18	14.0	28.0	32.0	27.5	700	2,800,000	747R3180(1)00(2)	R747R3180(1)00(2)
700	2,000	0.22	18.0	33.0	32.0	27.5	700	2,800,000	747R3220(1)00(2)	R747R3220(1)00(2)
700	2,000	0.27	18.0	33.0	32.0	27.5	700	2,800,000	747R3270(1)00(2)	R747R3270(1)00(2)
700	2,000	0.33	22.0	37.0	32.0	27.5	700	2,800,000	747R3330(1)00(2)	R747R3330(1)00(2)
VAC	**VDC**	**Capacitance Value (µF)**	**B (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (p)**	**dV/dt (V/µs)**	**Max K_0 (V^2/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) Insert lead and packaging code. See Ordering Options Table for available options.
(2) J = 5%, K = ±10%

Table 1 – Ratings & Part Number Reference cont'd

VAC	VDC	Capacitance Value (µF)	Dimensions in mm			Lead Spacing (p)	dV/dt (V/µs)	Max K_0 (V^2/µs)	New KEMET Part Number	Legacy Part Number
			B	H	L					
700	2,000	0.15	11.0	22.0	41.5	37.5	400	1,600,000	747W3150(1)00(2)	R747W3150(1)00(2)
700	2,000	0.18	13.0	24.0	41.5	37.5	400	1,600,000	747W3180(1)00(2)	R747W3180(1)00(2)
700	2,000	0.22	16.0	28.5	41.5	37.5	400	1,600,000	747W3220(1)20(2)	R747W3220(1)20(2)
700	2,000	0.27	16.0	28.5	41.5	37.5	400	1,600,000	747W3270(1)00(2)	R747W3270(1)00(2)
700	2,000	0.33	19.0	32.0	41.5	37.5	400	1,600,000	747W3330(1)20(2)	R747W3330(1)20(2)
700	2,000	0.39	19.0	32.0	41.5	37.5	400	1,600,000	747W3390(1)00(2)	R747W3390(1)00(2)
700	2,000	0.47	20.0	40.0	41.5	37.5	400	1,600,000	747W3470(1)20(2)	R747W3470(1)20(2)
700	2,000	0.56	20.0	40.0	41.5	37.5	400	1,600,000	747W3560(1)00(2)	R747W3560(1)00(2)
700	2,000	0.68	24.0	44.0	41.5	37.5	400	1,600,000	747W3680(1)00(2)	R747W3680(1)00(2)
700	2,000	0.82	24.0	44.0	41.5	37.5	400	1,600,000	747W3820(1)00(2)	R747W3820(1)00(2)
700	2,000	1.0	30.0	45.0	41.5	37.5	400	1,600,000	747W4100(1)00(2)	R747W4100(1)00(2)
900	2,200	0.0010	6.0	15.0	26.5	22.5	2,500	11,000,000	749N1100(1)00(2)	R749N1100(1)00(2)
900	2,200	0.0012	6.0	15.0	26.5	22.5	2,500	11,000,000	749N1120(1)00(2)	R749N1120(1)00(2)
900	2,200	0.0015	6.0	15.0	26.5	22.5	2,500	11,000,000	749N1150(1)00(2)	R749N1150(1)00(2)
900	2,200	0.0018	6.0	15.0	26.5	22.5	2,500	11,000,000	749N1180(1)00(2)	R749N1180(1)00(2)
900	2,200	0.0022	6.0	15.0	26.5	22.5	2,500	11,000,000	749N1220(1)00(2)	R749N1220(1)00(2)
900	2,200	0.0027	6.0	15.0	26.5	22.5	2,500	11,000,000	749N1270(1)00(2)	R749N1270(1)00(2)
900	2,200	0.0033	6.0	15.0	26.5	22.5	2,500	11,000,000	749N1330(1)00(2)	R749N1330(1)00(2)
900	2,200	0.0039	6.0	15.0	26.5	22.5	2,500	11,000,000	749N1390(1)00(2)	R749N1390(1)00(2)
900	2,200	0.0047	6.0	15.0	26.5	22.5	2,500	11,000,000	749N1470(1)00(2)	R749N1470(1)00(2)
900	2,200	0.0056	6.0	15.0	26.5	22.5	2,500	11,000,000	749N1560(1)00(2)	R749N1560(1)00(2)
900	2,200	0.0068	6.0	15.0	26.5	22.5	2,500	11,000,000	749N1680(1)00(2)	R749N1680(1)00(2)
900	2,200	0.0082	7.0	16.0	26.5	22.5	2,500	11,000,000	749N1820(1)00(2)	R749N1820(1)00(2)
900	2,200	0.010	7.0	16.0	26.5	22.5	2,500	11,000,000	749N2100(1)00(2)	R749N2100(1)00(2)
900	2,200	0.012	8.5	17.0	26.5	22.5	2,500	11,000,000	749N2120(1)00(2)	R749N2120(1)00(2)
900	2,200	0.015	10.0	18.5	26.5	22.5	2,500	11,000,000	749N2150(1)00(2)	R749N2150(1)00(2)
900	2,200	0.018	10.0	18.5	26.5	22.5	2,500	11,000,000	749N2180(1)00(2)	R749N2180(1)00(2)
900	2,200	0.022	11.0	20.0	26.5	22.5	2,500	11,000,000	749N2220(1)00(2)	R749N2220(1)00(2)
900	2,200	0.027	13.0	22.0	26.5	22.5	2,500	11,000,000	749N2270(1)00(2)	R749N2270(1)00(2)
900	2,200	0.033	13.0	22.0	26.5	22.5	2,500	11,000,000	749N2330(1)00(2)	R749N2330(1)00(2)
900	2,200	0.022	9.0	17.0	32.0	27.5	1,500	6,600,000	749R2220(1)00(2)	R749R2220(1)00(2)
900	2,200	0.027	9.0	17.0	32.0	27.5	1,500	6,600,000	749R2270(1)00(2)	R749R2270(1)00(2)
900	2,200	0.033	11.0	20.0	32.0	27.5	1,500	6,600,000	749R2330(1)00(2)	R749R2330(1)00(2)
900	2,200	0.039	11.0	20.0	32.0	27.5	1,500	6,600,000	749R2390(1)00(2)	R749R2390(1)00(2)
900	2,200	0.047	13.0	22.0	32.0	27.5	1,500	6,600,000	749R2470(1)00(2)	R749R2470(1)00(2)
900	2,200	0.056	13.0	22.0	32.0	27.5	1,500	6,600,000	749R2560(1)00(2)	R749R2560(1)00(2)
900	2,200	0.068	14.0	28.0	32.0	27.5	1,500	6,600,000	749R2680(1)00(2)	R749R2680(1)00(2)
900	2,200	0.082	14.0	28.0	32.0	27.5	1,500	6,600,000	749R2820(1)00(2)	R749R2820(1)00(2)
900	2,200	0.10	18.0	33.0	32.0	27.5	1,500	6,600,000	749R3100(1)00(2)	R749R3100(1)00(2)
900	2,200	0.12	18.0	33.0	32.0	27.5	1,500	6,600,000	749R3120(1)00(2)	R749R3120(1)00(2)
900	2,200	0.15	18.0	33.0	32.0	27.5	1,500	6,600,000	749R3150(1)00(2)	R749R3150(1)00(2)
900	2,200	0.068	11.0	22.0	41.5	37.5	900	3,960,000	749W2680(1)00(2)	R749W2680(1)00(2)
900	2,200	0.082	13.0	24.0	41.5	37.5	900	3,960,000	749W2820(1)20(2)	R749W2820(1)20(2)
900	2,200	0.10	13.0	24.0	41.5	37.5	900	3,960,000	749W3100(1)00(2)	R749W3100(1)00(2)
900	2,200	0.12	16.0	28.5	41.5	37.5	900	3,960,000	749W3120(1)20(2)	R749W3120(1)20(2)
900	2,200	0.15	16.0	28.5	41.5	37.5	900	3,960,000	749W3150(1)00(2)	R749W3150(1)00(2)
900	2,200	0.18	19.0	32.0	41.5	37.5	900	3,960,000	749W3180(1)20(2)	R749W3180(1)20(2)
900	2,200	0.22	19.0	32.0	41.5	37.5	900	3,960,000	749W3220(1)00(2)	R749W3220(1)00(2)
900	2,200	0.27	20.0	40.0	41.5	37.5	900	3,960,000	749W3270(1)00(2)	R749W3270(1)00(2)
900	2,200	0.33	20.0	40.0	41.5	37.5	900	3,960,000	749W3330(1)00(2)	R749W3330(1)00(2)
900	2,200	0.39	24.0	44.0	41.5	37.5	900	3,960,000	749W3390(1)00(2)	R749W3390(1)00(2)
900	2,200	0.47	24.0	44.0	41.5	37.5	900	3,960,000	749W3470(1)00(2)	R749W3470(1)00(2)
VAC	**VDC**	**Capacitance Value (µF)**	**B (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (p)**	**dV/dt (V/µs)**	**Max K_0 (V^2/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) Insert lead and packaging code. See Ordering Options Table for available options.
(2) J = 5%, K = ±10%

Soldering Process

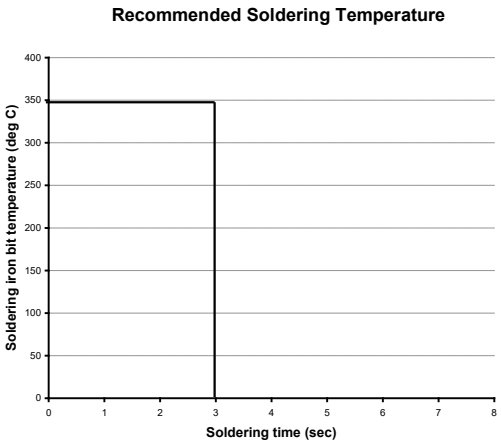
The implementation of the RoHS directive has resulted in the selection of SnAgCu (SAC) alloys or SnCu alloys as primary solder. This has increased the liquidus temperature from that of 183ºC for SnPb eutectic alloy to 217 – 221ºC for the new alloys. As a result, the heat stress to the components, even 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 – 170ºC). 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.

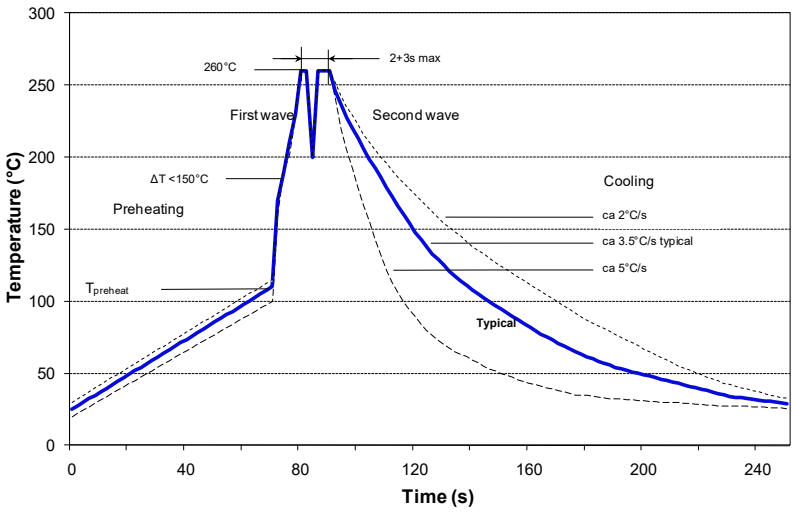
Manual Soldering Recommendations

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



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

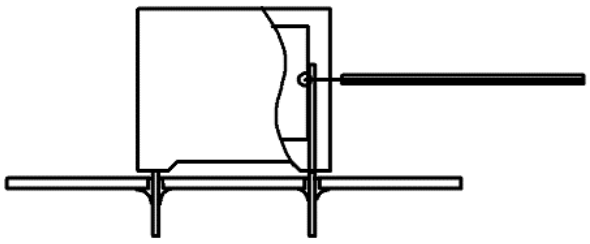
Wave Soldering Recommendations cont'd

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

Dielectric Film Material	Maximum Preheat Temperature			Maximum Peak Soldering Temperature	
	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.

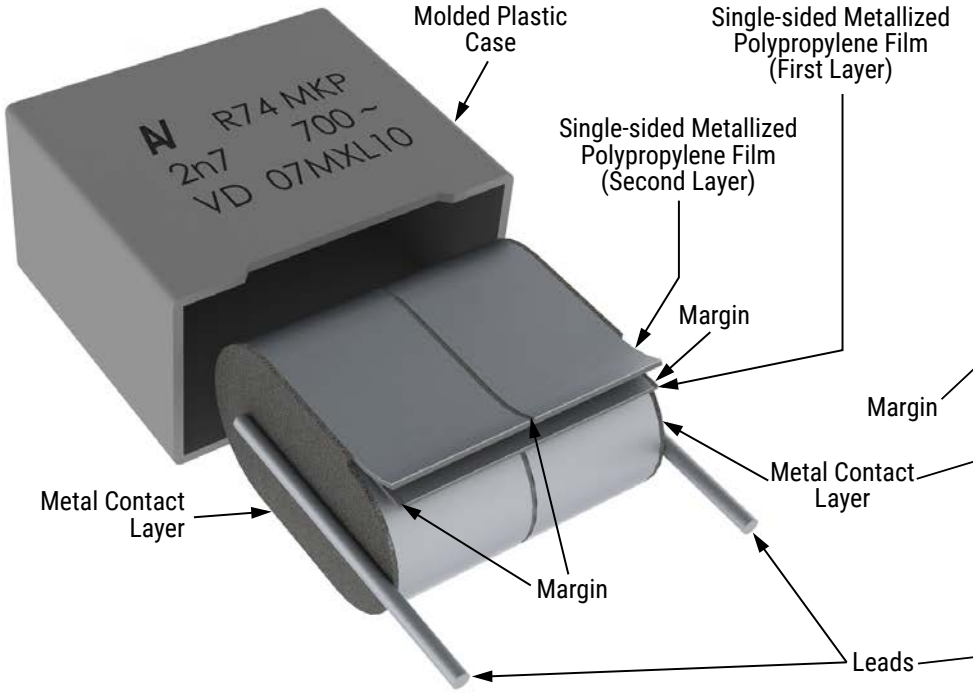
Selective Soldering Recommendations

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.

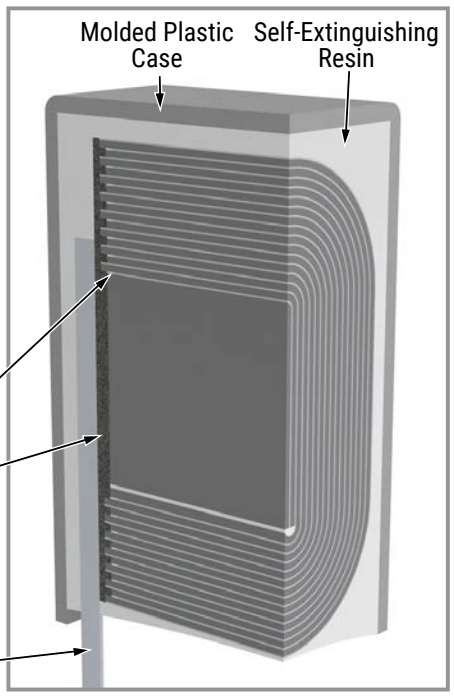
The temperature profile for selective soldering is similar to the double wave flow soldering outlined in this document, **however, instead of two baths, there is only one bath with a time from 3 to 10 seconds.** In selective soldering, the risk of overheating is greater than in double wave flow soldering,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

Construction

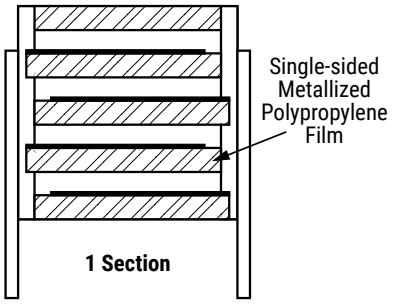
2 Sections

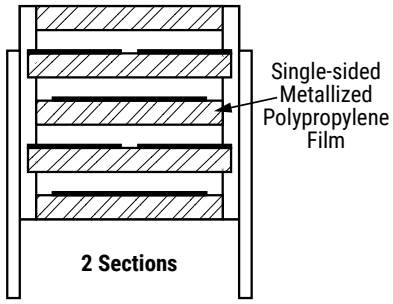


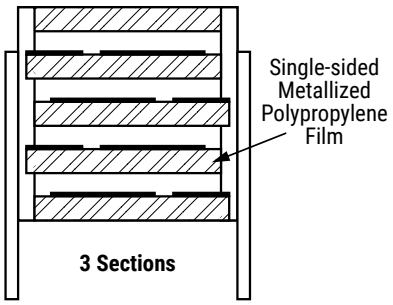
Detailed Cross Section

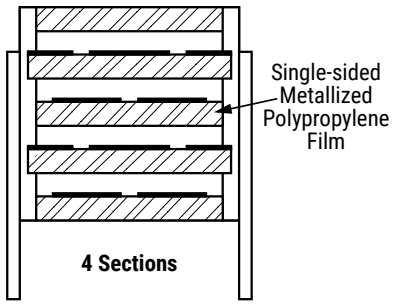


Winding Schemes

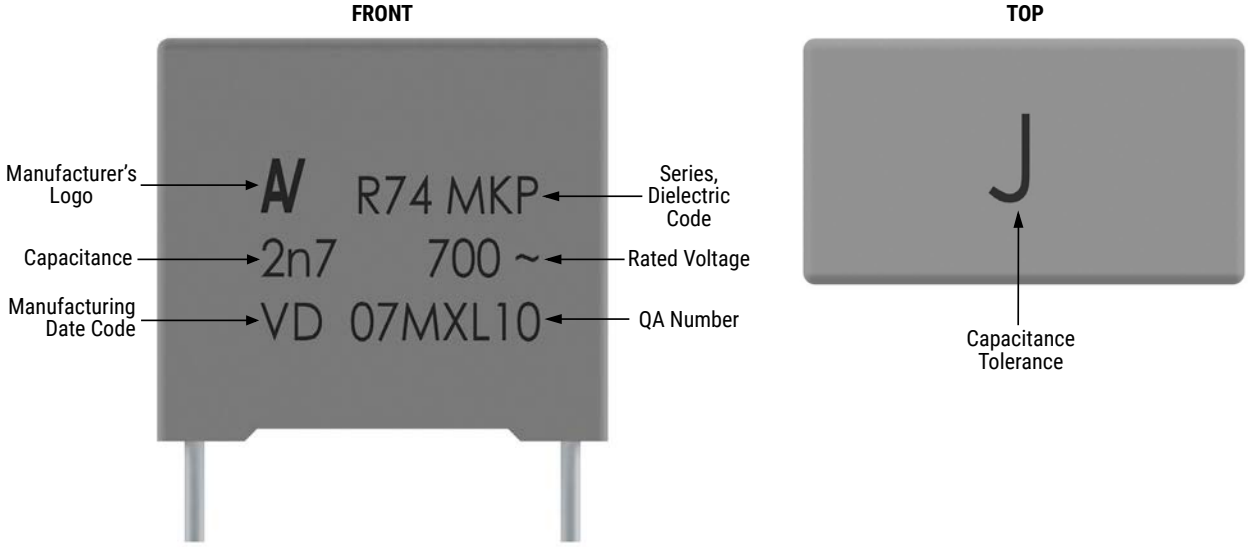








Marking

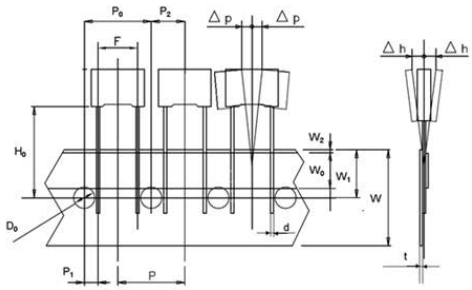

FRONT
TOP
Manufacturer's Logo
Capacitance
Manufacturing Date Code
R74 MKP
2n7
700 ~
VD 07MXL10
Series, Dielectric Code
Rated Voltage
QA Number
J
Capacitance Tolerance

Packaging Quantities

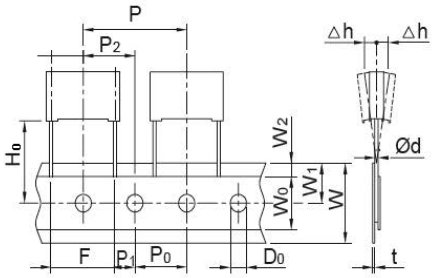
Lead Spacing	Thickness (mm)	Height (mm)	Length (mm)	Bulk Short Leads	Bulk Long Leads	Standard Reel ø 355 mm	Large Reel ø 500 mm	Ammo Taped
10	4.0	9.0	13.0	2,000	1,800	750	1,500	1,000
	5.0	11.0	13.0	1,300	1,500	600	1,250	800
	6.0	12.0	13.0	1,000	1,200	500	1,000	680
15	4.0	10.0	18.0	2,500	1,500	-	1,500	1,000
	5.0	11.0	18.0	2,000	1,000	600	1,250	800
	6.0	12.0	18.0	1,750	900	500	1,000	680
	7.5	13.5	18.0	1,000	700	350	800	500
	8.5	14.5	18.0	1,000	500	300	700	440
	9.0	12.5	18.0	1,000	520	270	650	410
	10.0	16.0	18.0	750	500	300	600	380
	11.0	19.0	18.0	450	350	-	500	340
	13.0	12.0	18.0	750	490	200	480	280
22.5	6.0	15.0	26.5	805	500		700	464
	7.0	16.0	26.5	700	500		550	380
	8.5	17.0	26.5	468	300		450	280
	10.0	18.5	26.5	396	300		350	235
	11.0	20.0	26.5	360	250		350	217
	13.0	22.0	26.5	300	200		300	-
27.5	9.0	17.0	32.0	816	408		450	
	11.0	20.0	32.0	560	336		350	
	13.0	22.0	32.0	480	288		300	
	14.0	28.0	32.0	352	176			
	18.0	33.0	32.0	256	128			
	22.0	37.0	32.0	168	112			
37.5	11.0	22.0	41.5	420	252			
	13.0	24.0	41.5	360	216			
	16.0	28.5	41.5	216	108			
	19.0	32.0	41.5	192	96			
	20.0	40.0	41.5	126	84			
	24.0	44.0	41.5	108	72			
	30.0	45.0	41.5	90	60			

Lead Taping & Packaging (IEC 60286–2)

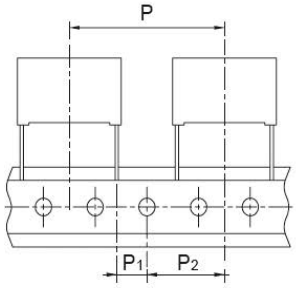
Lead Spacing 7.5 mm



Lead Spacing 10 & 15 mm



Lead Spacing 22.5 & 27.5



Taping Specification

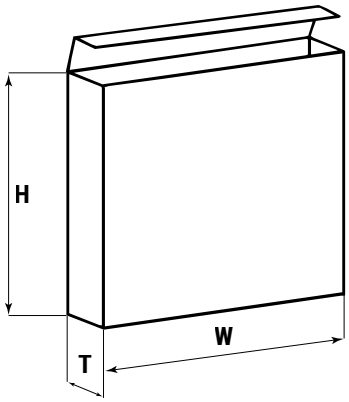
Description	Symbol	Dimensions (mm)				
		Lead Spacing				Tolerance
		10.0	15.0	22.5	27.5	
Lead wire diameter	d	0.6	0.6 - 0.8	0.8	0.8	±0.05
Taping lead space	P	25.4	25.4	38.1	38.1	±1
Feed hole lead space *	P_0	12.7	12.7	12.7	12.7	±0.2 **
Centering of the lead wire	P_1	7.7	5.2	7.8	5.3	±0.7
Centering of the body	P_2	12.7	12.7	19.05	19.05	±1.3
Lead spacing ***	F	10.0	15.0	22.5	27.5	+0.6/-0.1
Component alignment	Δh	0	0	0	0	±2
Component deviation	Δp	0	0	0	0	±1
Height of component from tape center	H_0****	18.5	18.5	18.5	18.5	±0.5
Carrier tape width	W	18	18	18	18	+1/-0.5
Hold down tape width	W_0	9	10	10	10	Minimum
Hole position	W_1	9	9	9	9	±0.5
Hold down tape position	W_2	3	3	3	3	Maximum
Feed hole diameter	D_0	4	4	4	4	±0.2
Tape thickness	t	0.7	0.7	0.7	0.7	±0.2

** Available also 15 mm.*
*** Maximum 1 mm on 20 lead spacing.*
**** 15 mm and 10 mm taped to 7.5 mm (crimped leads) available upon request.*
***** H_0 = 16.5 mm is available upon request.*

Lead Taping & Packaging (IEC 60286–2) cont'd

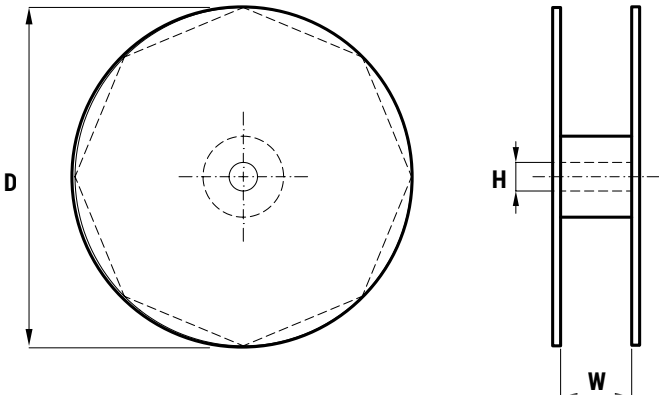
Ammo Specifications

Dimensions (mm)		
H	W	T
360	340	59



Reel Specifications

Dimensions (mm)		
D	H	W
355 500	30 25	55 Maximum



Manufacturing Date Code (IEC–60062)

Y = Year, Z = Month			
Year	Code	Month	Code
2000	M	January	1
2001	N	February	2
2002	P	March	3
2003	R	April	4
2004	S	May	5
2005	T	June	6
2006	U	July	7
2007	V	August	8
2008	W	September	9
2009	X	October	O
2010	A	November	N
2011	B	December	D
2012	C		
2013	D		
2014	E		
2015	F		
2016	H		
2017	J		
2018	K		
2019	L		
2020	M		

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