

## Overview

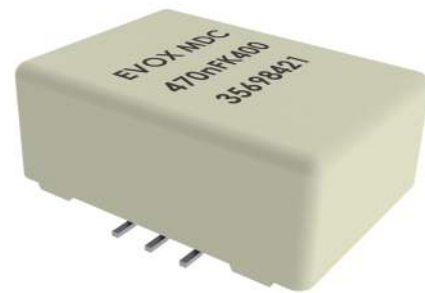
Dual in-line (DIL) metallized polyester (PET) film capacitor for surface mounting is encapsulated in a self-extinguishing material, meeting the requirements of UL 94 V-0.

## Applications

Typical applications include high frequency switched-mode power supplies, DC/DC converters and input/output filtering.

## Benefits

- Rated voltage: 50 – 630 VDC
- Rated voltage: 30 – 220 VAC
- Capacitance range: 0.033 – 15  $\mu$ F
- Capacitance tolerance:  $\pm$ 5%,  $\pm$ 10%, other tolerances on request
- Climatic category: 55/125/56
- RoHS compliant and lead-free terminations
- Operating temperature range of  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$



## Customer Part Number

| MDC                                | 10                | 333   | K  | 50                             | A52                 | P3   | TUBE                       |
|------------------------------------|-------------------|---|--|--------------------------------|---------------------|--|----------------------------|
| Series                             | Lead Spacing (mm) | Capacitance Code (pF)   | Capacitance Tolerance  | Rated Voltage (VDC)            | Size Code           | Number of Leads per Side   | Packaging                  |
| Dual In-Line, Metallized Polyester | 10<br>15          | First two digits indicate the two most significant digits of the capacitance value in picofarads. The third digit is the number of following zeros. | J = $\pm$ 5<br>K = $\pm$ 10%<br>Other tolerances on request. | 50<br>100<br>250<br>400<br>630 | See Dimension Table | P3 = 3 leads<br>P4 = 4 leads<br>P5 = 5 leads<br>P7 = 7 leads<br>P8 = 8 leads | See Ordering Options Table |

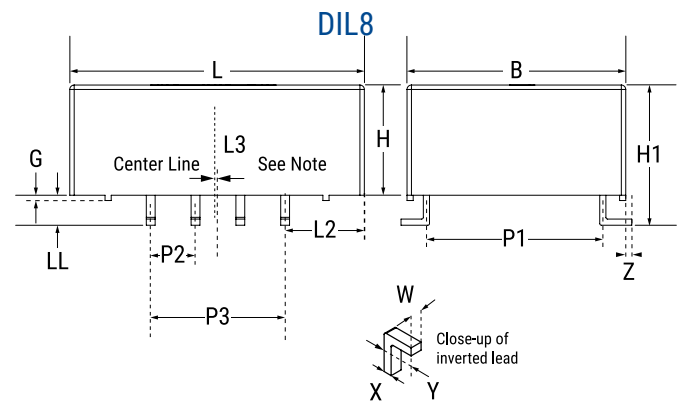
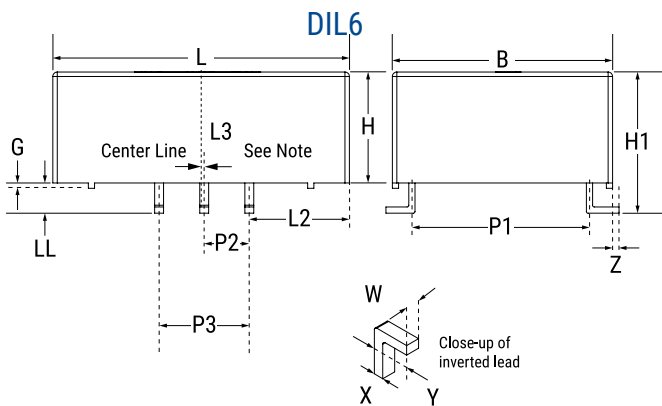
## KEMET Internal Part Number

| F               | 15                                 | 3   | A                 | A                     | 333   | K   | 050  | T                          |
|-----------------|------------------------------------|---|-------------------|-----------------------|---|---|--|----------------------------|
| Capacitor Class | Series                             | Number of Leads per Side  | Lead Spacing (mm) | Size Code             | Capacitance Code (pF)   | Capacitance Tolerance                                       | Rated Voltage (VDC)  | Packaging                  |
| F = Film        | Dual In-line, Metallized Polyester | 3 = 3 leads<br>4 = 4 leads<br>5 = 5 leads<br>7 = 7 leads<br>8 = 8 leads | A = 10<br>B = 15  | A = Standard box size | First two digits indicate the two most significant digits of the capacitance value in picofarads. The third digit is the number of following zeros. | J = $\pm$ 5<br>K = $\pm$ 10%<br>Other tolerances on request | 050 = 50<br>100 = 100<br>250 = 250<br>400 = 400<br>630 = 630 | See Ordering Options Table |

## Ordering Options Table

| Packaging Type             |                                | KEMET Packaging Code | Legacy Packaging Code |
|----------------------------|--------------------------------|----------------------|-----------------------|
| Standard Packaging Options |                                |                      |                       |
| Bulk (Tube)                |                                | T                    | TUBE                  |
| Case Size<br>A53           | Tape & Reel<br>(Standard Reel) | VV687                | TR32                  |

## Dimensions – Millimeters

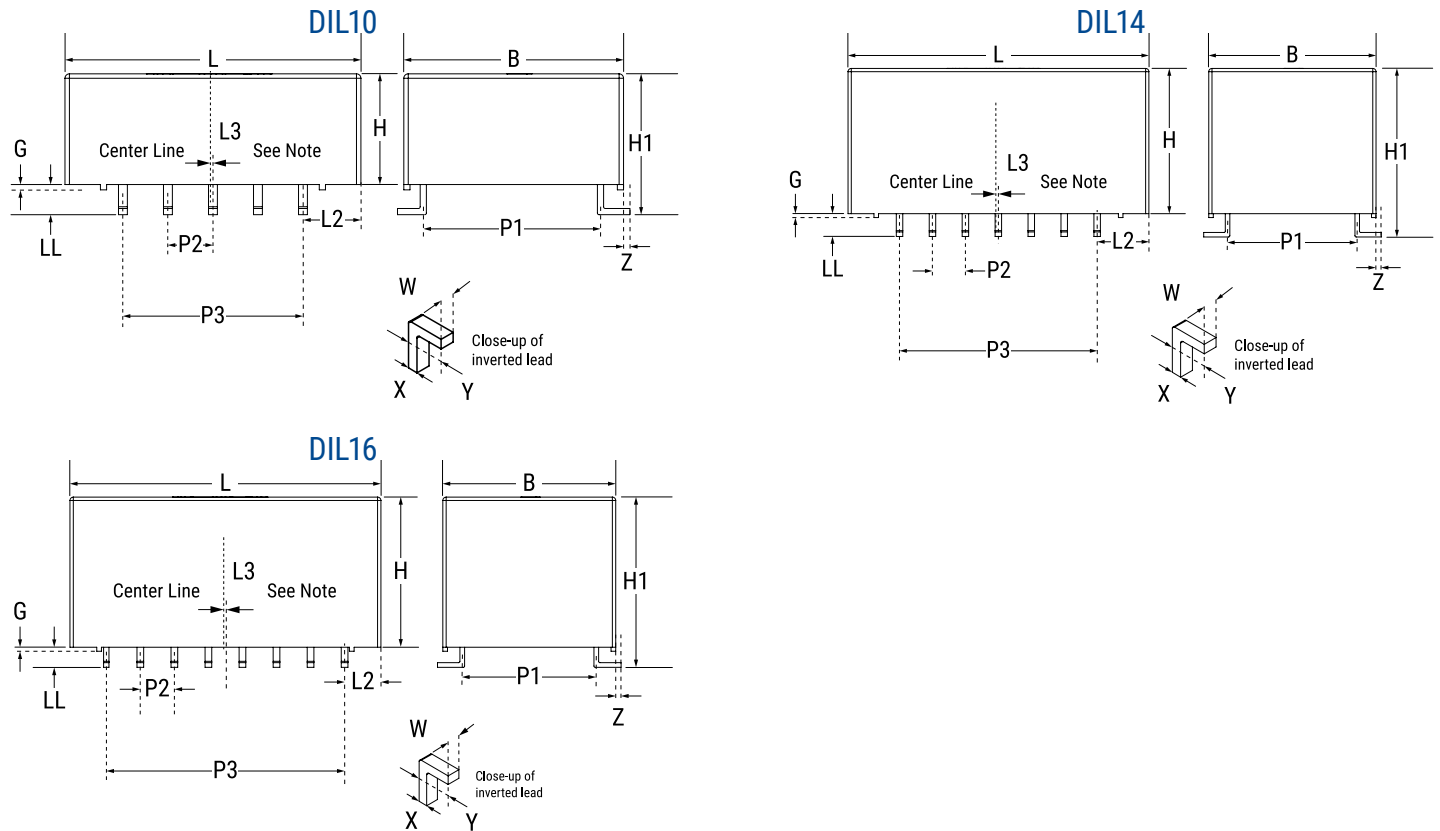


| Legacy Size Code | Leads per Side | P1   | P2   | P3 <sup>(1)</sup> | B    | H    | L     | H1   | L2   | L3 <sup>(2)</sup> | W       | X     | Y     | Z    | LL      | G    |
|------------------|----------------|------|------|-------------------|------|------|-------|------|------|-------------------|---------|-------|-------|------|---------|------|
|                  |                | ±0.2 | ±0.2 | ±0.2              | ±0.2 | ±0.2 | ±0.2  | ±0.2 | ±0.4 | ±0.2              | Maximum | ±0.05 | ±0.05 | ±0.2 | Nominal | ±0.2 |
| A52              | 3              | 10.0 | 2.54 | 5.08              | 12.2 | 5.75 | 11.0  | 7.75 | 2.96 | 0.2               | 0.5     | 0.35  | 1.5   | 0.25 | 2.2     | 0.3  |
| A53              | 3              | 10.0 | 2.54 | 5.08              | 12.7 | 8.5  | 14.0  | 10.5 | 4.46 | 0.2               | 0.5     | 0.35  | 1.5   | 0    | 2.0     | 0.5  |
| A54              | 3              | 10.0 | 2.54 | 5.08              | 12.2 | 5.75 | 13.5  | 7.75 | 4.21 | 0.2               | 0.5     | 0.35  | 1.5   | 0.25 | 2.2     | 0.3  |
| A55              | 3              | 10.0 | 2.54 | 5.08              | 12.2 | 5.75 | 16.5  | 7.75 | 5.71 | 0.2               | 0.5     | 0.35  | 1.5   | 0.25 | 2.2     | 0.3  |
| B53              | 3              | 15.0 | 2.54 | 5.08              | 16.5 | 5.75 | 11.0  | 7.75 | 2.96 | 0.2               | 0.5     | 0.35  | 1.5   | 0.6  | 2.2     | 0.3  |
| B55              | 3              | 15.0 | 2.54 | 5.08              | 16.5 | 5.75 | 12.2  | 7.75 | 3.56 | 0.2               | 0.5     | 0.35  | 1.5   | 0.6  | 2.2     | 0.3  |
|                  |                |      |      |                   |      |      |       |      |      |                   |         |       |       |      |         |      |
| A53              | 4              | 10.0 | 2.54 | 7.62              | 12.7 | 8.5  | 14.0  | 10.5 | 3.19 | 0.2               | 0.5     | 0.35  | 1.5   | 0    | 2.0     | 0.5  |
| A54              | 4              | 10.0 | 2.54 | 7.62              | 12.2 | 5.75 | 13.5  | 7.75 | 2.94 | 0.2               | 0.5     | 0.35  | 1.5   | 0.25 | 2.2     | 0.3  |
| A55              | 4              | 10.0 | 2.54 | 7.62              | 12.2 | 5.75 | 16.5  | 7.75 | 4.44 | 0.2               | 0.5     | 0.35  | 1.5   | 0.25 | 2.2     | 0.3  |
| B55              | 4              | 15.0 | 2.54 | 7.62              | 16.5 | 5.75 | 12.2  | 7.75 | 2.29 | 0.2               | 0.5     | 0.35  | 1.5   | 0.6  | 2.2     | 0.3  |
|                  |                |      |      |                   |      |      |       |      |      |                   |         |       |       |      |         |      |
| A55              | 5              | 10.0 | 2.54 | 10.16             | 12.2 | 5.75 | 16.5  | 7.75 | 3.17 | 0.2               | 0.5     | 0.35  | 1.5   | 0.25 | 2.2     | 0.3  |
|                  |                |      |      |                   |      |      |       |      |      |                   |         |       |       |      |         |      |
| A58              | 7              | 10.0 | 2.54 | 15.24             | 12.7 | 10.5 | 23.0  | 12.5 | 3.88 | 0.2               | 0.5     | 0.35  | 1.5   | 0    | 2.0     | 0.5  |
|                  |                |      |      |                   |      |      |       |      |      |                   |         |       |       |      |         |      |
| A58              | 8              | 10.0 | 2.54 | 17.78             | 12.7 | 10.5 | 23.00 | 12.5 | 2.61 | 0.2               | 0.5     | 0.35  | 1.5   | 0    | 2.0     | 0.5  |

(1) P3 represents the cumulative tolerance of all leads.

(2) L3 represents the extent to which the center line of the leads misaligns with the center line of the body. Dimension shown is the maximum such misalignment allowed.

## Dimensions – Millimeters cont.



| Legacy Size Code | Leads per Side | P1   | P2   | P3 <sup>(1)</sup> | B    | H    | L     | H1   | L2   | L3 <sup>(2)</sup> | W       | X     | Y     | Z    | LL      | G    |
|------------------|----------------|------|------|-------------------|------|------|-------|------|------|-------------------|---------|-------|-------|------|---------|------|
|                  |                | ±0.2 | ±0.2 | ±0.2              | ±0.2 | ±0.2 | ±0.2  | ±0.2 | ±0.4 | ±0.2              | Maximum | ±0.05 | ±0.05 | ±0.2 | Nominal | ±0.2 |
| A52              | 3              | 10.0 | 2.54 | 5.08              | 12.2 | 5.75 | 11.0  | 7.75 | 2.96 | 0.2               | 0.5     | 0.35  | 1.5   | 0.25 | 2.2     | 0.3  |
| A53              | 3              | 10.0 | 2.54 | 5.08              | 12.7 | 8.5  | 14.0  | 10.5 | 4.46 | 0.2               | 0.5     | 0.35  | 1.5   | 0    | 2.0     | 0.5  |
| A54              | 3              | 10.0 | 2.54 | 5.08              | 12.2 | 5.75 | 13.5  | 7.75 | 4.21 | 0.2               | 0.5     | 0.35  | 1.5   | 0.25 | 2.2     | 0.3  |
| A55              | 3              | 10.0 | 2.54 | 5.08              | 12.2 | 5.75 | 16.5  | 7.75 | 5.71 | 0.2               | 0.5     | 0.35  | 1.5   | 0.25 | 2.2     | 0.3  |
| B53              | 3              | 15.0 | 2.54 | 5.08              | 16.5 | 5.75 | 11.0  | 7.75 | 2.96 | 0.2               | 0.5     | 0.35  | 1.5   | 0.6  | 2.2     | 0.3  |
| B55              | 3              | 15.0 | 2.54 | 5.08              | 16.5 | 5.75 | 12.2  | 7.75 | 3.56 | 0.2               | 0.5     | 0.35  | 1.5   | 0.6  | 2.2     | 0.3  |
|                  |                |      |      |                   |      |      |       |      |      |                   |         |       |       |      |         |      |
| A53              | 4              | 10.0 | 2.54 | 7.62              | 12.7 | 8.5  | 14.0  | 10.5 | 3.19 | 0.2               | 0.5     | 0.35  | 1.5   | 0    | 2.0     | 0.5  |
| A54              | 4              | 10.0 | 2.54 | 7.62              | 12.2 | 5.75 | 13.5  | 7.75 | 2.94 | 0.2               | 0.5     | 0.35  | 1.5   | 0.25 | 2.2     | 0.3  |
| A55              | 4              | 10.0 | 2.54 | 7.62              | 12.2 | 5.75 | 16.5  | 7.75 | 4.44 | 0.2               | 0.5     | 0.35  | 1.5   | 0.25 | 2.2     | 0.3  |
| B55              | 4              | 15.0 | 2.54 | 7.62              | 16.5 | 5.75 | 12.2  | 7.75 | 2.29 | 0.2               | 0.5     | 0.35  | 1.5   | 0.6  | 2.2     | 0.3  |
|                  |                |      |      |                   |      |      |       |      |      |                   |         |       |       |      |         |      |
| A55              | 5              | 10.0 | 2.54 | 10.16             | 12.2 | 5.75 | 16.5  | 7.75 | 3.17 | 0.2               | 0.5     | 0.35  | 1.5   | 0.25 | 2.2     | 0.3  |
|                  |                |      |      |                   |      |      |       |      |      |                   |         |       |       |      |         |      |
| A58              | 7              | 10.0 | 2.54 | 15.24             | 12.7 | 10.5 | 23.0  | 12.5 | 3.88 | 0.2               | 0.5     | 0.35  | 1.5   | 0    | 2.0     | 0.5  |
|                  |                |      |      |                   |      |      |       |      |      |                   |         |       |       |      |         |      |
| A58              | 8              | 10.0 | 2.54 | 17.78             | 12.7 | 10.5 | 23.00 | 12.5 | 2.61 | 0.2               | 0.5     | 0.35  | 1.5   | 0    | 2.0     | 0.5  |

(1) P3 represents the cumulative tolerance of all leads.

(2) L3 represents the extent to which the center line of the leads misaligns with the center line of the body. Dimension shown is the maximum such misalignment allowed.

## Performance Characteristics

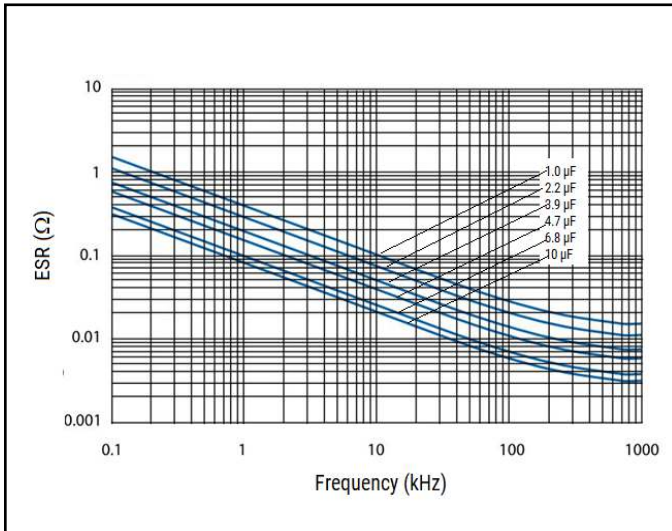
|                                     |  |                           |                             |                                     |                      |
|-------------------------------------|--|---------------------------|-----------------------------|-------------------------------------|----------------------|
| Rated Voltage (VDC)                 | 50   | 100                       | 250                         | 400                                 | 630                  |
| Rated Voltage (VAC)                 | 30   | 63                        | 160                         | 200                                 | 220                  |
| Capacitance Range ( $\mu\text{F}$ ) | 0.033 – 15   | 0.033 – 10                | 0.033 – 1.5                 | 0.033 – 0.47                        | 0.033 – 0.18         |
| Capacitance Tolerance               | $\pm 5\%$ , $\pm 10\%$ , other tolerances on request                   |                           |                             |                                     |                      |
| Category Temperature Range          | -55°C to +125°C  |                           |                             |                                     |                      |
| Rated Temperature                   | +85°C  |                           |                             |                                     |                      |
| Voltage Derating                    | The rated voltage should be decreased by 1.25%/°C from +85°C to +125°C |                           |                             |                                     |                      |
| Climatic Category                   | 55/125/56  |                           |                             |                                     |                      |
| Test Voltage                        | $1.6 \times V_R$ 60 seconds  |                           |                             |                                     |                      |
| Insulation Resistance               | Measured at +20°C According to IEC 60384-2                             |                           |                             |                                     |                      |
|                                     | Minimum Value Between Terminals  |                           |                             |                                     |                      |
|                                     |  | $C \leq 0.33 \mu\text{F}$ |                             | $C > 0.33 \mu\text{F}$              |                      |
|                                     | $V_R \leq 100$   | 15,000 M $\Omega$         |                             | 5,000 M $\Omega \cdot \mu\text{F}$  |                      |
|                                     | $V_R > 100$  | 30,000 M $\Omega$         |                             | 10,000 M $\Omega \cdot \mu\text{F}$ |                      |
| Dissipation Factor                  | Maximum Values at +23°C  |                           |                             |                                     |                      |
|                                     |  | $C \leq 0.1 \mu\text{F}$  | $0.1 < C < 3.3 \mu\text{F}$ | $3.3 \leq C \leq 10 \mu\text{F}$    | $C > 10 \mu\text{F}$ |
|                                     | 1 kHz  | 0.8%                      | 0.8%                        | 0.8%                                | 0.8%                 |
|                                     | 10 kHz   | 1.5%                      | 1.5%                        | 1.5%                                | 2.0%                 |
|                                     | 100 kHz  | 2.5%                      | 5.0%                        |                                     |                      |
| Self Inductance                     | Approximately 4 nH   |                           |                             |                                     |                      |

## Environmental Compliance

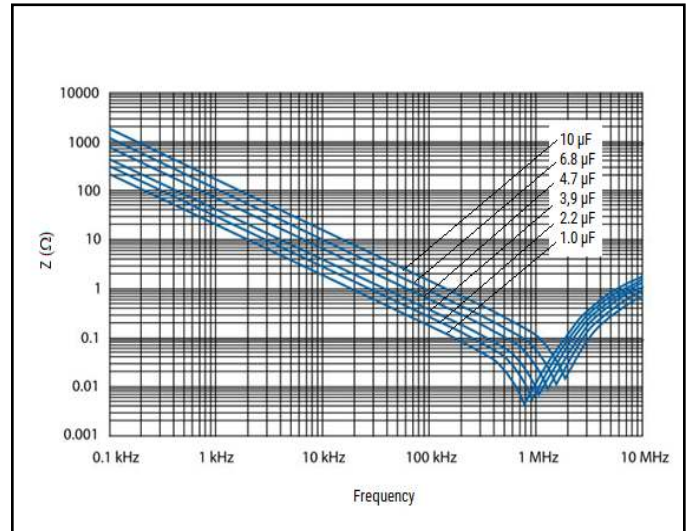
All KEMET surface mount capacitors are RoHS compliant.



## ESR vs. Frequency



## Impedance vs. Frequency



## Maximum $V_{rms}$ (V) vs. Frequency

| Value  | Rated Voltage | Case Size | 1 kHz | 10 kHz | 100 kHz | 500 kHz | 1 MHz |
|--------|---------------|-----------|-------|--------|---------|---------|-------|
| 1.0 μF | 250 V         | A57       | 150.0 | 36.0   | 9.2     | 2.9     | 1.3   |
| 2.2 μF | 100 V         | A52       | 50.0  | 25.0   | 5.0     | 1.2     | 0.6   |
| 3.9 μF | 100 V         | A52       | 50.0  | 18.0   | 4.0     | 1.0     | 0.3   |
| 4.7 μF | 100 V         | A54       | 50.0  | 16.0   | 3.5     | 0.7     | 0.2   |
| 6.8 μF | 100 V         | A57       | 50.0  | 15.5   | 2.2     | 0.5     | 0.2   |
| 10 μF  | 100 V         | A58       | 50.0  | 15.0   | 2.0     | 0.4     | 0.2   |

## Maximum $I_{rms}$ (V) vs. Frequency

| Value  | Rated Voltage | Case Size | 1 kHz | 10 kHz | 100 kHz | 500 kHz | 1 MHz |
|--------|---------------|-----------|-------|--------|---------|---------|-------|
| 1.0 μF | 250 V         | A57       | 1.0   | 2.2    | 5.5     | 9.0     | 10.0  |
| 2.2 μF | 100 V         | A52       | 1.5   | 2.3    | 6.0     | 7.5     | 10.0  |
| 3.9 μF | 100 V         | A52       | 2.0   | 4.0    | 10.0    | 11.0    | 11.5  |
| 4.7 μF | 100 V         | A54       | 2.0   | 4.5    | 10.0    | 12.5    | 12.5  |
| 6.8 μF | 100 V         | A57       | 3.0   | 6.0    | 11.0    | 13.0    | 13.5  |
| 10 μF  | 100 V         | A58       | 4.0   | 9.0    | 13.0    | 14.0    | 14.5  |

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

| VDC | VAC | Cap Value (µF) | Size Code (New/Legacy) | Dimensions in mm |        |        | Lead Spacing (p) | ESR 500 kHz (mΩ) | New KEMET Part Number | Legacy Part Number       |
|-----|-----|----------------|------------------------|------------------|--------|--------|------------------|------------------|-----------------------|--------------------------|
|     |     |                |                        | B                | H      | L      |                  |                  |                       |                          |
| 50  | 30  | 0.033          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 390              | F153AA333(1)050T      | MDC10333(1)50A52P3TUBE   |
| 50  | 30  | 0.039          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 330              | F153AA393(1)050T      | MDC10393(1)50A52P3TUBE   |
| 50  | 30  | 0.047          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 270              | F153AA473(1)050T      | MDC10473(1)50A52P3TUBE   |
| 50  | 30  | 0.056          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 230              | F153AA563(1)050T      | MDC10563(1)50A52P3TUBE   |
| 50  | 30  | 0.068          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 190              | F153AA683(1)050T      | MDC10683(1)50A52P3TUBE   |
| 50  | 30  | 0.082          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 160              | F153AA823(1)050T      | MDC10823(1)50A52P3TUBE   |
| 50  | 30  | 0.10           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 130              | F153AA104(1)050T      | MDC10104(1)50A52P3TUBE   |
| 50  | 30  | 0.12           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 110              | F153AA124(1)050T      | MDC10124(1)50A52P3TUBE   |
| 50  | 30  | 0.15           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 85               | F153AA154(1)050T      | MDC10154(1)50A52P3TUBE   |
| 50  | 30  | 0.18           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 70               | F153AA184(1)050T      | MDC10184(1)50A52P3TUBE   |
| 50  | 30  | 0.22           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 58               | F153AA224(1)050T      | MDC10224(1)50A52P3TUBE   |
| 50  | 30  | 0.27           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 47               | F153AA274(1)050T      | MDC10274(1)50A52P3TUBE   |
| 50  | 30  | 0.33           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 39               | F153AA334(1)050T      | MDC10334(1)50A52P3TUBE   |
| 50  | 30  | 0.39           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 33               | F153AA394(1)050T      | MDC10394(1)50A52P3TUBE   |
| 50  | 30  | 0.47           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 30               | F153AA474(1)050T      | MDC10474(1)50A52P3TUBE   |
| 50  | 30  | 0.56           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 26               | F153AA564(1)050T      | MDC10564(1)50A52P3TUBE   |
| 50  | 30  | 0.68           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 21               | F153AA684(1)050T      | MDC10684(1)50A52P3TUBE   |
| 50  | 30  | 0.82           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 18               | F153AA824(1)050T      | MDC10824(1)50A52P3TUBE   |
| 50  | 30  | 1.0            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 15               | F153AA105(1)050T      | MDC10105(1)50A52P3TUBE   |
| 50  | 30  | 1.2            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 14               | F153AA125(1)050T      | MDC10125(1)50A52P3TUBE   |
| 50  | 30  | 1.5            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 13               | F153AA155(1)050T      | MDC10155(1)50A52P3TUBE   |
| 50  | 30  | 1.8            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 12               | F153AA185(1)050T      | MDC10185(1)50A52P3TUBE   |
| 50  | 30  | 2.2            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 11               | F153AA225(1)050T      | MDC10225(1)50A52P3TUBE   |
| 50  | 30  | 2.7            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 10               | F153AA275(1)050T      | MDC10275(1)50A52P3TUBE   |
| 50  | 30  | 3.3            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 8                | F153AA335(1)050T      | MDC10335(1)50A52P3TUBE   |
| 50  | 30  | 3.9            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 7                | F153AA395(1)050T      | MDC10395(1)50A52P3TUBE   |
| 50  | 30  | 4.7            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 6                | F153AA475(1)050T      | MDC10475(1)50A52P3TUBE   |
| 50  | 30  | 5.6            | AA/A54                 | 12.2             | 5.75   | 13.5   | 10               | 5                | F15(2)AA565(1)050T    | MDC10565(1)50A54P(2)TUBE |
| 50  | 30  | 6.8            | AA/A55                 | 12.2             | 5.75   | 16.5   | 10               | 5                | F15(3)AA685(1)050T    | MDC10685(1)50A55P(3)TUBE |
| 50  | 30  | 8.2            | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 4                | F15(4)AA685(1)050T    | MDC10825(1)50A58P(4)TUBE |
| 50  | 30  | 10             | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 3                | F15(4)AA106(1)050T    | MDC10106(1)50A58P(4)TUBE |
| 50  | 30  | 12             | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 3                | F15(4)AA126(1)050T    | MDC10126(1)50A58P(4)TUBE |
| 50  | 30  | 15             | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 3                | F15(4)AA156(1)050T    | MDC10156(1)50A58P(4)TUBE |
| 50  | 30  | 0.033          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 390              | F153BA333(1)050T      | MDC15333(1)50B53P3TUBE   |
| 50  | 30  | 0.039          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 330              | F153BA393(1)050T      | MDC15393(1)50B53P3TUBE   |
| 50  | 30  | 0.047          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 270              | F153BA473(1)050T      | MDC15473(1)50B53P3TUBE   |
| 50  | 30  | 0.056          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 230              | F153BA563(1)050T      | MDC15563(1)50B53P3TUBE   |
| 50  | 30  | 0.068          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 190              | F153BA683(1)050T      | MDC15683(1)50B53P3TUBE   |
| 50  | 30  | 0.082          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 160              | F153BA823(1)050T      | MDC15823(1)50B53P3TUBE   |
| 50  | 30  | 0.10           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 130              | F153BA104(1)050T      | MDC15104(1)50B53P3TUBE   |
| 50  | 30  | 0.12           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 110              | F153BA124(1)050T      | MDC15124(1)50B53P3TUBE   |
| 50  | 30  | 0.15           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 85               | F153BA154(1)050T      | MDC15154(1)50B53P3TUBE   |
| 50  | 30  | 0.18           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 70               | F153BA184(1)050T      | MDC15184(1)50B53P3TUBE   |
| 50  | 30  | 0.22           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 58               | F153BA224(1)050T      | MDC15224(1)50B53P3TUBE   |
| 50  | 30  | 0.27           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 47               | F153BA274(1)050T      | MDC15274(1)50B53P3TUBE   |
| 50  | 30  | 0.33           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 39               | F153BA334(1)050T      | MDC15334(1)50B53P3TUBE   |
| 50  | 30  | 0.39           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 39               | F153BA394(1)050T      | MDC15394(1)50B53P3TUBE   |
| 50  | 30  | 0.47           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 30               | F153BA474(1)050T      | MDC15474(1)50B53P3TUBE   |
| 50  | 30  | 0.56           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 26               | F153BA564(1)050T      | MDC15564(1)50B53P3TUBE   |
| 50  | 30  | 0.68           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 21               | F153BA684(1)050T      | MDC15684(1)50B53P3TUBE   |
| 50  | 30  | 0.82           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 18               | F153BA824(1)050T      | MDC15824(1)50B53P3TUBE   |
| 50  | 30  | 1.0            | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 15               | F153BA105(1)050T      | MDC15105(1)50B53P3TUBE   |
| 50  | 30  | 1.2            | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 15               | F153BA125(1)050T      | MDC15125(1)50B53P3TUBE   |
| 50  | 30  | 1.5            | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 13               | F153BA155(1)050T      | MDC15155(1)50B53P3TUBE   |
| 50  | 30  | 1.8            | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 13               | F153BA185(1)050T      | MDC15185(1)50B53P3TUBE   |
| 50  | 30  | 2.2            | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 11               | F153BA225(1)050T      | MDC15225(1)50B53P3TUBE   |
| 50  | 30  | 2.7            | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 11               | F153BA275(1)050T      | MDC15275(1)50B53P3TUBE   |
| VDC | VAC | Cap Value (µF) | Size Code (New/Legacy) | B (mm)           | H (mm) | L (mm) | Lead Spacing (p) | ESR 500 kHz (mΩ) | New KEMET Part Number | Legacy Part Number       |

(1) J = ±5%, K = ±10%, other tolerances on request.

(2) = Number of leads per side, 3 or 4.

(3) = Number of leads per side, 3, 4 or 5.

(4) = Number of leads per side, 7 or 8.

**Table 1 – Ratings & Part Number Reference cont.**

| VDC | VAC | Cap Value (µF) | Size Code (New/Legacy) | Dimensions in mm |        |        | Lead Spacing (p) | ESR 500 kHz (mΩ) | New KEMET Part Number | Legacy Part Number        |
|-----|-----|----------------|------------------------|------------------|--------|--------|------------------|------------------|-----------------------|---------------------------|
|     |     |                |                        | B                | H      | L      |                  |                  |                       |                           |
| 50  | 30  | 3.3            | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 8                | F153BA335(1)050T      | MDC15335(1)50B53P3TUBE    |
| 50  | 30  | 3.9            | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 8                | F153BA395(1)050T      | MDC15395(1)50B53P3TUBE    |
| 50  | 30  | 4.7            | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 6                | F153BA475(1)050T      | MDC15475(1)50B53P3TUBE    |
| 50  | 30  | 5.6            | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 5                | F153BA565(1)050T      | MDC15565(1)50B53P3TUBE    |
| 50  | 30  | 6.8            | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 5                | F153BA685(1)050T      | MDC15685(1)50B53P3TUBE    |
| 100 | 63  | 0.033          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 390              | F153AA333(1)100T      | MDC10333(1)100A52P3TUBE   |
| 100 | 63  | 0.039          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 330              | F153AA393(1)100T      | MDC10393(1)100A52P3TUBE   |
| 100 | 63  | 0.047          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 270              | F153AA473(1)100T      | MDC10473(1)100A52P3TUBE   |
| 100 | 63  | 0.056          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 230              | F153AA563(1)100T      | MDC10563(1)100A52P3TUBE   |
| 100 | 63  | 0.068          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 190              | F153AA683(1)100T      | MDC10683(1)100A52P3TUBE   |
| 100 | 63  | 0.082          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 160              | F153AA823(1)100T      | MDC10823(1)100A52P3TUBE   |
| 100 | 63  | 0.10           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 130              | F153AA104(1)100T      | MDC10104(1)100A52P3TUBE   |
| 100 | 63  | 0.12           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 110              | F153AA124(1)100T      | MDC10124(1)100A52P3TUBE   |
| 100 | 63  | 0.15           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 85               | F153AA154(1)100T      | MDC10154(1)100A52P3TUBE   |
| 100 | 63  | 0.18           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 70               | F153AA184(1)100T      | MDC10184(1)100A52P3TUBE   |
| 100 | 63  | 0.22           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 58               | F153AA224(1)100T      | MDC10224(1)100A52P3TUBE   |
| 100 | 63  | 0.27           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 47               | F153AA274(1)100T      | MDC10274(1)100A52P3TUBE   |
| 100 | 63  | 0.33           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 39               | F153AA334(1)100T      | MDC10334(1)100A52P3TUBE   |
| 100 | 63  | 0.39           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 33               | F153AA394(1)100T      | MDC10394(1)100A52P3TUBE   |
| 100 | 63  | 0.47           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 30               | F153AA474(1)100T      | MDC10474(1)100A52P3TUBE   |
| 100 | 63  | 0.56           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 26               | F153AA564(1)100T      | MDC10564(1)100A52P3TUBE   |
| 100 | 63  | 0.68           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 21               | F153AA684(1)100T      | MDC10684(1)100A52P3TUBE   |
| 100 | 63  | 0.82           | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 18               | F153AA824(1)100T      | MDC10824(1)100A52P3TUBE   |
| 100 | 63  | 1.0            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 15               | F153AA105(1)100T      | MDC10105(1)100A52P3TUBE   |
| 100 | 63  | 1.2            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 14               | F153AA125(1)100T      | MDC10125(1)100A52P3TUBE   |
| 100 | 63  | 1.5            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 13               | F153AA155(1)100T      | MDC10155(1)100A52P3TUBE   |
| 100 | 63  | 1.8            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 12               | F153AA185(1)100T      | MDC10185(1)100A52P3TUBE   |
| 100 | 63  | 2.2            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 11               | F153AA225(1)100T      | MDC10225(1)100A52P3TUBE   |
| 100 | 35  | 2.7            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 10               | F153AA275(1)100T      | MDC10275(1)100A52P3TUBE   |
| 100 | 35  | 3.3            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 8                | F153AA335(1)100T      | MDC10335(1)100A52P3TUBE   |
| 100 | 35  | 3.9            | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 7                | F153AA395(1)100T      | MDC10395(1)100A52P3TUBE   |
| 100 | 35  | 4.7            | AA/A54                 | 12.2             | 5.75   | 13.5   | 10               | 6                | F15(2)AA475(1)100T    | MDC10475(1)100A54P(2)TUBE |
| 100 | 35  | 4.7            | AA/A53                 | 12.7             | 8.5    | 14.0   | 10               | 6                | F15(2)AA475(1)100V687 | MDC10475(1)100A53P(2)TR32 |
| 100 | 35  | 5.6            | AA/A55                 | 12.2             | 5.75   | 16.5   | 10               | 5                | F15(3)AA565(1)100T    | MDC10565(1)100A55P(3)TUBE |
| 100 | 63  | 6.8            | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 5                | F15(4)AA685(1)100T    | MDC10685(1)100A58P(4)TUBE |
| 100 | 63  | 8.2            | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 4                | F15(4)AA825(1)100T    | MDC10825(1)100A58P(4)TUBE |
| 100 | 63  | 10             | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 3                | F15(4)AA106(1)100T    | MDC10106(1)100A58P(4)TUBE |
| 100 | 63  | 0.033          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 390              | F153BA333(1)100T      | MDC15333(1)100B53P3TUBE   |
| 100 | 63  | 0.039          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 330              | F153BA393(1)100T      | MDC15393(1)100B53P3TUBE   |
| 100 | 63  | 0.047          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 270              | F153BA473(1)100T      | MDC15473(1)100B53P3TUBE   |
| 100 | 63  | 0.056          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 230              | F153BA563(1)100T      | MDC15563(1)100B53P3TUBE   |
| 100 | 63  | 0.068          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 190              | F153BA683(1)100T      | MDC15683(1)100B53P3TUBE   |
| 100 | 63  | 0.082          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 160              | F153BA823(1)100T      | MDC15823(1)100B53P3TUBE   |
| 100 | 63  | 0.10           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 130              | F153BA104(1)100T      | MDC15104(1)100B53P3TUBE   |
| 100 | 63  | 0.12           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 110              | F153BA124(1)100T      | MDC15124(1)100B53P3TUBE   |
| 100 | 63  | 0.15           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 85               | F153BA154(1)100T      | MDC15154(1)100B53P3TUBE   |
| 100 | 63  | 0.18           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 70               | F153BA184(1)100T      | MDC15184(1)100B53P3TUBE   |
| 100 | 63  | 0.22           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 58               | F153BA224(1)100T      | MDC15224(1)100B53P3TUBE   |
| 100 | 63  | 0.27           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 47               | F153BA274(1)100T      | MDC15274(1)100B53P3TUBE   |
| 100 | 63  | 0.33           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 39               | F153BA334(1)100T      | MDC15334(1)100B53P3TUBE   |
| 100 | 63  | 0.39           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 39               | F153BA394(1)100T      | MDC15394(1)100B53P3TUBE   |
| 100 | 63  | 0.47           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 30               | F153BA474(1)100T      | MDC15474(1)100B53P3TUBE   |
| 100 | 63  | 0.56           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 26               | F153BA564(1)100T      | MDC15564(1)100B53P3TUBE   |
| 100 | 63  | 0.68           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 21               | F153BA684(1)100T      | MDC15684(1)100B53P3TUBE   |
| 100 | 63  | 0.82           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 18               | F153BA824(1)100T      | MDC15824(1)100B53P3TUBE   |
| 100 | 63  | 1.0            | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 15               | F153BA105(1)100T      | MDC15105(1)100B53P3TUBE   |
| 100 | 63  | 1.2            | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 15               | F153BA125(1)100T      | MDC15125(1)100B53P3TUBE   |
| VDC | VAC | Cap Value (µF) | Size Code (New/Legacy) | B (mm)           | H (mm) | L (mm) | Lead Spacing (p) | ESR 500 kHz (mΩ) | New KEMET Part Number | Legacy Part Number        |

(1) J = ±5%, K = ±10%, other tolerances on request.

(2) = Number of leads per side, 3 or 4.

(3) = Number of leads per side, 3, 4 or 5.

(4) = Number of leads per side, 7 or 8.

**Table 1 – Ratings & Part Number Reference cont.**

| VDC | VAC | Cap Value<br>(µF) | Size Code<br>(New/<br>Legacy) | Dimensions in<br>mm |      |      | Lead<br>Spacing<br>(p) | ESR 500<br>kHz (mΩ) | New KEMET<br>Part Number | Legacy<br>Part Number     |
|-----|-----|-------------------|-------------------------------|---------------------|------|------|------------------------|---------------------|--------------------------|---------------------------|
|     |     |                   |                               | B                   | H    | L    |                        |                     |                          |                           |
| 100 | 63  | 1.5               | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 13                  | F153BA155(1)100T         | MDC15155(1)100B53P3TUBE   |
| 100 | 63  | 1.8               | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 13                  | F153BA185(1)100T         | MDC15185(1)100B53P3TUBE   |
| 100 | 63  | 2.2               | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 11                  | F153BA225(1)100T         | MDC15225(1)100B53P3TUBE   |
| 100 | 63  | 2.7               | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 11                  | F153BA275(1)100T         | MDC15275(1)100B53P3TUBE   |
| 100 | 63  | 3.3               | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 8                   | F153BA335(1)100T         | MDC15335(1)100B53P3TUBE   |
| 100 | 63  | 3.9               | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 8                   | F153BA395(1)100T         | MDC15395(1)100B53P3TUBE   |
| 100 | 35  | 4.7               | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 6                   | F153BA475(1)100T         | MDC15475(1)100B53P3TUBE   |
| 100 | 63  | 5.6               | BA/B55                        | 16.5                | 5.75 | 12.2 | 15                     | 5                   | F15(2)BA565(1)100T       | MDC15565(1)100B55P(2)TUBE |
| 250 | 160 | 0.033             | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 390                 | F153AA333(1)250T         | MDC10333(1)250A52P3TUBE   |
| 250 | 160 | 0.039             | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 330                 | F153AA393(1)250T         | MDC10393(1)250A52P3TUBE   |
| 250 | 160 | 0.047             | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 270                 | F153AA473(1)250T         | MDC10473(1)250A52P3TUBE   |
| 250 | 160 | 0.056             | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 230                 | F153AA563(1)250T         | MDC10563(1)250A52P3TUBE   |
| 250 | 160 | 0.068             | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 190                 | F153AA683(1)250T         | MDC10683(1)250A52P3TUBE   |
| 250 | 160 | 0.082             | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 160                 | F153AA823(1)250T         | MDC10823(1)250A52P3TUBE   |
| 250 | 160 | 0.10              | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 130                 | F153AA104(1)250T         | MDC10104(1)250A52P3TUBE   |
| 250 | 160 | 0.12              | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 130                 | F153AA124(1)250T         | MDC10124(1)250A52P3TUBE   |
| 250 | 160 | 0.15              | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 130                 | F153AA154(1)250T         | MDC10154(1)250A52P3TUBE   |
| 250 | 160 | 0.18              | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 70                  | F153AA184(1)250T         | MDC10184(1)250A52P3TUBE   |
| 250 | 160 | 0.22              | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 58                  | F153AA224(1)250T         | MDC10224(1)250A52P3TUBE   |
| 250 | 160 | 0.27              | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 47                  | F153AA274(1)250T         | MDC10274(1)250A52P3TUBE   |
| 250 | 160 | 0.33              | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 39                  | F153AA334(1)250T         | MDC10334(1)250A52P3TUBE   |
| 250 | 160 | 0.39              | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 33                  | F153AA394(1)250T         | MDC10394(1)250A52P3TUBE   |
| 250 | 160 | 0.47              | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 30                  | F153AA474(1)250T         | MDC10474(1)250A52P3TUBE   |
| 250 | 160 | 0.56              | AA/A54                        | 12.2                | 5.75 | 13.5 | 10                     | 26                  | F15(2)AA564(1)250T       | MDC10564(1)250A54P(2)TUBE |
| 250 | 160 | 0.68              | AA/A55                        | 12.2                | 5.75 | 16.5 | 10                     | 21                  | F15(3)AA684(1)250T       | MDC10684(1)250A55P(3)TUBE |
| 250 | 160 | 0.82              | AA/A58                        | 12.7                | 10.5 | 23.0 | 10                     | 18                  | F15(4)AA824(1)250T       | MDC10824(1)250A58P(4)TUBE |
| 250 | 160 | 1.0               | AA/A58                        | 12.7                | 10.5 | 23.0 | 10                     | 15                  | F15(4)AA105(1)250T       | MDC10105(1)250A58P(4)TUBE |
| 250 | 160 | 1.2               | AA/A58                        | 12.7                | 10.5 | 23.0 | 10                     | 14                  | F15(4)AA125(1)250T       | MDC10125(1)250A58P(4)TUBE |
| 250 | 160 | 1.5               | AA/A58                        | 12.7                | 10.5 | 23.0 | 10                     | 13                  | F15(4)AA155(1)250T       | MDC10155(1)250A58P(4)TUBE |
| 250 | 160 | 0.033             | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 390                 | F153BA333(1)250T         | MDC15333(1)250B53P3TUBE   |
| 250 | 160 | 0.039             | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 330                 | F153BA393(1)250T         | MDC15393(1)250B53P3TUBE   |
| 250 | 160 | 0.047             | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 270                 | F153BA473(1)250T         | MDC15473(1)250B53P3TUBE   |
| 250 | 160 | 0.056             | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 230                 | F153BA563(1)250T         | MDC15563(1)250B53P3TUBE   |
| 250 | 160 | 0.068             | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 190                 | F153BA683(1)250T         | MDC15683(1)250B53P3TUBE   |
| 250 | 160 | 0.082             | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 160                 | F153BA823(1)250T         | MDC15823(1)250B53P3TUBE   |
| 250 | 160 | 0.10              | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 130                 | F153BA104(1)250T         | MDC15104(1)250B53P3TUBE   |
| 250 | 160 | 0.12              | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 110                 | F153BA124(1)250T         | MDC15124(1)250B53P3TUBE   |
| 250 | 160 | 0.15              | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 85                  | F153BA154(1)250T         | MDC15154(1)250B53P3TUBE   |
| 250 | 160 | 0.18              | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 70                  | F153BA184(1)250T         | MDC15184(1)250B53P3TUBE   |
| 250 | 160 | 0.22              | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 58                  | F153BA224(1)250T         | MDC15224(1)250B53P3TUBE   |
| 250 | 160 | 0.27              | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 47                  | F153BA274(1)250T         | MDC15274(1)250B53P3TUBE   |
| 250 | 160 | 0.33              | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 39                  | F153BA334(1)250T         | MDC15334(1)250B53P3TUBE   |
| 250 | 160 | 0.39              | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 39                  | F153BA394(1)250T         | MDC15394(1)250B53P3TUBE   |
| 250 | 160 | 0.47              | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 30                  | F153BA474(1)250T         | MDC15474(1)250B53P3TUBE   |
| 250 | 160 | 0.56              | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 26                  | F153BA564(1)250T         | MDC15564(1)250B53P3TUBE   |
| 250 | 160 | 0.68              | BA/B53                        | 16.5                | 5.75 | 11.0 | 15                     | 21                  | F153BA684(1)250T         | MDC15684(1)250B53P3TUBE   |
| 400 | 200 | 0.033             | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 390                 | F153AA333(1)400T         | MDC10333(1)400A52P3TUBE   |
| 400 | 200 | 0.039             | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 330                 | F153AA393(1)400T         | MDC10393(1)400A52P3TUBE   |
| 400 | 200 | 0.047             | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 270                 | F153AA473(1)400T         | MDC10473(1)400A52P3TUBE   |
| 400 | 200 | 0.056             | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 230                 | F153AA563(1)400T         | MDC10563(1)400A52P3TUBE   |
| 400 | 200 | 0.068             | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 190                 | F153AA683(1)400T         | MDC10683(1)400A52P3TUBE   |
| 400 | 200 | 0.082             | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 160                 | F153AA823(1)400T         | MDC10823(1)400A52P3TUBE   |
| 400 | 200 | 0.10              | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 130                 | F153AA104(1)400T         | MDC10104(1)400A52P3TUBE   |
| 400 | 200 | 0.12              | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 110                 | F153AA124(1)400T         | MDC10124(1)400A52P3TUBE   |
| 400 | 200 | 0.15              | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 85                  | F153AA154(1)400T         | MDC10154(1)400A52P3TUBE   |
| 400 | 200 | 0.18              | AA/A52                        | 12.2                | 5.75 | 11.0 | 10                     | 70                  | F153AA184(1)400T         | MDC10184(1)400A52P3TUBE   |
| 400 | 200 | 0.22              | AA/A58                        | 12.7                | 10.5 | 23.0 | 10                     | 58                  | F15(4)AA224(1)400T       | MDC10224(1)400A58P(4)TUBE |

(1) J = ±5%, K = ±10%, other tolerances on request.

(2) = Number of leads per side, 3 or 4.

(3) = Number of leads per side, 3, 4 or 5.

(4) = Number of leads per side, 7 or 8.



**Table 1 – Ratings & Part Number Reference cont.**

| VDC | VAC | Cap Value (µF) | Size Code (New/Legacy) | Dimensions in mm |        |        | Lead Spacing (p) | ESR 500 kHz (mΩ) | New KEMET Part Number | Legacy Part Number        |
|-----|-----|----------------|------------------------|------------------|--------|--------|------------------|------------------|-----------------------|---------------------------|
|     |     |                |                        | B                | H      | L      |                  |                  |                       |                           |
| 400 | 200 | 0.27           | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 47               | F15(4)AA274(1)400T    | MDC10274(1)400A58P(4)TUBE |
| 400 | 200 | 0.33           | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 39               | F15(4)AA334(1)400T    | MDC10334(1)400A58P(4)TUBE |
| 400 | 200 | 0.39           | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 33               | F15(4)AA394(1)400T    | MDC10394(1)400A58P(4)TUBE |
| 400 | 200 | 0.47           | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 30               | F15(4)AA474(1)400T    | MDC10474(1)400A58P(4)TUBE |
| 400 | 200 | 0.033          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 390              | F153BA333(1)400T      | MDC15333(1)400B53P3TUBE   |
| 400 | 200 | 0.039          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 330              | F153BA393(1)400T      | MDC15393(1)400B53P3TUBE   |
| 400 | 200 | 0.047          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 270              | F153BA473(1)400T      | MDC15473(1)400B53P3TUBE   |
| 400 | 200 | 0.056          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 230              | F153BA563(1)400T      | MDC15563(1)400B53P3TUBE   |
| 400 | 200 | 0.068          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 190              | F153BA683(1)400T      | MDC15683(1)400B53P3TUBE   |
| 400 | 200 | 0.082          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 160              | F153BA823(1)400T      | MDC15823(1)400B53P3TUBE   |
| 400 | 200 | 0.10           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 130              | F153BA104(1)400T      | MDC15104(1)400B53P3TUBE   |
| 400 | 200 | 0.12           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 110              | F153BA124(1)400T      | MDC15124(1)400B53P3TUBE   |
| 400 | 200 | 0.15           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 85               | F153BA154(1)400T      | MDC15154(1)400B53P3TUBE   |
| 400 | 200 | 0.18           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 70               | F153BA184(1)400T      | MDC15184(1)400B53P3TUBE   |
| 400 | 200 | 0.22           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 58               | F153BA224(1)400T      | MDC15224(1)400B53P3TUBE   |
| 400 | 200 | 0.27           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 47               | F153BA274(1)400T      | MDC15274(1)400B53P3TUBE   |
| 400 | 200 | 0.33           | BA/B55                 | 16.5             | 5.75   | 12.2   | 15               | 39               | F15(2)BA334(1)400T    | MDC15334(1)400B55P(2)TUBE |
| 630 | 220 | 0.033          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 390              | F153AA333(1)630T      | MDC10333(1)630A52P3TUBE   |
| 630 | 220 | 0.039          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 330              | F153AA393(1)630T      | MDC10393(1)630A52P3TUBE   |
| 630 | 220 | 0.047          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 270              | F153AA473(1)630T      | MDC10473(1)630A52P3TUBE   |
| 630 | 220 | 0.056          | AA/A52                 | 12.2             | 5.75   | 11.0   | 10               | 230              | F153AA563(1)630T      | MDC10563(1)630A52P3TUBE   |
| 630 | 220 | 0.068          | AA/A54                 | 12.2             | 5.75   | 13.5   | 10               | 190              | F15(2)AA683(1)630T    | MDC10683(1)630A54P(2)TUBE |
| 630 | 220 | 0.082          | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 160              | F15(4)AA823(1)630T    | MDC10823(1)630A58P(4)TUBE |
| 630 | 220 | 0.10           | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 130              | F15(4)AA104(1)630T    | MDC10104(1)630A58P(4)TUBE |
| 630 | 220 | 0.12           | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 110              | F15(4)AA124(1)630T    | MDC10124(1)630A58P(4)TUBE |
| 630 | 220 | 0.15           | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 85               | F15(4)AA154(1)630T    | MDC10154(1)630A58P(4)TUBE |
| 630 | 220 | 0.18           | AA/A58                 | 12.7             | 10.5   | 23.0   | 10               | 70               | F15(4)AA184(1)630T    | MDC10184(1)630A58P(4)TUBE |
| 630 | 220 | 0.033          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 390              | F153BA333(1)630T      | MDC15333(1)630B53P3TUBE   |
| 630 | 220 | 0.039          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 330              | F153BA393(1)630T      | MDC15393(1)630B53P3TUBE   |
| 630 | 220 | 0.047          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 270              | F153BA473(1)630T      | MDC15473(1)630B53P3TUBE   |
| 630 | 220 | 0.056          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 230              | F153BA563(1)630T      | MDC15563(1)630B53P3TUBE   |
| 630 | 220 | 0.068          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 190              | F153BA683(1)630T      | MDC15683(1)630B53P3TUBE   |
| 630 | 220 | 0.082          | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 160              | F153BA823(1)630T      | MDC15823(1)630B53P3TUBE   |
| 630 | 220 | 0.10           | BA/B53                 | 16.5             | 5.75   | 11.0   | 15               | 130              | F153BA104(1)630T      | MDC15104(1)630B53P3TUBE   |
| VDC | VAC | Cap Value (µF) | Size Code (New/Legacy) | B (mm)           | H (mm) | L (mm) | Lead Spacing (p) | ESR 500 kHz (mΩ) | New KEMET Part Number | Legacy Part Number        |

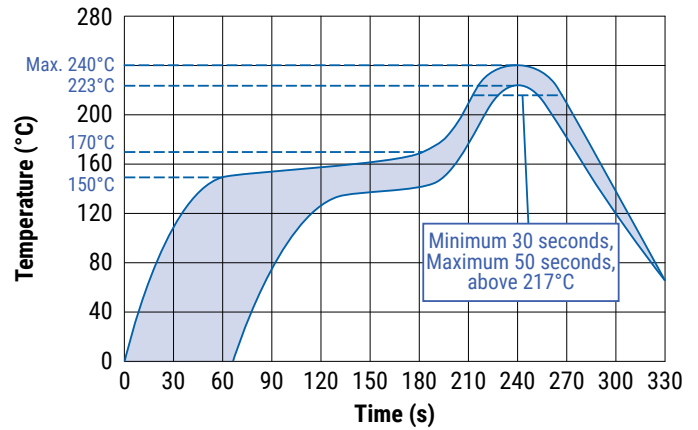
(1) J = ±5%, K = ±10%, other tolerances on request.  
(2) = Number of leads per side, 3 or 4.

(3) = Number of leads per side, 3, 4 or 5.  
(4) = Number of leads per side, 7 or 8.

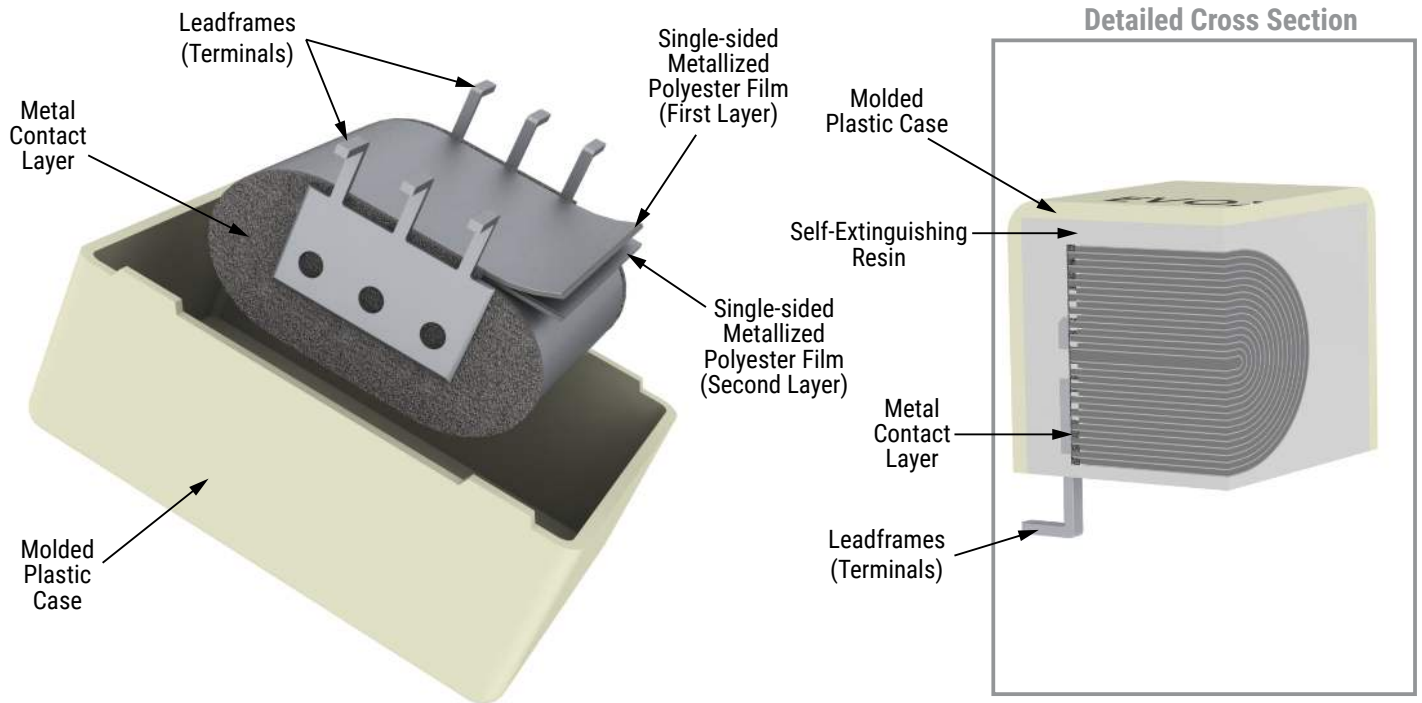
## Soldering Process

**Reflow soldering temperature is measured on the top surface of the component:** Preheating temperature should be less than 170°C. The time above 217°C should be less than 50 seconds. The peak temperature must not exceed 240°C.

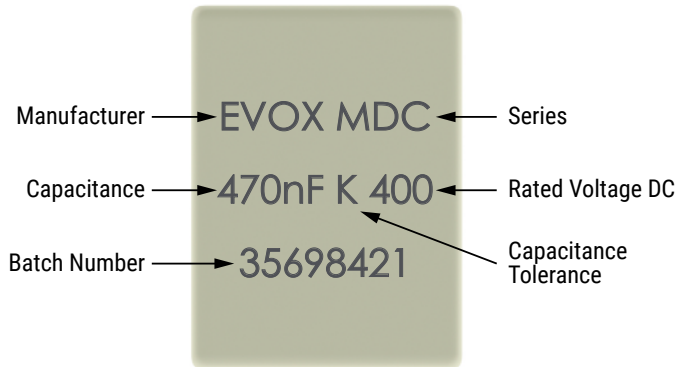
A lead-free soldering process for this series is in development. Please contact KEMET for details.



## Construction



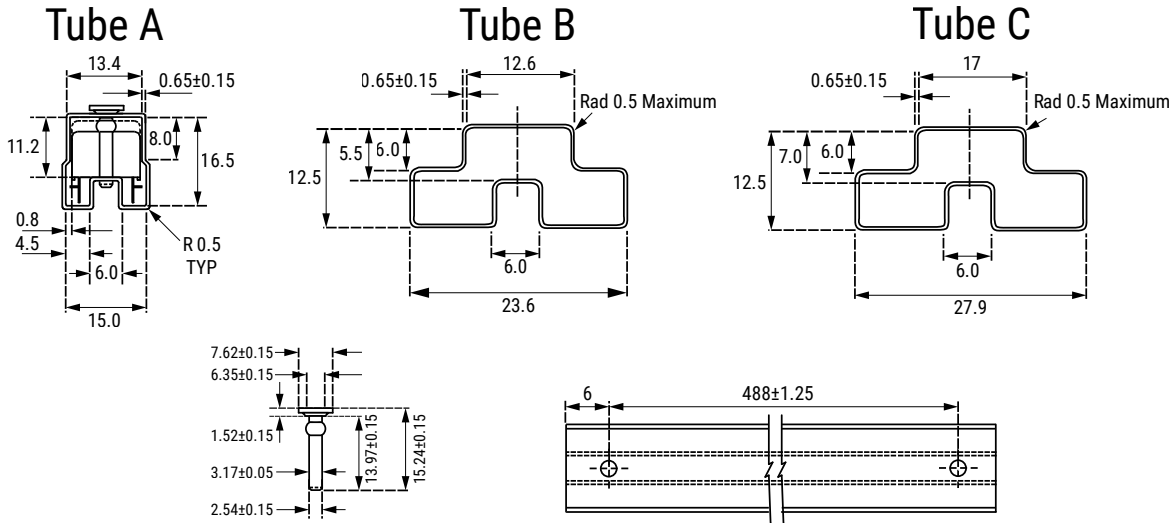
## Marking



## Packaging Quantities

| Size Code | Lead Spacing | Base (mm) | Height (mm) | Length (mm) | Bulk | Reel |
|-----------|--------------|-----------|-------------|-------------|------|------|
| A52       | 10.0         | 12.2      | 5.75        | 11.0        | 43   |      |
| A53       |              | 12.7      | 8.5         | 14.0        | 34   | 200  |
| A54       |              | 12.2      | 5.75        | 13.5        | 35   |      |
| A55       |              | 12.2      | 5.75        | 16.5        | 28   |      |
| A58       |              | 12.7      | 10.5        | 23.0        | 21   |      |
| B53       | 15.0         | 16.5      | 5.75        | 11.0        | 43   |      |
| B55       |              | 16.5      | 5.75        | 12.2        | 39   |      |

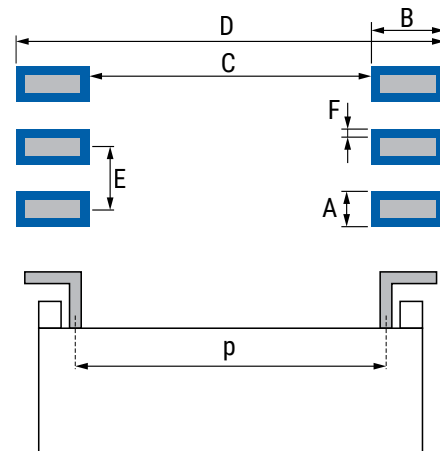
## Tube Packaging



| Size Code | Dimensions in mm          | Tube   |
|-----------|---------------------------|--------|
| A52       | 10.0 – 12.2 x 5.75 x 11.0 | Tube B |
| A53       | 10.0 – 12.7 x 8.5 x 14.0  | Tube A |
| A54       | 10.0 – 12.2 x 5.75 x 13.5 | Tube B |
| A55       | 10.0 – 12.2 x 5.75 x 16.5 | Tube B |
| A58       | 10.0 – 12.7 x 10.5 x 23.0 | Tube A |
| B53       | 15.0 – 16.5 x 5.75 x 11.0 | Tube C |
| B55       | 15.0 – 16.5 x 5.75 x 12.2 | Tube C |

## Landing

| Size | Dimensions in mm |   |   |       |       |      |      |
|------|------------------|---|---|-------|-------|------|------|
|      | p                | A | B | C     | D     | E    | F    |
| A52  | 10               | 1 | 2 | 9.15  | 13.15 | 2.54 | 0.25 |
| A53  | 10               | 1 | 2 | 9.15  | 13.15 | 2.54 | 0.25 |
| A54  | 10               | 1 | 2 | 9.15  | 13.15 | 2.54 | 0.25 |
| A55  | 10               | 1 | 2 | 9.15  | 13.15 | 2.54 | 0.25 |
| A58  | 10               | 1 | 2 | 9.15  | 13.15 | 2.54 | 0.25 |
| B53  | 15               | 1 | 2 | 14.15 | 18.15 | 2.54 | 0.25 |
| B55  | 15               | 1 | 2 | 14.15 | 18.15 | 2.54 | 0.25 |



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