

# C4AS, Radial, 2 or 4 Leads, 850 – 3,000 VDC/500 – 750 VAC

## Overview

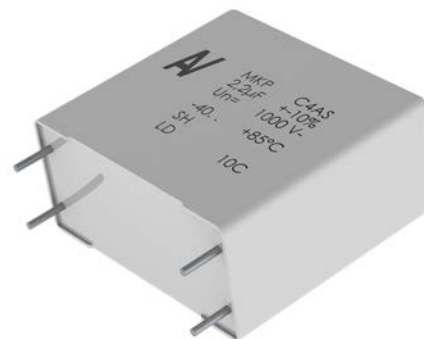
The C4AS capacitor is a polypropylene metallized film and polyester double-metallized foil capacitor with a rectangular, plastic box-type design filled with resin, and uses 2 or 4 tinned copper wires.

## Applications

Typical applications include snubber, clamping, resonance, and pulse.

## Benefits

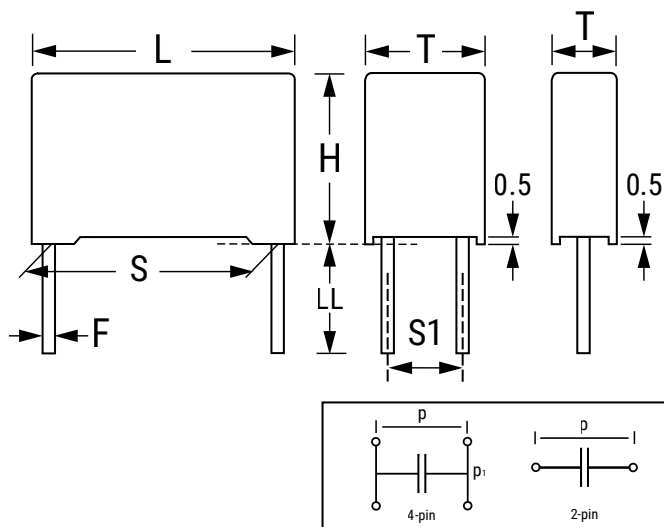
- Self-healing
- Low loss
- High ripple current
- High contact reliability
- Suitable for high frequency applications



## Part Number System

| C4                  | AS                                   | M                                                           | B                                                | U                        | 3150                                                                                                                               | A3                   | A                   | J                 |
|---------------------|--------------------------------------|-------------------------------------------------------------|--------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------|
| Series              | Type                                 | Rated Voltage (VDC)                                         | Case                                             | Number of Leads          | Capacitance Code (pF)                                                                                                              | Lead Diameter (mm)   | Size Code           | Tolerance         |
| C4 = MKP Capacitors | AS = Radial box, snubber application | M = 850<br>N = 1,000<br>P = 1,200<br>W = 2,000<br>Y = 3,000 | B = Plastic box with thermosetting resin sealing | U = 2 lead<br>W = 4 lead | Digits two – four indicate the first three digits of the capacitance value. First digit indicates the number of zeros to be added. | A1 = 0.8<br>A3 = 1.2 | See Dimension Table | J = 5%<br>K = 10% |

## Dimensions – Millimeters



| Size Code | S    | S1   | T       |           | H       |           | L       |           | LL    |
|-----------|------|------|---------|-----------|---------|-----------|---------|-----------|-------|
|           | ±0.4 | ±0.4 | Nominal | Tolerance | Nominal | Tolerance | Nominal | Tolerance | +0/-2 |
| A         | 27.5 |      | 10      | +0/-0.7   | 20      | +0/-0.7   | 32      | +0/-0.7   | 6     |
| B         | 27.5 | 5.1  | 13      | +0/-0.7   | 22      | +0/-0.7   | 32      | +0/-0.7   | 6     |
| C         | 27.5 | 5.1  | 14      | +0/-0.7   | 28      | +0/-0.7   | 32      | +0/-0.7   | 6     |
| E         | 27.5 | 5.1  | 18      | +0/-0.7   | 33      | +0/-0.7   | 32      | +0/-0.7   | 6     |
| G         | 27.5 | 10.2 | 22      | +0/-0.7   | 37      | +0/-0.7   | 32      | +0/-0.7   | 6     |
| F         | 37.5 | 10.2 | 20      | +0/-0.7   | 40      | +0/-0.7   | 41.5    | +0/-0.7   | 6     |
| H         | 37.5 | 10.2 | 24      | +0/-0.7   | 44      | +0/-0.7   | 41.5    | +0/-0.7   | 6     |
| J         | 37.5 | 10.2 | 28      | +0/-0.7   | 37      | +0/-0.7   | 42.5    | +0/-0.7   | 6     |
| L         | 37.5 | 20.3 | 30      | +0/-0.7   | 45      | +0/-0.7   | 42      | +0/-0.7   | 6     |
| M         | 52.5 | 20.3 | 30      | +0/-0.7   | 45      | +0/-0.7   | 57.5    | +0/-0.7   | 6     |
| N         | 52.5 | 20.3 | 35      | +0/-0.7   | 50      | +0/-0.7   | 57.5    | +0/-0.7   | 6     |

Note: Wire diameter (F): See Table "Part Numbers".

## Qualifications

|                     |                                   |
|---------------------|-----------------------------------|
| Reference Standards | IEC 61071, EN61071, VDE0560       |
| Climatic Category   | 40/85/56 according to IEC 60068-1 |

## Performance Characteristics

|                                                                        |                                                                                                             |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Temperature Range                                                      | -40°C to + 85°C                                                                                             |
| Maximum Permissible Ambient Temperature                                | +70°C                                                                                                       |
| Capacitance Tolerance                                                  | ±5%, ±10%                                                                                                   |
| IEC Climatic Category                                                  | 40/85/56 according to IEC 68-1                                                                              |
| Peak Non-Repetitive Maximum Current                                    | $I_{PKR} \times 1.5$                                                                                        |
| Test Voltage Terminal to Terminal $V_{TT}$                             | $2 V_n$ for 10 seconds                                                                                      |
| Test Voltage Terminal to Case $V_{TC}$                                 | 3k V – 50 Hz for 60 seconds                                                                                 |
| Dissipation Factor (DF)                                                | $\geq 5 \times 10^{-4}$ at 1 kHz and 20°C                                                                   |
| Acceptable Relative Humidity                                           | Annual average $\leq 70\%$<br>$\leq 85\%$ for $\leq 30$ intermittent days annually<br>Dewing not admissible |
| Capacitance Deviation in Operating Temperature Range of -40°C to +85°C | ±1.5% maximum on capacitance value measured at +20°C                                                        |
| Change of Capacitance vs. Operating Time                               | -3% after 30,000 hours at $V_{RMS}$ or after 100,000 hours at $V_n$                                         |
| Case Components                                                        | Solvent-resistant plastic case with epoxy resin sealing, flame retardant execution (UL Class 94V-0)         |
| Terminals                                                              | Tinned copper 2 or 4 wires                                                                                  |
| Installation                                                           | Any position                                                                                                |
| Life Expectancy                                                        | $\geq 30,000$ hours at $V_{RMS}$ , $\geq 100,000$ hours at $V_n$                                            |
| Failure Quota                                                          | 300/10 <sup>9</sup> components per hour                                                                     |

## Environmental Compliance

As a leading global supplier of electronic components and an environmentally conscious company, KEMET continually aspires to improve the environmental effects of our manufacturing processes and our finished electronic components.

In Europe (RoHS Directive) and in some other geographical areas such as China (China RoHS), legislation has been enacted to prevent or otherwise limit the use of certain hazardous materials, including lead (Pb), in electronic equipment. KEMET monitors legislation globally to ensure compliance and endeavors to adjust our manufacturing processes and/or electronic components as may be required by applicable law.

For military, medical, automotive, and some commercial applications, the use of lead (Pb) in the termination is necessary and/or required by design. KEMET is committed to communicating RoHS compliance to our customers. Information related to RoHS compliance will be provided in data sheets and using specific identifiers on the packaging labels.

All KEMET power film capacitors are RoHS compliant.

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

| Part Number             | Cap Value (µF) | VDC   | VAC | Peak VDC | Size Code | Maximum Dimensions (mm) |      |    |    |      |
|-------------------------|----------------|-------|-----|----------|-----------|-------------------------|------|----|----|------|
|                         |                |       |     |          |           | S                       | S1   | T  | H  | L    |
| C4ASMBU3150(2)A(3)      | 0.15           | 850   | 500 | 1,200    | A         | 27.5                    | -    | 10 | 20 | 32   |
| C4ASMBU3220(2)B(3)      | 0.22           | 850   | 500 | 1,200    | B         | 27.5                    | -    | 13 | 22 | 32   |
| C4ASMB(1)3330(2)C(3)    | 0.33           | 850   | 500 | 1,200    | C         | 27.5                    | 5.1  | 14 | 28 | 32   |
| C4ASMB(1)3470(2)E(3)    | 0.47           | 850   | 500 | 1,200    | E         | 27.5                    | 5.1  | 18 | 33 | 32   |
| C4ASMB(1)3680(2)G(3)    | 0.68           | 850   | 500 | 1,200    | G         | 27.5                    | 10.2 | 22 | 37 | 32   |
| C4ASMB(1)4100(2)F(3)    | 1              | 850   | 500 | 1,200    | F         | 37.5                    | 10.2 | 20 | 40 | 41.5 |
| C4ASMB(1)4200(2)H(3)    | 2              | 850   | 500 | 1,200    | H         | 37.5                    | 10.2 | 24 | 44 | 41.5 |
| C4ASMB(1)4300(2)M(3)    | 3              | 850   | 500 | 1,200    | M         | 52.5                    | 20.3 | 30 | 45 | 57.5 |
| C4ASMB(1)4400(2)M(3)    | 4              | 850   | 500 | 1,200    | M         | 52.5                    | 20.3 | 30 | 45 | 57.5 |
| C4ASMB(1)4500(2)N(3)    | 5              | 850   | 500 | 1,200    | N         | 52.5                    | 20.3 | 35 | 50 | 57.5 |
| C4ASNB(1)3150(2)A(3)    | 0.15           | 1,000 | 600 | 1,300    | A         | 27.5                    | -    | 10 | 20 | 32   |
| C4ASNB(1)3220(2)B(3)    | 0.22           | 1,000 | 600 | 1,300    | B         | 27.5                    | 5.1  | 13 | 22 | 32   |
| C4ASNB(1)3330(2)C(3)    | 0.33           | 1,000 | 600 | 1,300    | C         | 27.5                    | 5.1  | 14 | 28 | 32   |
| C4ASNB(1)3470(2)E(3)    | 0.47           | 1,000 | 600 | 1,300    | E         | 27.5                    | 5.1  | 18 | 33 | 32   |
| C4ASNB(1)3680(2)G(3)    | 0.68           | 1,000 | 600 | 1,300    | G         | 27.5                    | 10.2 | 22 | 37 | 32   |
| C4ASNB(1)4100(2)F(3)    | 1              | 1,000 | 600 | 1,300    | F         | 37.5                    | 10.2 | 20 | 40 | 41.5 |
| C4ASNB(1)4150(2)J(3)    | 1.5            | 1,000 | 600 | 1,300    | J         | 37.5                    | 10.2 | 28 | 37 | 42.5 |
| C4ASNB(1)4200(2)L(3)    | 2              | 1,000 | 600 | 1,300    | L         | 37.5                    | 20.3 | 30 | 45 | 42   |
| C4ASNB(1)4220(2)L(3)    | 2.2            | 1,000 | 600 | 1,300    | L         | 37.5                    | 20.3 | 30 | 45 | 42   |
| C4ASNB(1)4300(2)M(3)    | 3              | 1,000 | 600 | 1,300    | M         | 52.5                    | 20.3 | 30 | 45 | 57.5 |
| C4ASNB(1)4400(2)N(3)    | 4              | 1,000 | 600 | 1,300    | N         | 52.5                    | 20.3 | 35 | 50 | 57.5 |
| C4ASNB(1)4470(2)N(3)    | 4.7            | 1,000 | 600 | 1,300    | N         | 52.5                    | 20.3 | 35 | 50 | 57.5 |
| C4ASPB(1)3100(2)A(3)    | 0.1            | 1,200 | 630 | 1,600    | A         | 27.5                    | -    | 10 | 20 | 32   |
| C4ASPB(1)3150(2)B(3)    | 0.15           | 1,200 | 630 | 1,600    | B         | 27.5                    | -    | 13 | 22 | 32   |
| C4ASPB(1)3220(2)C(3)    | 0.22           | 1,200 | 630 | 1,600    | C         | 27.5                    | 5.1  | 14 | 28 | 32   |
| C4ASPB(1)3330(2)E(3)    | 0.33           | 1,200 | 630 | 1,600    | E         | 27.5                    | 5.1  | 18 | 33 | 32   |
| C4ASPB(1)3470(2)G(3)    | 0.47           | 1,200 | 630 | 1,600    | G         | 27.5                    | 10.2 | 22 | 37 | 32   |
| C4ASPB(1)3680(2)F(3)    | 0.68           | 1,200 | 630 | 1,600    | F         | 37.5                    | 10.2 | 20 | 40 | 41.5 |
| C4ASPB(1)4100(2)F(3)    | 1              | 1,200 | 630 | 1,600    | F         | 37.5                    | 10.2 | 20 | 40 | 41.5 |
| C4ASPB(1)4120(2)J(3)    | 1.2            | 1,200 | 630 | 1,600    | J         | 37.5                    | 10.2 | 28 | 37 | 42.5 |
| C4ASPB(1)4200(2)M(3)    | 2              | 1,200 | 630 | 1,600    | M         | 52.5                    | 20.3 | 30 | 45 | 57.5 |
| C4ASPB(1)4220(2)M(3)    | 2.2            | 1,200 | 630 | 1,600    | M         | 52.5                    | 20.3 | 30 | 45 | 57.5 |
| C4ASPB(1)4250(2)M(3)    | 2.5            | 1,200 | 630 | 1,600    | M         | 52.5                    | 20.3 | 30 | 45 | 57.5 |
| C4ASPB(1)4300(2)N(3)    | 3              | 1,200 | 630 | 1,600    | N         | 52.5                    | 20.3 | 35 | 50 | 57.5 |
| C4ASPB(1)4350(2)N(3)    | 3.5            | 1,200 | 630 | 1,600    | N         | 52.5                    | 20.3 | 35 | 50 | 57.5 |
| C4ASWBU2330(2)A(3)      | 0.033          | 2,000 | 700 | 2,400    | A         | 27.5                    | -    | 10 | 20 | 32   |
| C4ASWBU2470(2)A(3)      | 0.047          | 2,000 | 700 | 2,400    | A         | 27.5                    | -    | 10 | 20 | 32   |
| C4ASWBU2680(2)B(3)      | 0.068          | 2,000 | 700 | 2,400    | B         | 27.5                    | -    | 13 | 22 | 32   |
| C4ASWB(1)3100(2)C(3)    | 0.1            | 2,000 | 700 | 2,400    | C         | 27.5                    | 5.1  | 14 | 28 | 32   |
| C4ASWB(1)3150(2)E(3)    | 0.15           | 2,000 | 700 | 2,400    | E         | 27.5                    | 5.1  | 18 | 33 | 32   |
| C4ASWB(1)3220(2)E(3)    | 0.22           | 2,000 | 700 | 2,400    | E         | 27.5                    | 5.1  | 18 | 33 | 32   |
| C4ASWB(1)3330(2)F(3)    | 0.33           | 2,000 | 700 | 2,400    | F         | 37.5                    | 10.2 | 20 | 40 | 41.5 |
| C4ASWB(1)3680(2)H(3)    | 0.68           | 2,000 | 700 | 2,400    | H         | 37.5                    | 10.2 | 24 | 44 | 41.5 |
| C4ASWB(1)4100(2)M(3)    | 1              | 2,000 | 700 | 2,400    | M         | 52.5                    | 20.3 | 30 | 45 | 57.5 |
| C4ASWB(1)4150(2)N(3)    | 1.5            | 2,000 | 700 | 2,400    | N         | 52.5                    | 20.3 | 35 | 50 | 57.5 |
| C4ASYBU2220(2)A(3)      | 0.022          | 3,000 | 750 | 3,500    | A         | 27.5                    | -    | 10 | 20 | 32   |
| C4ASYBU2330(2)B(3)      | 0.033          | 3,000 | 750 | 3,500    | B         | 27.5                    | -    | 13 | 22 | 32   |
| C4ASYB(1)2470(2)C(3)    | 0.047          | 3,000 | 750 | 3,500    | C         | 27.5                    | 5.1  | 14 | 28 | 32   |
| C4ASYB(1)2680(2)C(3)    | 0.068          | 3,000 | 750 | 3,500    | C         | 27.5                    | 5.1  | 14 | 28 | 32   |
| C4ASYB(1)3100(2)E(3)    | 0.1            | 3,000 | 750 | 3,500    | E         | 27.5                    | 5.1  | 18 | 33 | 32   |
| C4ASYB(1)3150(2)G(3)    | 0.15           | 3,000 | 750 | 3,500    | G         | 27.5                    | 10.2 | 22 | 37 | 32   |
| C4ASYB(1)3220(2)F(3)    | 0.22           | 3,000 | 750 | 3,500    | F         | 37.5                    | 10.2 | 20 | 40 | 41.5 |
| C4ASYB(1)3330(2)H(3)    | 0.33           | 3,000 | 750 | 3,500    | H         | 37.5                    | 10.2 | 24 | 44 | 41.5 |
| C4ASYB(1)3470(2)M(3)    | 0.47           | 3,000 | 750 | 3,500    | M         | 52.5                    | 20.3 | 30 | 45 | 57.5 |
| C4ASYB(1)3820(2)N(3)    | 0.82           | 3,000 | 750 | 3,500    | N         | 52.5                    | 20.3 | 35 | 50 | 57.5 |
| Part Number             | Cap Value (µF) | VDC   | VAC | Peak VDC | Size Code | S                       | S1   | T  | H  | L    |
| Maximum Dimensions (mm) |                |       |     |          |           |                         |      |    |    |      |

(1) U = 2 leads, W = 4 leads

(2) Lead Diameter: A1 = 0.8, A3 = 1.2

(3) K = ±10%, J = ±5%

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

| Part Number          | Ripple Current   |       |         | Peak Current | ESR (Maximum) |         |         | dV/dt (V/μs) | Packaging Quantity |         |
|----------------------|------------------|-------|---------|--------------|---------------|---------|---------|--------------|--------------------|---------|
|                      | 100 kHz 70°C (A) |       |         |              | 100 kHz (mΩ)  |         |         |              |                    |         |
|                      | 2 wires          |       | 4 wires |              | (A)           | 2 wires |         |              |                    | 4 wires |
|                      | F=0.8            | F=1.2 | F=1.2   |              |               | F=0.8   | F=1.2   |              |                    | F=1.2   |
| C4ASMBU3150(2)A(3)   | 8                | 8     | -       | 185          | 14.3          | 13.6    | -       | 1,232        | 288                |         |
| C4ASMBU3220(2)B(3)   | 9                | 10    | -       | 271          | 10.2          | 9.5     | -       | 1,232        | 234                |         |
| C4ASMB(1)3330(2)C(3) | 9                | 13    | 14      | 407          | 7.6           | 6.9     | 6       | 1,232        | 96                 |         |
| C4ASMB(1)3470(2)E(3) | 9                | 14    | 19      | 579          | 6.2           | 5.3     | 4.3     | 1,232        | 80                 |         |
| C4ASMB(1)3680(2)G(3) | 9                | 14    | 25      | 838          | 5.2           | 4.2     | 3.1     | 1,232        | 64                 |         |
| C4ASMB(1)4100(2)F(3) | 9                | 14    | 22      | 758          | 6.2           | 5.2     | 4.1     | 758          | 58                 |         |
| C4ASMB(1)4200(2)H(3) | 9                | 14    | 29      | 1,516        | 4.6           | 3.5     | 2.3     | 758          | 44                 |         |
| C4ASMB(1)4300(2)M(3) | 9                | 14    | 29      | 1,407        | 5.6           | 4.5     | 3.2     | 469          | 27                 |         |
| C4ASMB(1)4400(2)M(3) | 9                | 14    | 29      | 1,876        | 4.9           | 3.8     | 2.5     | 469          | 27                 |         |
| C4ASMB(1)4500(2)N(3) | 9                | 14    | 29      | 2,345        | 4.7           | 3.5     | 2.1     | 469          | 23                 |         |
| C4ASNB(1)3150(2)A(3) | 8                | 8     | -       | 202          | 13.3          | 12.7    | -       | 1,344        | 288                |         |
| C4ASNB(1)3220(2)B(3) | 9                | 11    | 11      | 296          | 9.7           | 9       | 8.3     | 1,344        | 234                |         |
| C4ASNB(1)3330(2)C(3) | 9                | 14    | 15      | 444          | 7.3           | 6.5     | 5.6     | 1,344        | 96                 |         |
| C4ASNB(1)3470(2)E(3) | 9                | 14    | 20      | 632          | 6             | 5.1     | 4.1     | 1,344        | 80                 |         |
| C4ASNB(1)3680(2)G(3) | 9                | 14    | 25      | 914          | 5             | 4       | 3       | 1,344        | 64                 |         |
| C4ASNB(1)4100(2)F(3) | 9                | 14    | 22      | 827          | 5.9           | 5       | 3.9     | 827          | 58                 |         |
| C4ASNB(1)4150(2)J(3) | 9                | 14    | 29      | 1,241        | 4.7           | 3.8     | 2.7     | 827          | 36                 |         |
| C4ASNB(1)4200(2)L(3) | 9                | 14    | 29      | 1,654        | 4.5           | 3.4     | 2.2     | 827          | 36                 |         |
| C4ASNB(1)4220(2)L(3) | 9                | 14    | 29      | 1,819        | 4.4           | 3.3     | 2       | 827          | 36                 |         |
| C4ASNB(1)4300(2)M(3) | 9                | 14    | 29      | 1,536        | 5.4           | 4.3     | 3       | 512          | 27                 |         |
| C4ASNB(1)4400(2)N(3) | 9                | 14    | 29      | 2,048        | 5             | 3.8     | 2.4     | 512          | 23                 |         |
| C4ASNB(1)4470(2)N(3) | 9                | 14    | 29      | 2,406        | 4.7           | 3.5     | 2.1     | 512          | 23                 |         |
| C4ASPB(1)3100(2)A(3) | 7                | 7     | -       | 157          | 17.4          | 16.8    | -       | 1,568        | 288                |         |
| C4ASPB(1)3150(2)B(3) | 9                | 10    | -       | 235          | 12.2          | 11.6    | -       | 1,568        | 234                |         |
| C4ASPB(1)3220(2)C(3) | 9                | 12    | 13      | 345          | 9.2           | 8.4     | 7.5     | 1,568        | 96                 |         |
| C4ASPB(1)3330(2)E(3) | 9                | 14    | 18      | 517          | 7             | 6.1     | 5.1     | 1,568        | 80                 |         |
| C4ASPB(1)3470(2)G(3) | 9                | 14    | 23      | 737          | 5.8           | 4.8     | 3.7     | 1,568        | 64                 |         |
| C4ASPB(1)3680(2)F(3) | 9                | 14    | 20      | 656          | 7             | 6       | 4.9     | 965          | 58                 |         |
| C4ASPB(1)4100(2)F(3) | 9                | 14    | 26      | 965          | 5.6           | 4.6     | 3.5     | 965          | 58                 |         |
| C4ASPB(1)4120(2)J(3) | 9                | 14    | 28      | 1,158        | 5             | 4       | 2.9     | 965          | 36                 |         |
| C4ASPB(1)4200(2)M(3) | 9                | 14    | 28      | 1,196        | 6.2           | 5       | 3.8     | 598          | 27                 |         |
| C4ASPB(1)4220(2)M(3) | 9                | 14    | 29      | 1,316        | 5.9           | 4.7     | 3.5     | 598          | 27                 |         |
| C4ASPB(1)4250(2)M(3) | 9                | 14    | 29      | 1,495        | 5.5           | 4.4     | 3.1     | 598          | 27                 |         |
| C4ASPB(1)4300(2)N(3) | 9                | 14    | 29      | 1,794        | 5.3           | 4.1     | 2.7     | 598          | 23                 |         |
| C4ASPB(1)4350(2)N(3) | 9                | 14    | 29      | 2,093        | 5             | 3.7     | 2.4     | 598          | 23                 |         |
| C4ASWBU2330(2)A(3)   | 5                | 5     | -       | 74           | 40            | 39.3    | -       | 2,240        | 288                |         |
| C4ASWBU2470(2)A(3)   | 6                | 6     | -       | 105          | 28.5          | 27.9    | -       | 2,240        | 288                |         |
| C4ASWBU2680(2)B(3)   | 8                | 8     | -       | 152          | 20.3          | 19.6    | -       | 2,240        | 234                |         |
| C4ASWB(1)3100(2)C(3) | 9                | 10    | 11      | 224          | 14.6          | 13.8    | 13      | 2,240        | 96                 |         |
| C4ASWB(1)3150(2)E(3) | 9                | 14    | 15      | 336          | 10.7          | 9.8     | 8.8     | 2,240        | 80                 |         |
| C4ASWB(1)3220(2)E(3) | 9                | 14    | 17      | 493          | 8             | 7.1     | 6.1     | 2,240        | 80                 |         |
| C4ASWB(1)3330(2)F(3) | 9                | 14    | 16      | 455          | 9.4           | 8.5     | 7.4     | 1,380        | 54                 |         |
| C4ASWB(1)3680(2)H(3) | 9                | 14    | 25      | 937          | 6.1           | 5       | 3.8     | 1,380        | 44                 |         |
| C4ASWB(1)4100(2)M(3) | 9                | 14    | 24      | 850          | 7.7           | 6.6     | 5.3     | 850          | 27                 |         |
| C4ASWB(1)4150(2)N(3) | 9                | 14    | 29      | 1,280        | 6.3           | 5.1     | 3.7     | 850          | 23                 |         |
| C4ASYBU2220(2)A(3)   | 5                | 5     | -       | 74           | 47.9          | 47.3    | -       | 3,360        | 288                |         |
| C4ASYBU2330(2)B(3)   | 7                | 7     | -       | 111          | 32.6          | 31.9    | -       | 3,360        | 234                |         |
| C4ASYB(1)2470(2)C(3) | 9                | 9     | 9       | 158          | 23.7          | 22.9    | 22      | 3,360        | 96                 |         |
| C4ASYB(1)2680(2)C(3) | 9                | 10    | 11      | 228          | 17            | 16.2    | 15.3    | 3,360        | 96                 |         |
| C4ASYB(1)3100(2)E(3) | 9                | 13    | 15      | 336          | 12.4          | 11.5    | 10.5    | 3,360        | 80                 |         |
| C4ASYB(1)3150(2)G(3) | 9                | 14    | 19      | 504          | 9.2           | 8.2     | 7.2     | 3,360        | 64                 |         |
| C4ASYB(1)3220(2)F(3) | 9                | 14    | 18      | 455          | 10.5          | 9.4     | 8.2     | 2,070        | 58                 |         |
| C4ASYB(1)3330(2)H(3) | 9                | 14    | 21      | 682          | 7.9           | 6.8     | 5.6     | 2,070        | 44                 |         |
| C4ASYB(1)3470(2)M(3) | 9                | 14    | 20      | 601          | 10.1          | 9       | 7.7     | 1,280        | 27                 |         |
| C4ASYB(1)3820(2)N(3) | 9                | 14    | 27      | 1,050        | 7.2           | 6       | 4.6     | 1,280        | 23                 |         |
| Part Number          | F=0.8            | F=1.2 | F=1.2   | (A)          | F=0.8         | F=1.2   | F=1.2   | dV/dt (V/μs) | Packaging Quantity |         |
|                      | 2 wires          |       | 4 wires | Peak Current | 2 wires       |         | 4 wires |              |                    |         |
|                      | Ripple Current   |       |         |              | ESR (Maximum) |         |         |              |                    |         |

(1) U = 2 leads, W = 4 leads

(2) Lead Diameter: A1 = 0.8, A3 = 1.2

(3) K = ±10%, J = ±5%

## Materials & Environment

The selection of raw materials that KEMET uses for the production of its electronic components is the result of extensive experience. KEMET directs specific attention toward environmental protection. KEMET selects its suppliers according to ISO 9001 standards and performs statistical analyses on raw materials before acceptance for use in manufacturing our electronic components. All materials are, to the best of KEMET's knowledge, non-toxic and free from cadmium; mercury; chrome and compounds; polychlorine triphenyl (PCB); bromide and chlorinedioxins bromurate clorurate; CFC and HCFC; and asbestos.

## Dissipation Factor

Dissipation factor is a complex function involved with capacitor inefficiency. The  $\tan \delta$  may vary up and down with increased temperature. For more information, refer to Performance Characteristics.

## Sealing

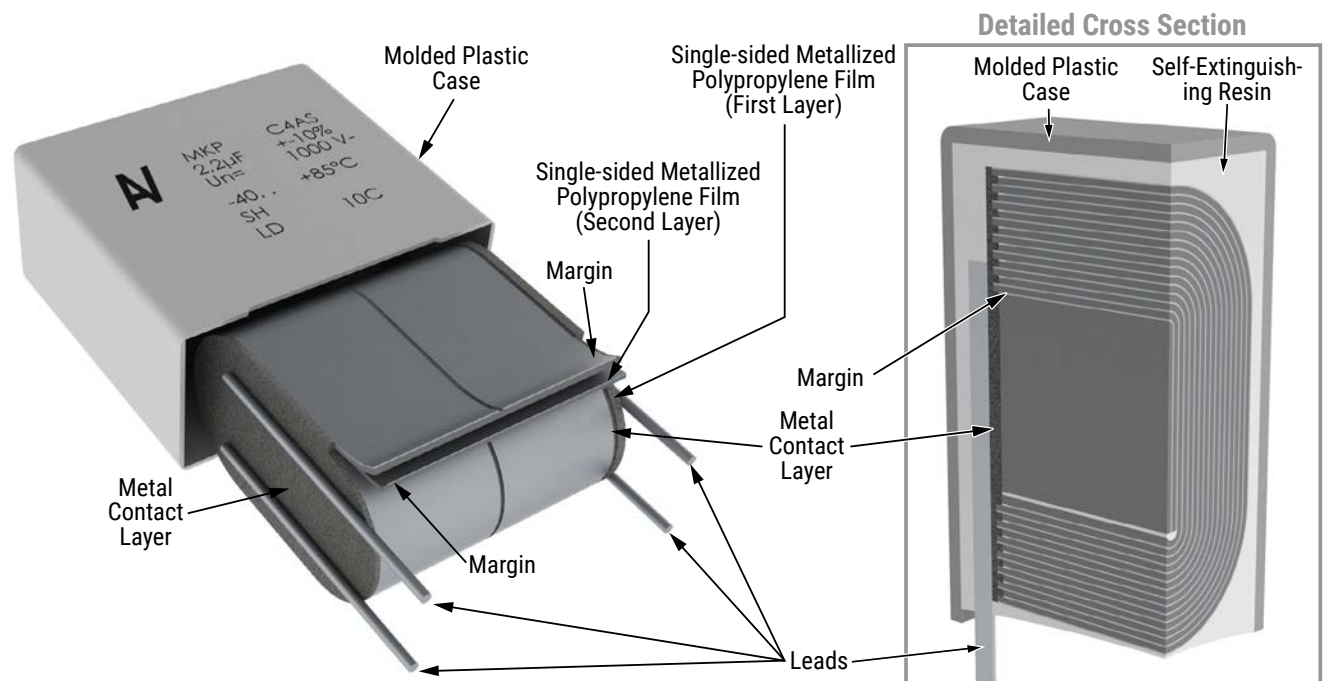
### Hermetically Sealed Capacitors

As the temperature increases, the pressure inside the capacitor increases. If the internal pressure is high enough, it can cause a breach in the capacitor. Such a breach can result in leakage, impregnation, filling fluid, or moisture susceptibility.

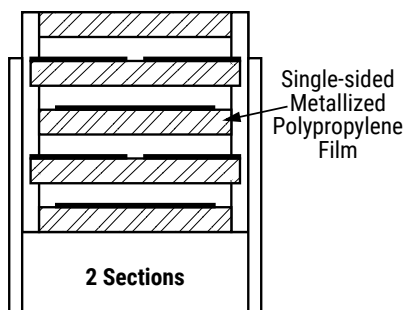
### Barometric Pressure

The altitude at which hermetically sealed capacitors are operated controls the capacitor's voltage rating. As the barometric pressure decreases, the susceptibility to terminal arc-over increases. Non-hermetic capacitors can be affected by internal stresses due to pressure changes. These effects can be in the form of capacitance changes, dielectric arc-over, and/or low insulation resistance. Altitude can also affect heat transfer. Heat that is generated in an operation cannot be dissipated properly, and high  $RI^2$  losses and eventual failure can result.

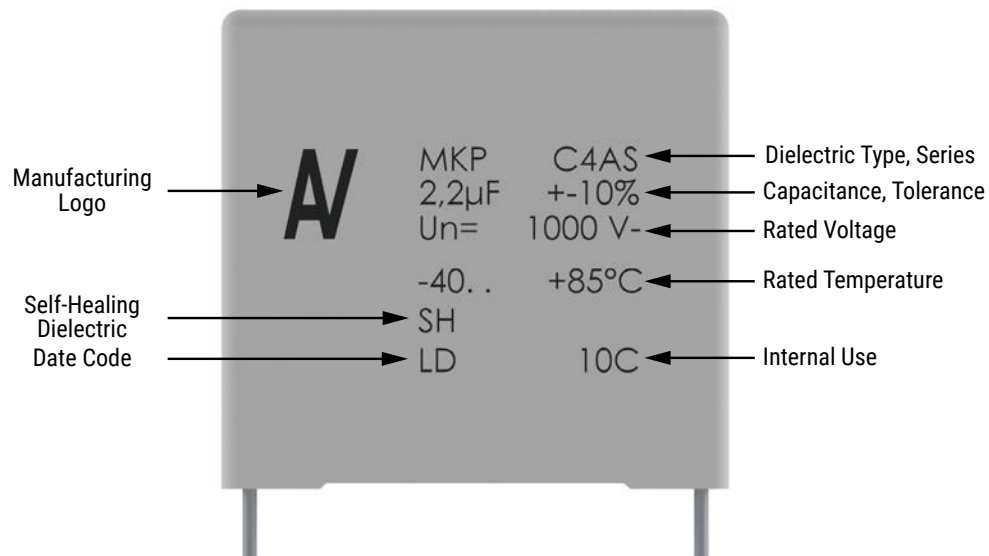
## Construction



## Winding Scheme



## Marking



**Manufacturing Date Code (IEC-60062)**

| Year | Code | Month     | Code |
|------|------|-----------|------|
| 2010 | A    | January   | 1    |
| 2011 | B    | February  | 2    |
| 2012 | C    | March     | 3    |
| 2013 | D    | April     | 4    |
| 2014 | E    | May       | 5    |
| 2015 | F    | June      | 6    |
| 2016 | H    | July      | 7    |
| 2017 | J    | August    | 8    |
| 2018 | K    | September | 9    |
| 2019 | L    | October   | 0    |
| 2020 | M    | November  | N    |
| 2021 | N    | December  | D    |
| 2022 | P    |           |      |
| 2023 | R    |           |      |
| 2024 | S    |           |      |
| 2025 | T    |           |      |
| 2026 | U    |           |      |
| 2027 | V    |           |      |
| 2028 | W    |           |      |
| 2029 | X    |           |      |
| 2030 | A    |           |      |



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