

# 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.

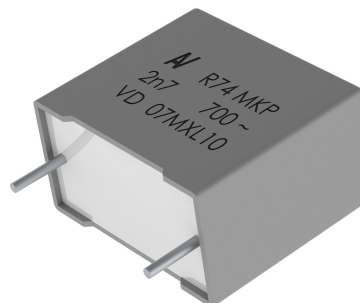
Automotive Grade devices are available (up to lead spacing 22.5 mm) and meet the demanding Automotive Electronics Council's AEC-Q200 qualification requirements.

## 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  $\mu$ F
- Lead Spacing: 10 – 37.5 mm
- Capacitance tolerance:  $\pm 5\%$ ,  $\pm 10\%$
- Climatic category: 55/105/56 IEC 60068-1
- Operating temperature range of  $-55^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$
- 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



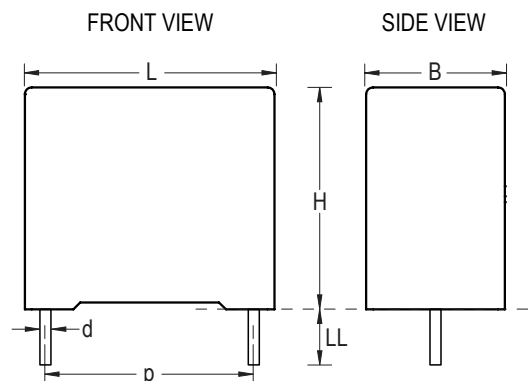
## Part Number System

| 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<br>N = 400<br>5 = 500<br>6 = 600<br>7 = 700<br>9 = 900 | F = 10<br>I = 15<br>N = 22.5<br>R = 27.5<br>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<br>30<br>60 | J = $\pm 5\%$<br>K = $\pm 10\%$ |

## Ordering Options Table

| Lead Spacing<br>Nominal (mm) | Type of Leads and Packaging                | Lead Length<br>(mm)          | Lead and<br>Packaging<br>Code |
|------------------------------|--------------------------------------------|------------------------------|-------------------------------|
| 10<br><br>15<br><br>22.5     | <b>Standard Lead and Packaging Options</b> |                              |                               |
|                              | Bulk (Bag) – Short Leads                   | 4 +2/-0                      | AA                            |
|                              | Ammo Pack                                  | H <sub>0</sub> = 18.5 +/-0.5 | DQ                            |
|                              | <b>Other Lead and Packaging Options</b>    |                              |                               |
|                              | Tape & Reel (Standard Reel)                | H <sub>0</sub> =18.5 +/- 0.5 | GY                            |
|                              | Tape & Reel (Large Reel)                   | H <sub>0</sub> =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                         | <b>Standard Lead and Packaging Options</b> |                              |                               |
|                              | Bulk (Tray) – Straight Leads               | 4 +2/-0                      | AA                            |
|                              | <b>Other Lead and Packaging Options</b>    |                              |                               |
|                              | Tape & Reel (Large Reel)                   | H <sub>0</sub> =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                         | <b>Standard Lead and Packaging Options</b> |                              |                               |
|                              | Bulk (Tray) – Straight Leads               | 4 +2/-0                      | AA                            |
|                              | <b>Other Lead and Packaging Options</b>    |                              |                               |
|                              | 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



| <b>p</b>                                                          |           | <b>B</b> |           | <b>H</b> |           | <b>L</b> |           | <b>d</b> |           |
|-------------------------------------------------------------------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|
| 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 $V_R$ (VAC)               | 250                                                                                                                                                                 | 400             | 500                             | 600 – 700                            | 900                              |               |
| Rated Voltage $V_R$ (VDC)               | 630                                                                                                                                                                 | 1300            | 1600                            | 2000                                 | 2200                             |               |
| Capacitance Range ( $\mu$ F)            | 0.01 – 0.15                                                                                                                                                         | 0.0022 – 3.3    | 0.001 – 2.2                     | 0.00047 – 1                          | 0.001 – 0.47                     |               |
| Capacitance Values                      | E12 series (IEC 60063) measured @ 1kHz and +20 $\pm$ 1°C                                                                                                            |                 |                                 |                                      |                                  |               |
| Capacitance Tolerance                   | $\pm$ 5%, $\pm$ 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                                                                                                                                               |                 |                                 |                                      |                                  |               |
|                                         | Average relative humidity $\leq$ 75%                                                                                                                                |                 |                                 |                                      |                                  |               |
|                                         | RH = 95% for 30 days per year                                                                                                                                       |                 |                                 |                                      |                                  |               |
|                                         | RH = 85% for further days limited by average value per year                                                                                                         |                 |                                 |                                      |                                  |               |
| Test Voltage                            | 1.6 x $V_R$ VDC for 2 seconds (between terminations) @ +25°C $\pm$ 5°C                                                                                              |                 |                                 |                                      |                                  |               |
| 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 ( $V_{pp} < V_R$ ), the specified dv/dt can be multiplied by the factor $V_R/V_{pp}$ |                 |                                 |                                      |                                  |               |
| Temperature Coefficient                 | -(200 $\pm$ 100) ppm/°C at 1 kHz                                                                                                                                    |                 |                                 |                                      |                                  |               |
| Self Inductance<br>(Lead Length ~ 2 mm) | Lead Spacing (mm)                                                                                                                                                   | 10              | 15                              | 22.5                                 | 27.5                             | 37.5          |
|                                         | L (nH) $\approx$                                                                                                                                                    | 9               | 10                              | 18                                   | 18                               | 20            |
|                                         | Maximum 1 nH per 1 mm lead and capacitor length.                                                                                                                    |                 |                                 |                                      |                                  |               |
| Dissipation Factor tan $\delta$         | Maximum Values @ 25°C $\pm$ 5°C                                                                                                                                     |                 |                                 |                                      |                                  |               |
|                                         | Frequency                                                                                                                                                           | C $\leq$ 2.2 nF | 2.2 nF < C $\leq$ 0.027 $\mu$ F | 0.027 $\mu$ F < C $\leq$ 0.1 $\mu$ F | 0.1 $\mu$ F < C $\leq$ 1 $\mu$ F | C > 1 $\mu$ F |
|                                         | 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%                                | -                                | -             |

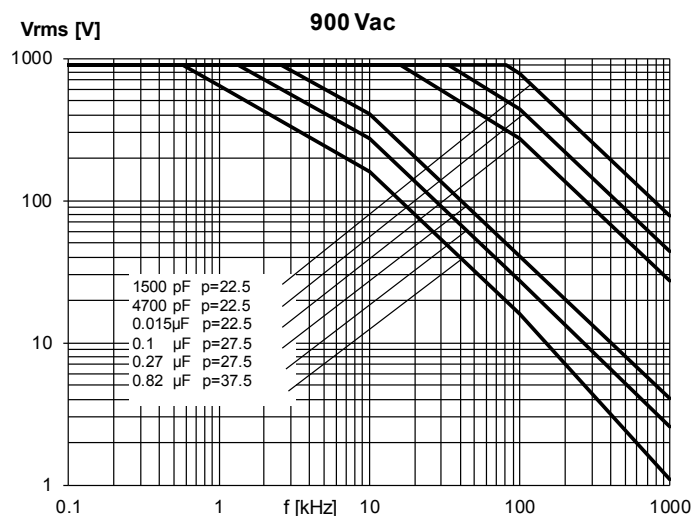
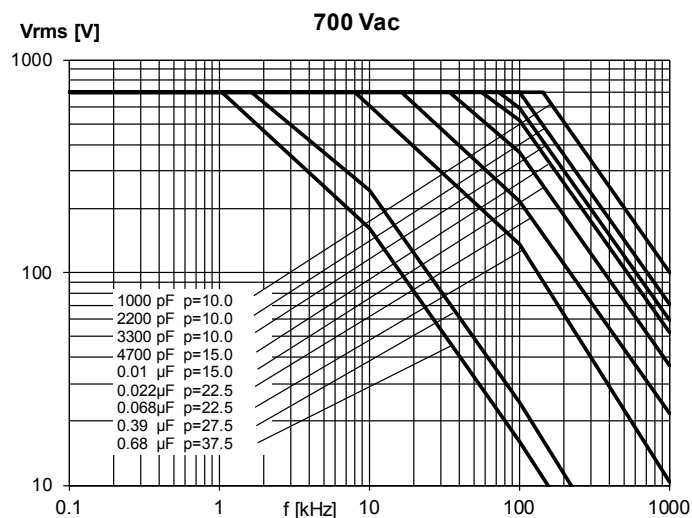
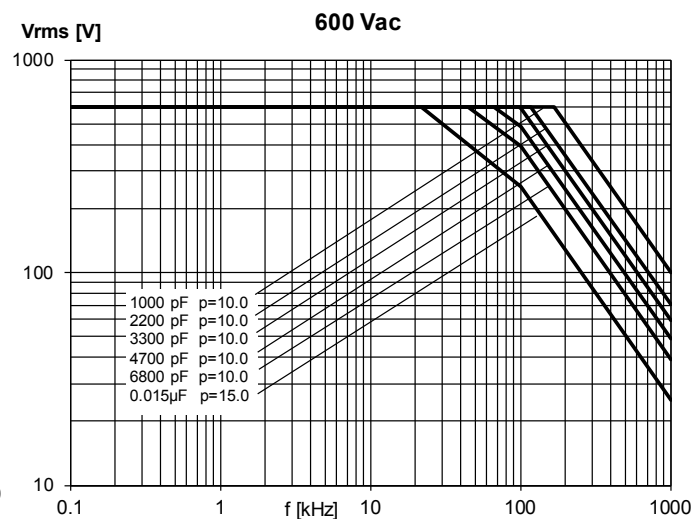
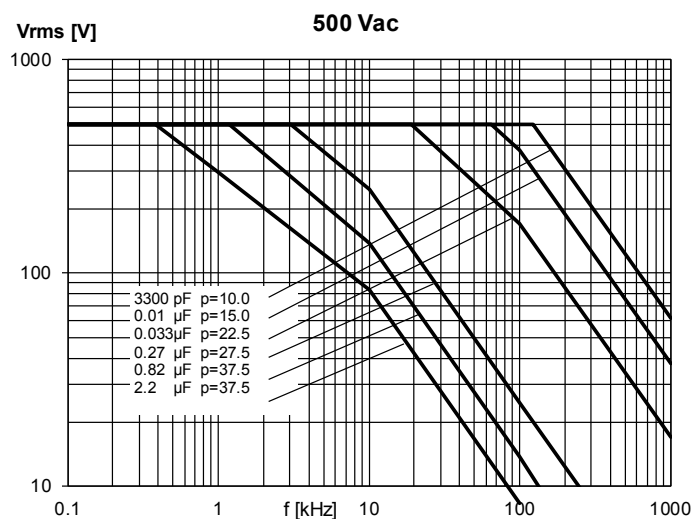
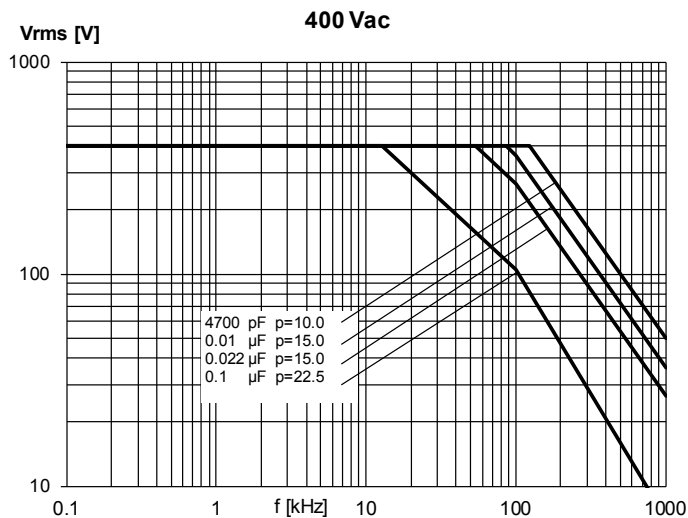
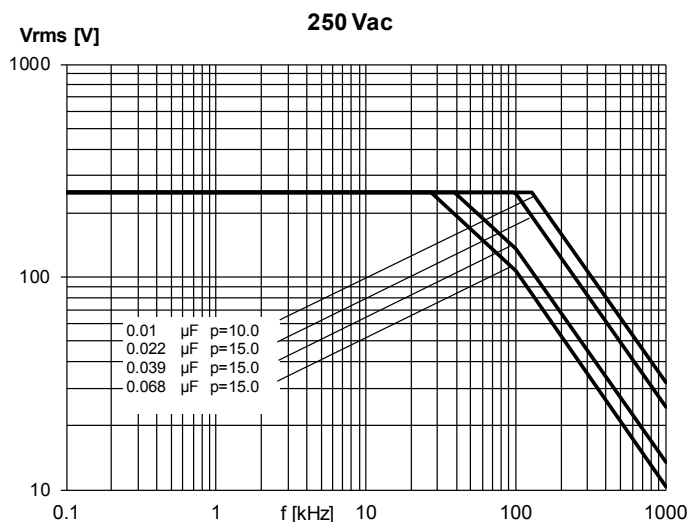
## Performance Characteristics cont'd

| 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 |

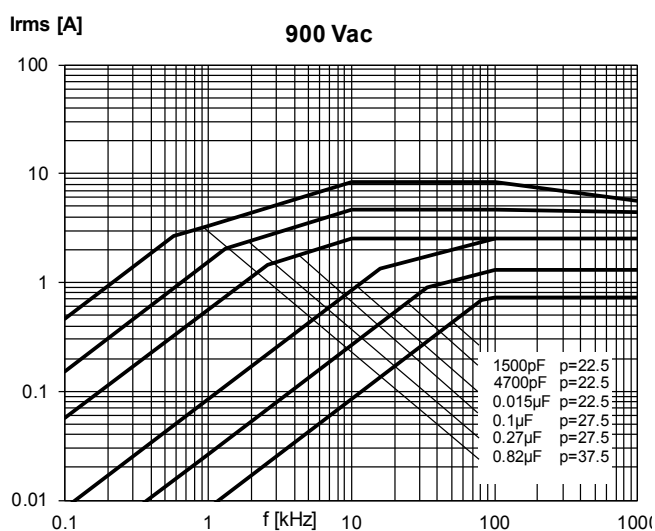
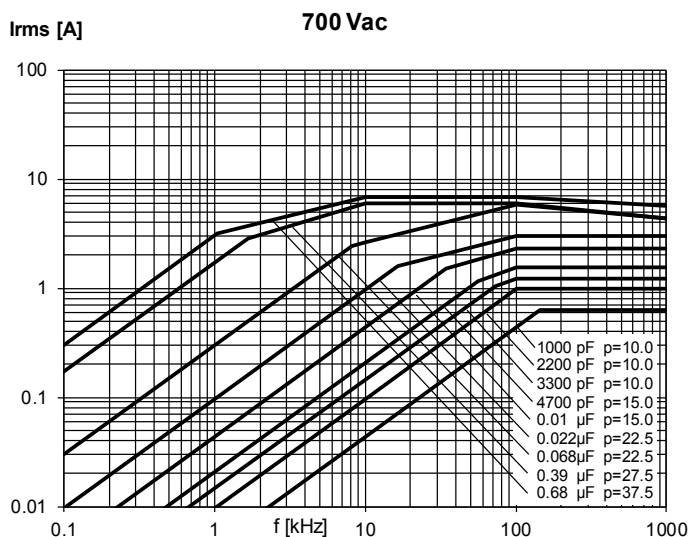
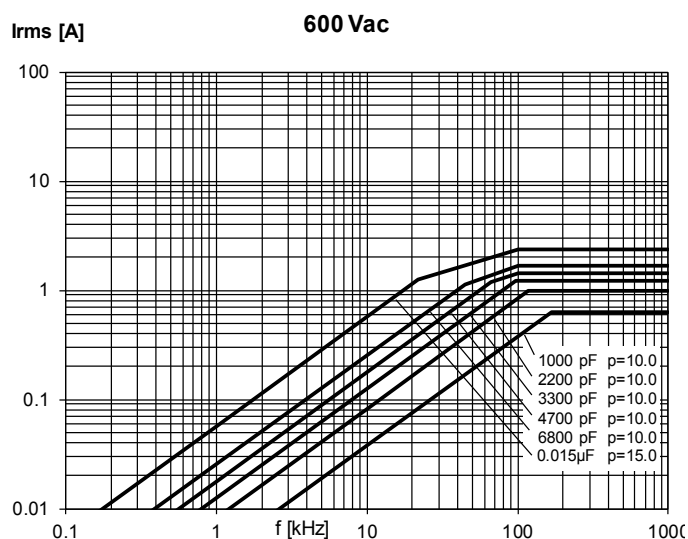
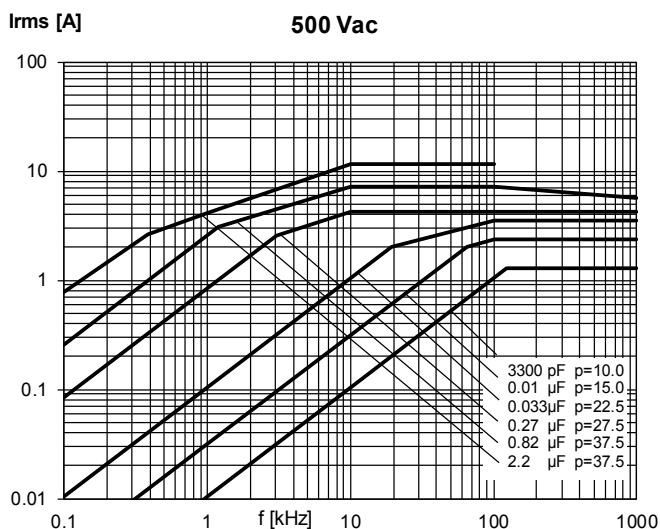
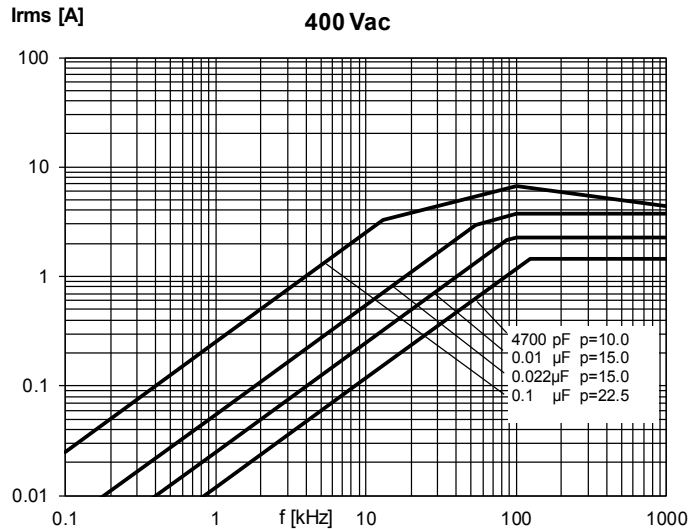
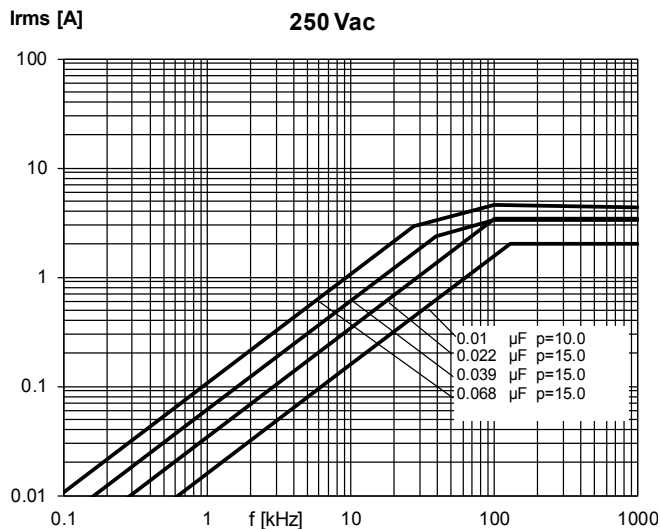
## Qualification

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](http://www.aecouncil.com).

## Maximum Voltage ( $V_{rms}$ ) vs. Frequency (Sinusoidal Waveform/ $T_h \leq 85^\circ\text{C}$ )



## Maximum Current ( $I_{rms}$ ) vs. Frequency (Sinusoidal Waveform/ $T_h \leq 85^\circ\text{C}$ )



## Environmental Test Data

| Damp Heat, Steady State Test      | Test Conditions:                                             |                                                         | Performances                                                                                                        |
|-----------------------------------|--------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
|                                   | Temperature:<br>Relative humidity (RH):<br>Test duration:    | +40°C ± 2°C<br>93% ± 2%<br>56 days                      | $ \Delta C/C  \leq 2\%$ ,<br>$\Delta \tan \delta \leq 0.001$ @ 1 kHz<br>IR after test $\geq 50\%$ of initial limit  |
| Endurance Test                    | Test Conditions                                              |                                                         | Performances                                                                                                        |
|                                   | Temperature:<br>Voltage applied:<br>Test duration:           | +85°C ± 2°C<br>1.25 x $V_R$ (AC) @ 50 Hz<br>2,000 hours | $ \Delta C/C  \leq 5\%$ ,<br>$\Delta \tan \delta \leq 0.0015$ @ 1 kHz<br>IR after test $\geq 50\%$ of initial limit |
| Resistance to Soldering Heat Test | Test Conditions                                              |                                                         | Performances                                                                                                        |
|                                   | Solder bath temperature:<br>Dipping time (with heat screen): | 260°C ± 5°C<br>10 seconds ± 1 second                    | $ \Delta C/C  \leq 1\%$ ,<br>$\Delta \tan \delta \leq 0.001$ @ 1 kHz<br>IR after test $\geq$ 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 <sub>0</sub> (V <sup>2</sup> /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 <sub>0</sub> (V <sup>2</sup> /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 &amp; Part Number Reference cont'd

| VAC | VDC   | Capacitance Value (μF) | Dimensions in mm |        |        | Lead Spacing (p) | dV/dt (V/μs) | Max K <sub>0</sub> (V <sup>2</sup> /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                   | 11.0             | 22.0   | 41.5   | 37.5             | 180          | 468,000                                 | 74NW3560(1)00(2)      | R74NW3560(1)00(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                    | 19.0             | 32.0   | 41.5   | 37.5             | 180          | 468,000                                 | 74NW4150(1)00(2)      | R74NW4150(1)00(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 <sub>0</sub> (V <sup>2</sup> /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 &amp; Part Number Reference cont'd

| VAC | VDC   | Capacitance Value (μF) | Dimensions in mm |        |        | Lead Spacing (p) | dV/dt (V/μs) | Max K <sub>0</sub> (V <sup>2</sup> /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                   | 11.0             | 22.0   | 41.5   | 37.5             | 300          | 960,000                                 | 745W3390(1)00(2)      | R745W3390(1)00(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                   | 13.0             | 24.0   | 41.5   | 37.5             | 300          | 960,000                                 | 745W3560(1)00(2)      | R745W3560(1)00(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                   | 16.0             | 28.5   | 41.5   | 37.5             | 300          | 960,000                                 | 745W3820(1)00(2)      | R745W3820(1)00(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                    | 19.0             | 32.0   | 41.5   | 37.5             | 300          | 960,000                                 | 745W4120(1)00(2)      | R745W4120(1)00(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                    | 24.0             | 44.0   | 41.5   | 37.5             | 300          | 960,000                                 | 745W4220(1)00(2)      | R745W4220(1)00(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 <sub>0</sub> (V <sup>2</sup> /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 &amp; Part Number Reference cont'd

| VAC | VDC   | Capacitance Value (μF) | Dimensions in mm |        |        | Lead Spacing (p) | dV/dt (V/μs) | Max K <sub>0</sub> (V <sup>2</sup> /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 <sub>0</sub> (V <sup>2</sup> /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 <sub>0</sub> (V <sup>2</sup> /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                   | 13.0             | 24.0   | 41.5   | 37.5             | 400          | 1,600,000                               | 747W3220(1)00(2)      | R747W3220(1)00(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                   | 16.0             | 28.5   | 41.5   | 37.5             | 400          | 1,600,000                               | 747W3330(1)00(2)      | R747W3330(1)00(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                   | 19.0             | 32.0   | 41.5   | 37.5             | 400          | 1,600,000                               | 747W3470(1)00(2)      | R747W3470(1)00(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                  | 11.0             | 22.0   | 41.5   | 37.5             | 900          | 3,960,000                               | 749W2820(1)00(2)      | R749W2820(1)00(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                   | 13.0             | 24.0   | 41.5   | 37.5             | 900          | 3,960,000                               | 749W3120(1)00(2)      | R749W3120(1)00(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                   | 16.0             | 28.5   | 41.5   | 37.5             | 900          | 3,960,000                               | 749W3180(1)00(2)      | R749W3180(1)00(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 <sub>0</sub> (V <sup>2</sup> /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

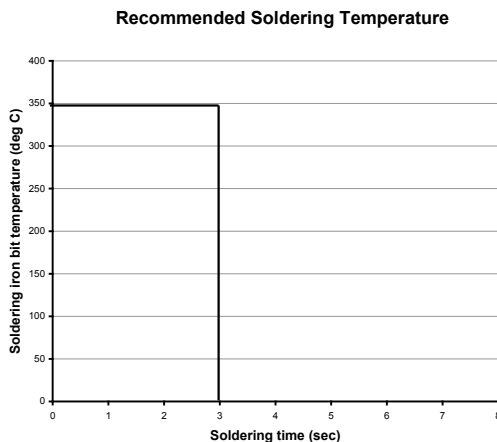
The implementation of the RoHS directive has resulted in the selection of SnAgCu (SAC) alloys or SnCu alloys as primary solder. This has increased the liquidus temperature from that of 183°C for SnPb eutectic alloy to 217 – 221°C for the new alloys. As a result, the heat stress to the components, even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

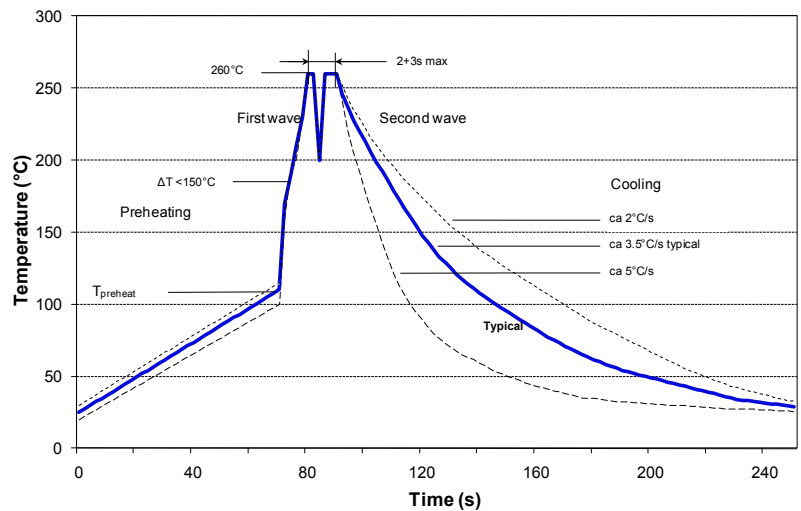
### Manual Soldering Recommendations

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



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

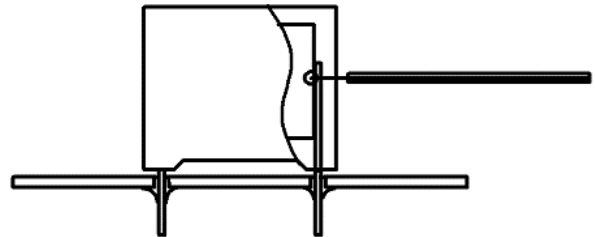
Figure 1

| 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.*

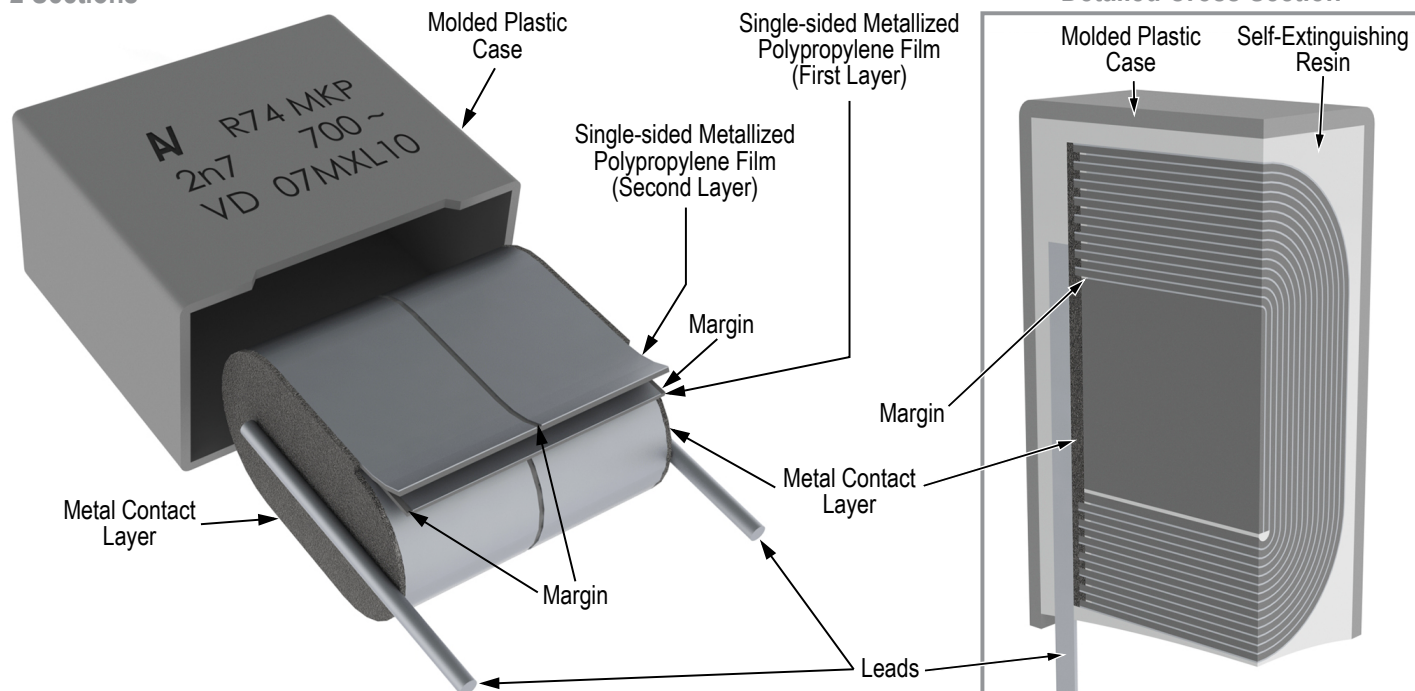
### Selective Soldering Recommendations

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.

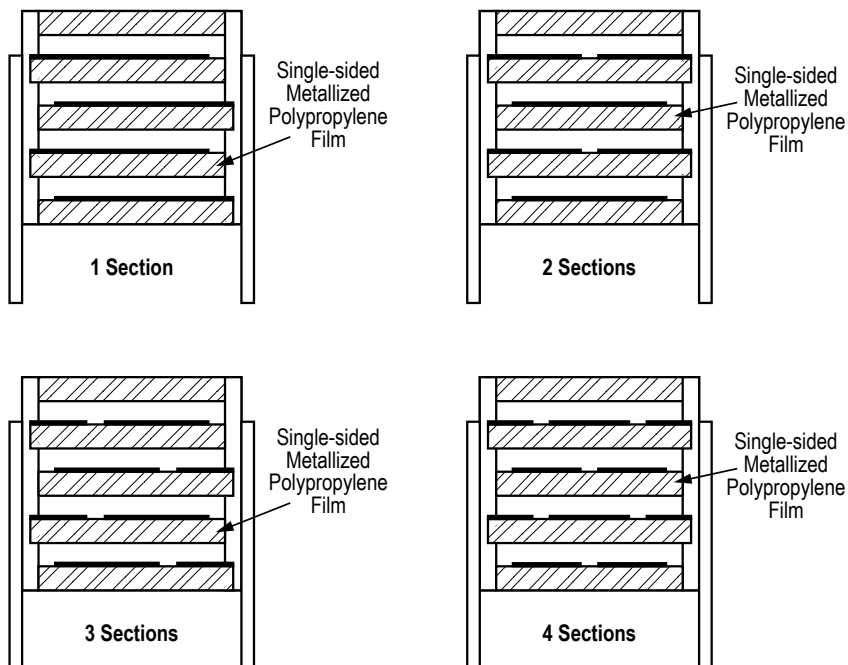
The temperature profile for selective soldering is similar to the double wave flow soldering outlined in this document, **however, instead of two baths, there is only one bath with a time from 3 to 10 seconds.** In selective soldering, the risk of overheating is greater than in double wave flow soldering,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

## Construction

### 2 Sections

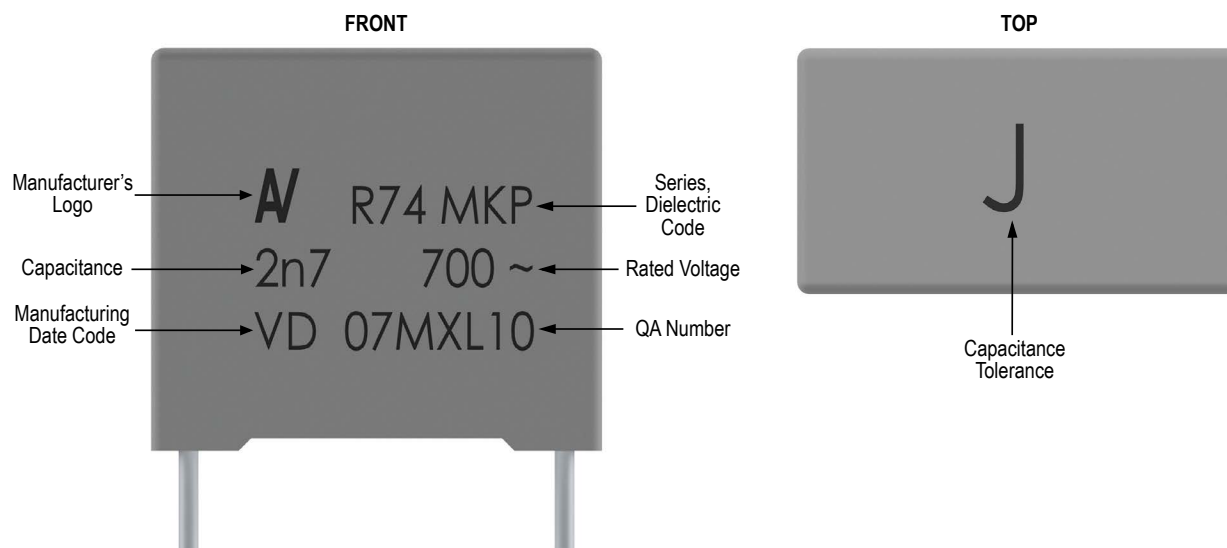


### Winding Schemes





## Marking



## Packaging Quantities

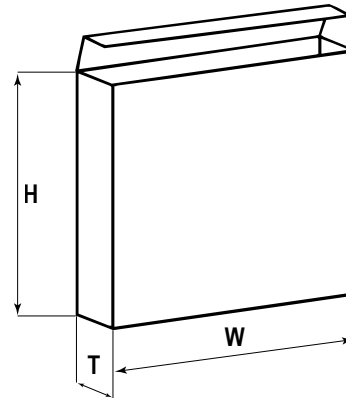
| Lead Spacing | Thickness (mm) | Height (mm) | Length (mm) | Bulk Short Leads | Bulk Long Leads | Standard Reel<br>ø 355 mm | Large Reel<br>ø 500 mm | Ammo Taped |
|--------------|----------------|-------------|-------------|------------------|-----------------|---------------------------|------------------------|------------|
| 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           | 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) cont'd

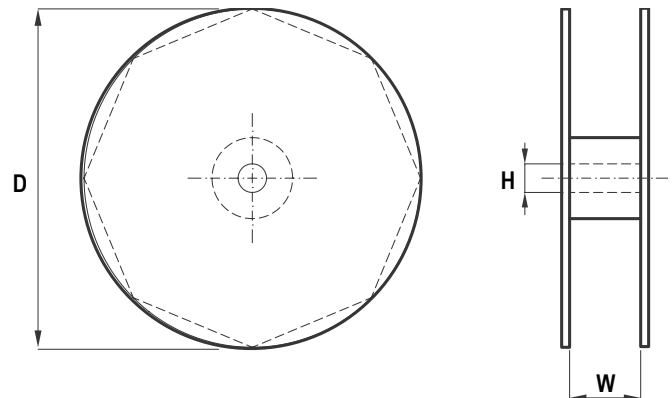
### Ammo Specifications

| Dimensions (mm) |     |    |
|-----------------|-----|----|
| H               | W   | T  |
| 360             | 340 | 59 |



### Reel Specifications

| Dimensions (mm) |          |            |
|-----------------|----------|------------|
| D               | H        | W          |
| 355<br>500      | 30<br>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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