

Overview

The C4BT capacitor is a polypropylene metallized film capacitor with a rectangular, plastic box-type design filled with resin. I has a tinned brass lug direct IGBT mounting.

Applications

Typical applications include clamping, DC filtering, blocking, AC harmonic filtering, and energy storage.

Benefits

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

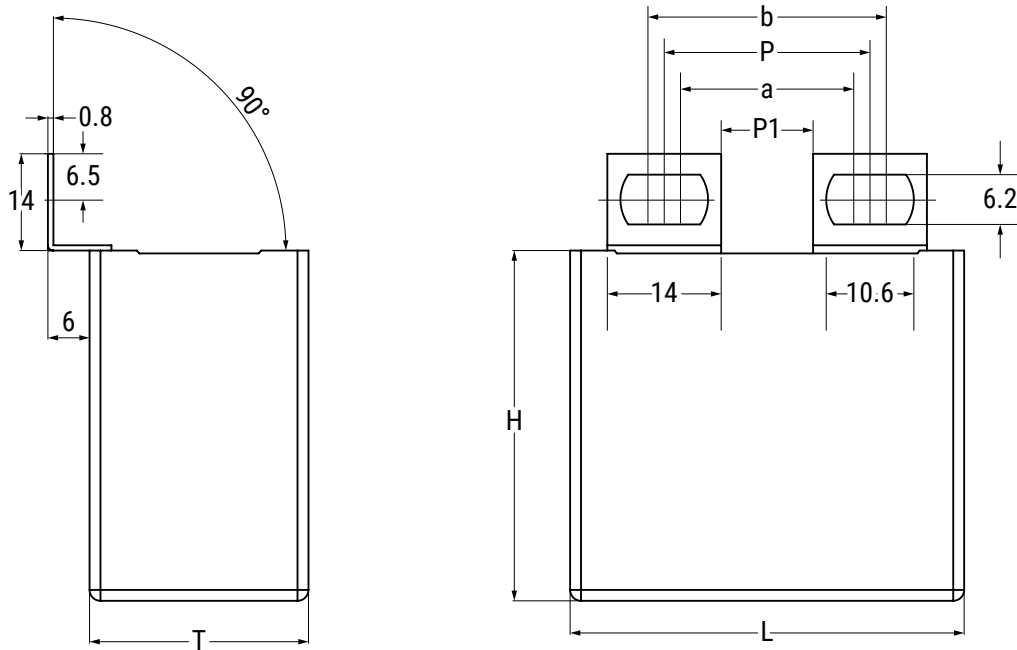


Part Number System

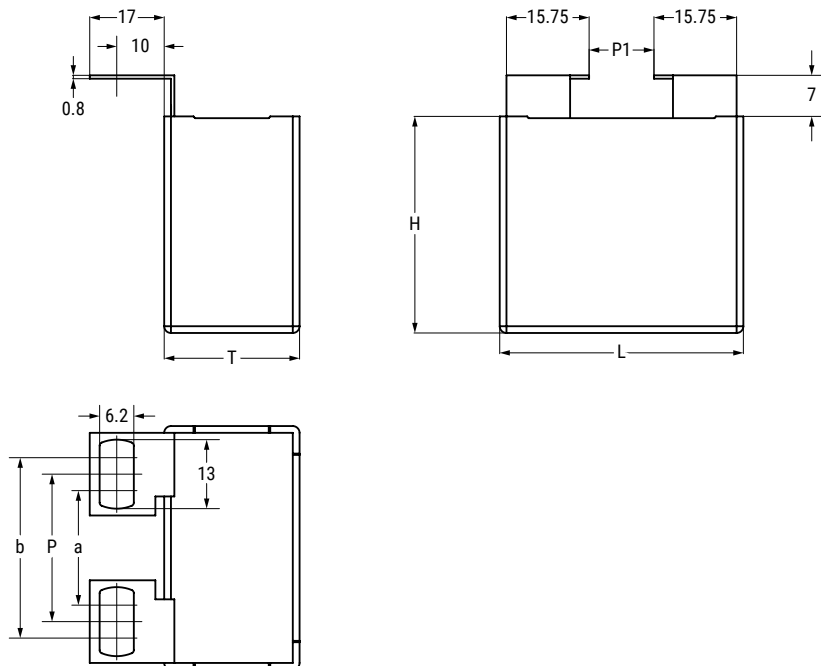
| C4                                         | BT                                                        | F                                                   | B                                                | X                  | 4330                                                                                                                        | Z             | E                                                                                                                                                                 | E                   | J                 |
|--------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------|
| Series                                     | Type                                                      | Rated Voltage (VDC)                                 | Case                                             | Lead Specification | Capacitance Code (pF)                                                                                                       | Internal Code | Termination Style                                                                                                                                                 | Size Code           | Tolerance         |
| C4 = MKP Capacitors for Power Applications | BT = Radial box with tab terminals, switching application | D = 250<br>F = 400<br>H = 600<br>J = 700<br>M = 850 | B = Plastic box with thermosetting resin sealing | X = Standard       | Digits 2-4 indicate the first three digits of the capacitance value. First digit indicates the number of zeros to be added. | Z = Standard  | A = Style A<br>B = Style B<br>D = Style D<br>E = Style E<br>F = Style F<br>G = Style G<br>H = Style H<br>M = Style M<br>T = Style T<br>W = Style W<br>X = Style X | See Dimension Table | J = 5%<br>K = 10% |

## Dimensions – Millimeters

### Style A

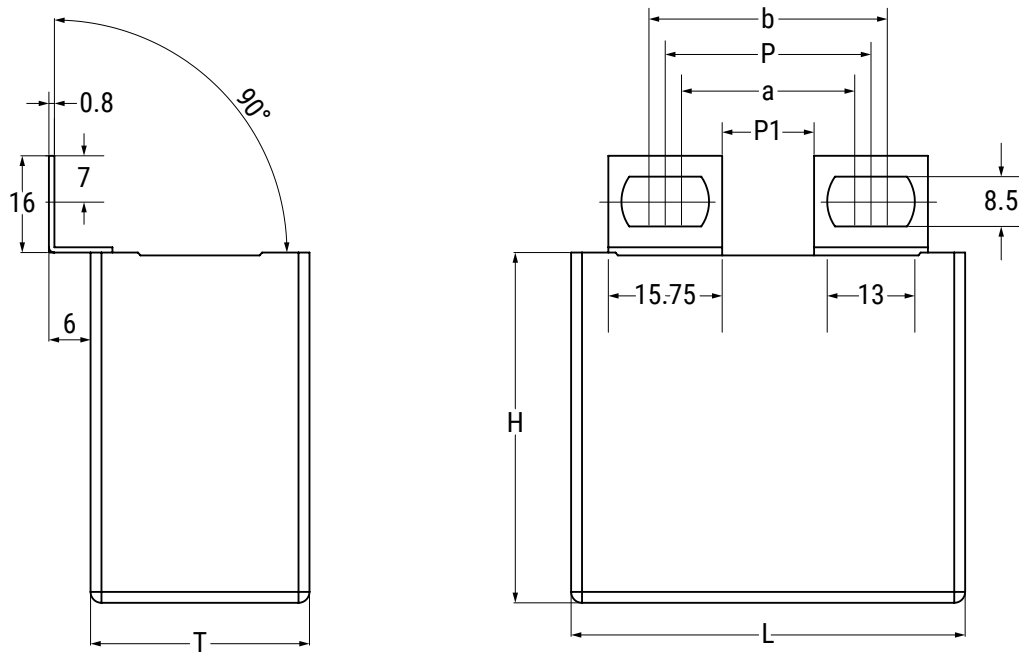


### Style B

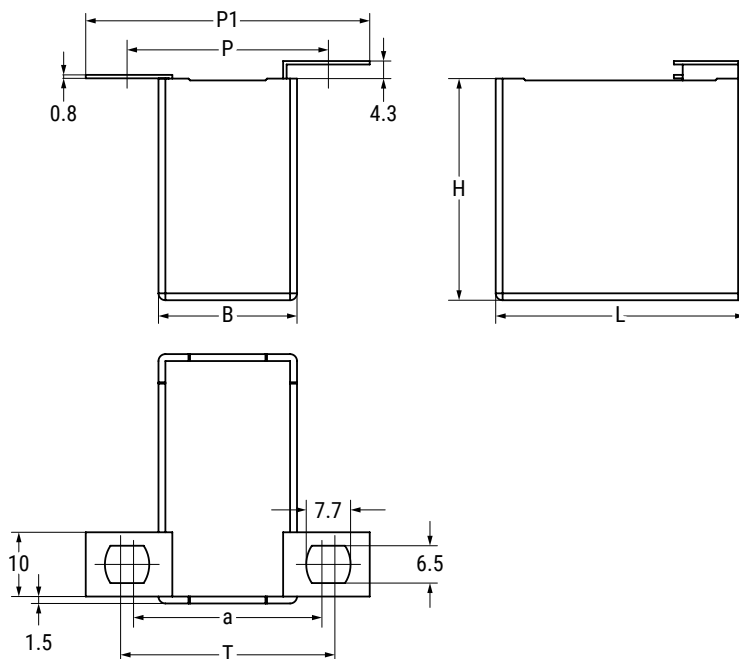


## Dimensions – Millimeters cont.

### Style D

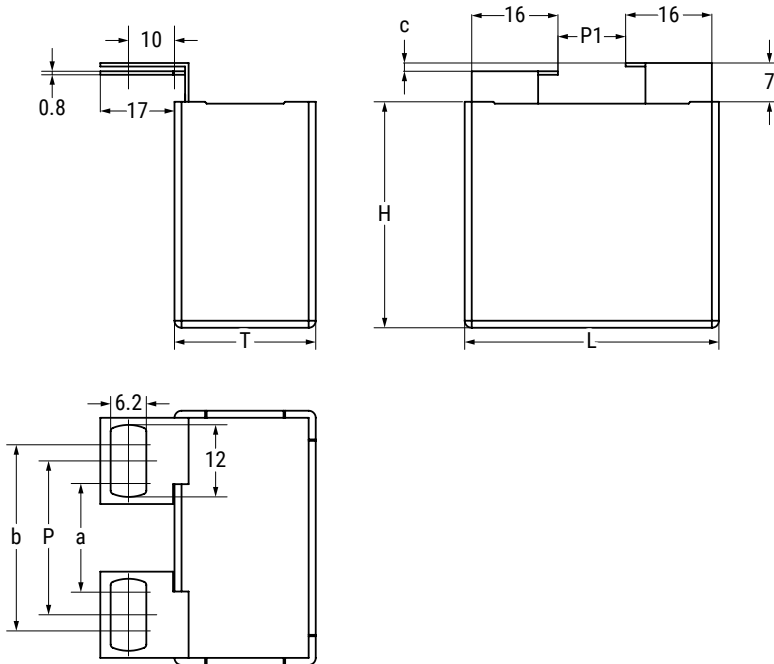


### Style E

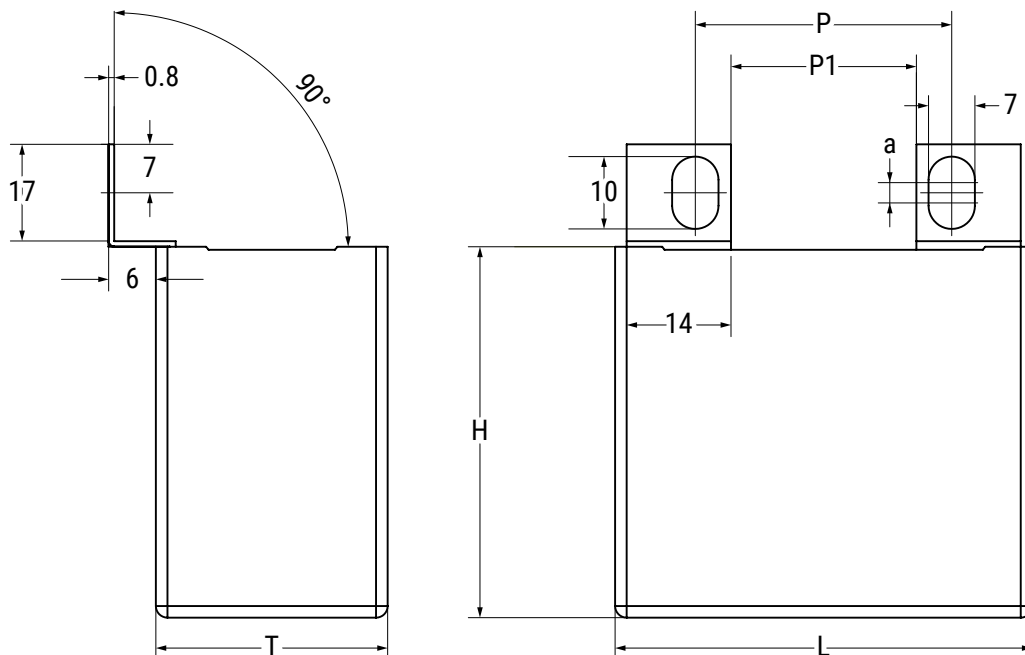


## Dimensions – Millimeters cont.

### Style F

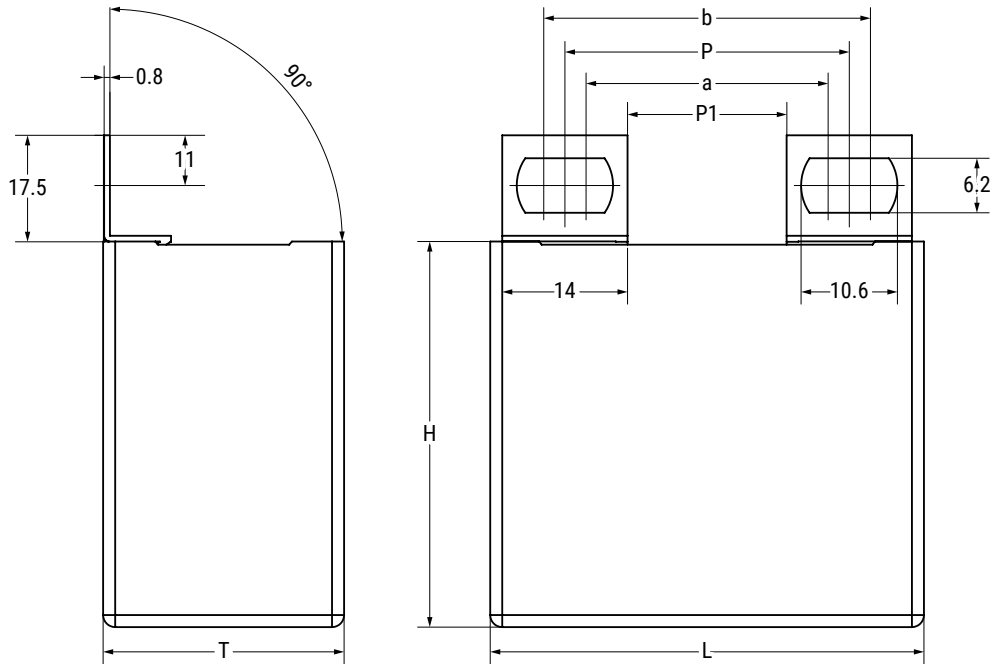


### Style G

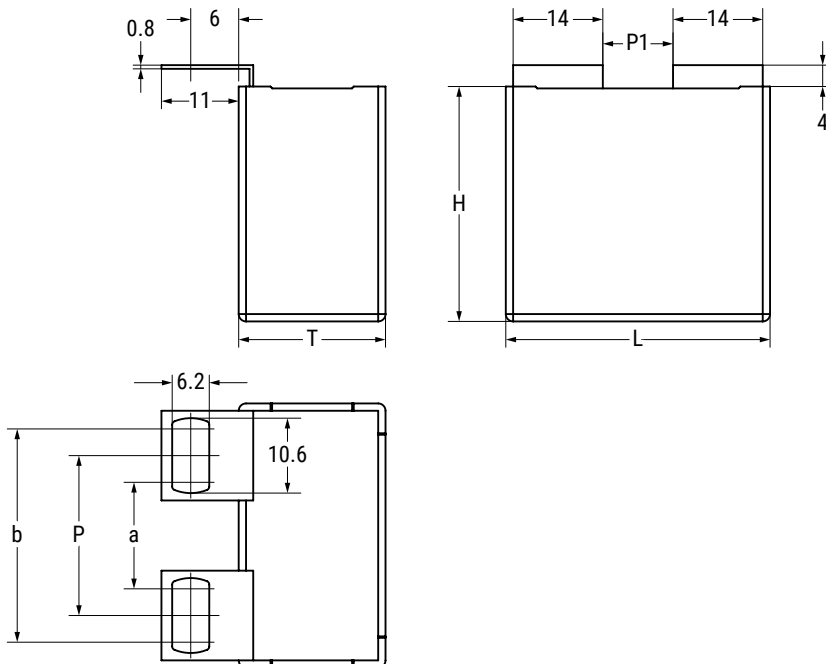


## Dimensions – Millimeters cont.

### Style H

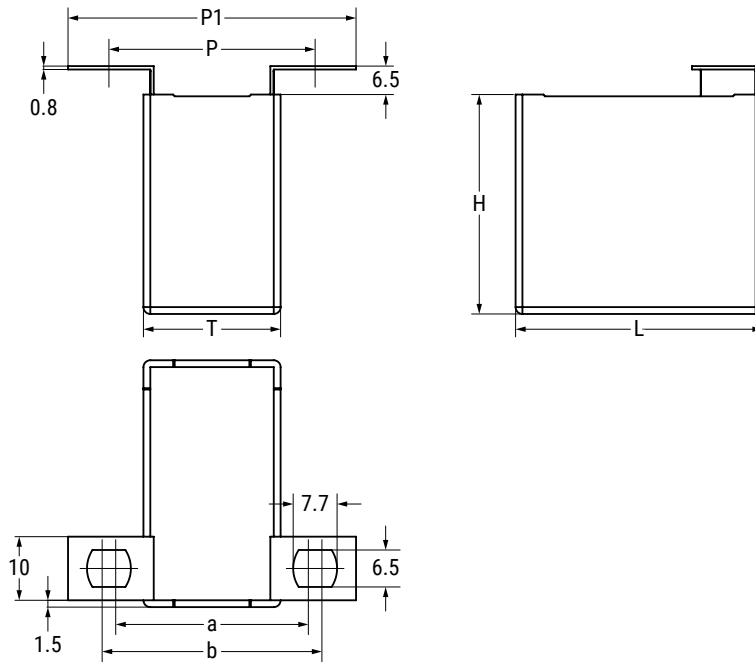


### Style M

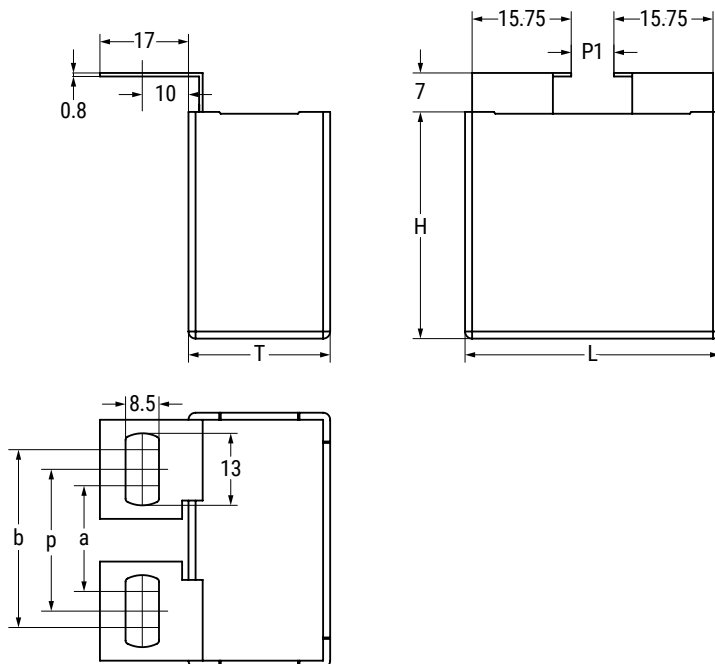


## Dimensions – Millimeters cont.

### Style T

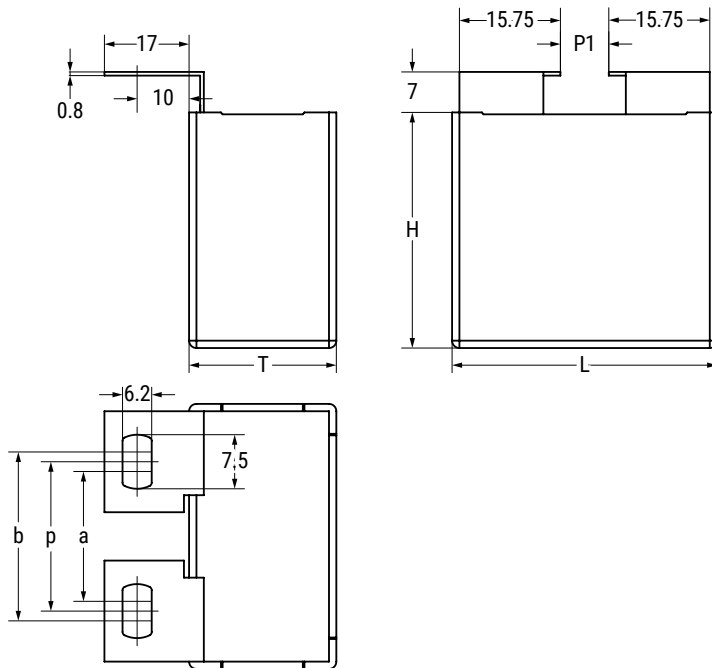


### Style W



## Dimensions – Millimeters cont.

### Style X



| Size Code | T       |           | H       |           | L       |           |
|-----------|---------|-----------|---------|-----------|---------|-----------|
|           | Nominal | Tolerance | Nominal | Tolerance | Nominal | Tolerance |
| F         | 20      | +0.4/-0.7 | 40      | +0.2/-0.7 | 41.5    | +1.5/-0.7 |
| H         | 24      | +0.4/-0.7 | 44      | +0.2/-0.7 | 41.5    | +1.5/-0.7 |
| J         | 28      | +0.4/-0.7 | 37      | +0.2/-0.7 | 42.5    | +1.5/-0.7 |
| L         | 30      | +0.4/-0.7 | 45      | +0.2/-0.7 | 42.0    | +1.5/-0.7 |
| M         | 30      | +0.5/-0.7 | 45      | +0.3/-0.7 | 57.5    | +1.2/-0.7 |
| N         | 35      | +0.5/-0.7 | 50      | +0.3/-0.7 | 57.5    | +1.2/-0.7 |

| Style   | Size Code  | P    | P1      | a    | b    |
|---------|------------|------|---------|------|------|
|         |            | ±0.2 | Nominal | ±0.2 | ±0.2 |
| A, H, M | F, H, J, L | 25.5 | 10.5    | 21.5 | 29.5 |
|         | M, N       | 41.0 | 25.0    | 37.0 | 45.0 |
| B, F    | F, H, J, L | 22.0 | 6.0     | 16.0 | 28.0 |
|         | M - N      | 37.0 | 21.0    | 31.0 | 43.0 |
| G       | F, H, J, L | 22.0 | 10.5    | 4.0  | -    |
|         | M - N      | 37.0 | 25.0    | 4.0  | -    |
| D       | F, J, H, L | 22.0 | 6.0     | 18.0 | 26.0 |
|         | M, N       | 37.0 | 21.0    | 33.0 | 41.0 |
| W       | F, J, H, L | 22.0 | 6.0     | 17.0 | 27.0 |
|         | M, N       | 37.0 | 21.0    | 32.0 | 42.0 |
| X       | F, J, H, L | 22.0 | 6.0     | 20.5 | 23.5 |
|         | M, N       | 37.0 | 21.0    | 35.5 | 38.5 |
| E, T    | F          | 33.0 | 46.0    | 31.0 | 35.0 |

## 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 Code (15th Digit )                               | J = ±5% , K = ±10%                                                                                                    |
| Peak Non-Repetitive Maximum Current                                    | $I_{PKR} \times 1.5$                                                                                                  |
| Peak Non-Repetitive Maximum Current                                    | $I_{PKR} \times 1.5$                                                                                                  |
| Test Voltage Terminal to Terminal $V_{TT}$                             | 2 $V_n$ for 10 seconds at +25°C                                                                                       |
| 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           |
| IEC Climatic Category                                                  | 40/85/56 according to IEC 68-1                                                                                        |
| Capacitance Deviation in Operating Temperature Range of -40°C to +85°C | ±2% maximum on capacitance value measured at +25°C                                                                    |
| Change of Capacitance vs. Operating Time                               | -3% after 100,000 hours at $V_n$ or 30,000 hours at $V_{rms}$                                                         |
| Case Components                                                        | Solvent resistant plastic case with epoxy and polyurethanic resin sealing, Flame retardant execution (UL Class 94V-0) |
| Terminals                                                              | Tinned copper wires                                                                                                   |
| Installation                                                           | Any position                                                                                                          |
| Life Expectancy                                                        | $\geq 100,000$ hours at $V_n$ or 30,000 hours at $V_{rms}$                                                            |
| Failure Quota                                                          | 300/10 <sup>9</sup> components per hour                                                                               |



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

| Cap Value (µF)     | VDC | VAC | Peak VDC | Size Code | Maximum Dimensions (mm) |    |      | Ripple Current<br>100 kHz<br>70°C (A) | Peak Current<br>(A) | ESR (max)<br>100 kHz<br>(mΩ) | ESL<br>(nH) | dV/dt<br>(V/µs) | Packaging Quantity | Part Number       |
|--------------------|-----|-----|----------|-----------|-------------------------|----|------|---------------------------------------|---------------------|------------------------------|-------------|-----------------|--------------------|-------------------|
|                    |     |     |          |           | T                       | H  | L    |                                       |                     |                              |             |                 |                    |                   |
| 10                 | 250 | 160 | 400      | F         | 20                      | 40 | 41.5 | 27                                    | 402                 | 2.6                          | 41          | 40              | 52                 | C4BTDBX5100Z(1)FJ |
| 10                 | 250 | 160 | 400      | F         | 20                      | 40 | 41.5 | 27                                    | 402                 | 2.6                          | 41          | 40              | 48                 | C4BTDBX5100Z(2)FJ |
| 10                 | 250 | 160 | 400      | F         | 20                      | 40 | 41.5 | 27                                    | 402                 | 2.6                          | 41          | 40              | 40                 | C4BTDBX5100Z(4)FJ |
| 15                 | 250 | 160 | 400      | F         | 20                      | 40 | 41.5 | 32                                    | 602                 | 1.8                          | 41          | 40              | 52                 | C4BTDBX5150Z(1)FJ |
| 15                 | 250 | 160 | 400      | F         | 20                      | 40 | 41.5 | 32                                    | 602                 | 1.8                          | 41          | 40              | 48                 | C4BTDBX5150Z(2)FJ |
| 15                 | 250 | 160 | 400      | F         | 20                      | 40 | 41.5 | 32                                    | 602                 | 1.8                          | 41          | 40              | 40                 | C4BTDBX5150Z(4)FJ |
| 20                 | 250 | 160 | 400      | J         | 28                      | 37 | 42.5 | 39                                    | 803                 | 1.4                          | 36          | 40              | 36                 | C4BTDBX5200Z(3)JJ |
| 25                 | 250 | 160 | 400      | H         | 24                      | 44 | 41.5 | 43                                    | 1004                | 1.2                          | 43          | 40              | 44                 | C4BTDBX5250Z(1)HJ |
| 25                 | 250 | 160 | 400      | H         | 24                      | 44 | 41.5 | 43                                    | 1004                | 1.2                          | 43          | 40              | 40                 | C4BTDBX5250Z(2)HJ |
| 30                 | 250 | 160 | 400      | L         | 30                      | 45 | 42   | 50                                    | 1205                | 1                            | 43          | 40              | 32                 | C4BTDBX5300Z(3)LJ |
| 40                 | 250 | 160 | 400      | M         | 30                      | 45 | 57.5 | 46                                    | 1082                | 1.5                          | 45          | 27              | 24                 | C4BTDBX5400Z(3)MJ |
| 50                 | 250 | 160 | 400      | N         | 35                      | 50 | 57.5 | 54                                    | 1353                | 1.2                          | 48          | 27              | 21                 | C4BTDBX5500Z(3)NJ |
| 60                 | 250 | 160 | 400      | N         | 35                      | 50 | 57.5 | 58                                    | 1624                | 1.1                          | 48          | 27              | 21                 | C4BTDBX5600Z(3)NJ |
|                    |     |     |          |           |                         |    |      |                                       |                     |                              |             |                 |                    |                   |
| 4                  | 400 | 250 | 600      | F         | 20                      | 40 | 41.5 | 19                                    | 201                 | 4.9                          | 41          | 50              | 52                 | C4BTFBX4400Z(1)FJ |
| 4                  | 400 | 250 | 600      | F         | 20                      | 40 | 41.5 | 19                                    | 201                 | 4.9                          | 41          | 50              | 48                 | C4BTFBX4400Z(2)FJ |
| 4                  | 400 | 250 | 600      | F         | 20                      | 40 | 41.5 | 19                                    | 201                 | 4.9                          | 41          | 50              | 40                 | C4BTFBX4400Z(4)FJ |
| 5                  | 400 | 250 | 600      | F         | 20                      | 40 | 41.5 | 22                                    | 251                 | 4                            | 41          | 50              | 52                 | C4BTFBX4500Z(1)FJ |
| 5                  | 400 | 250 | 600      | F         | 20                      | 40 | 41.5 | 22                                    | 251                 | 4                            | 41          | 50              | 48                 | C4BTFBX4500Z(2)FJ |
| 5                  | 400 | 250 | 600      | F         | 20                      | 40 | 41.5 | 22                                    | 251                 | 4                            | 41          | 50              | 40                 | C4BTFBX4500Z(4)FJ |
| 6.8                | 400 | 250 | 600      | F         | 20                      | 40 | 41.5 | 25                                    | 341                 | 3                            | 41          | 50              | 52                 | C4BTFBX4680Z(1)FJ |
| 6.8                | 400 | 250 | 600      | F         | 20                      | 40 | 41.5 | 25                                    | 341                 | 3                            | 41          | 50              | 48                 | C4BTFBX4680Z(2)FJ |
| 6.8                | 400 | 250 | 600      | F         | 20                      | 40 | 41.5 | 25                                    | 341                 | 3                            | 41          | 50              | 40                 | C4BTFBX4680Z(4)FJ |
| 10                 | 400 | 250 | 600      | F         | 20                      | 40 | 41.5 | 30                                    | 502                 | 2.1                          | 41          | 50              | 52                 | C4BTFBX5100Z(1)FJ |
| 10                 | 400 | 250 | 600      | F         | 20                      | 40 | 41.5 | 30                                    | 502                 | 2.1                          | 41          | 50              | 48                 | C4BTFBX5100Z(2)FJ |
| 10                 | 400 | 250 | 600      | F         | 20                      | 40 | 41.5 | 30                                    | 502                 | 2.1                          | 41          | 50              | 40                 | C4BTFBX5100Z(4)FJ |
| 12.5               | 400 | 250 | 600      | J         | 28                      | 37 | 42.5 | 35                                    | 627                 | 1.7                          | 36          | 50              | 36                 | C4BTFBX5125Z(3)JJ |
| 15                 | 400 | 250 | 600      | J         | 28                      | 37 | 42.5 | 38                                    | 753                 | 1.5                          | 36          | 50              | 36                 | C4BTFBX5150Z(3)JJ |
| 20                 | 400 | 250 | 600      | L         | 30                      | 45 | 42   | 46                                    | 1004                | 1.2                          | 43          | 50              | 32                 | C4BTFBX5200Z(3)LJ |
| 25                 | 400 | 250 | 600      | M         | 30                      | 45 | 57.5 | 41                                    | 846                 | 1.8                          | 45          | 34              | 24                 | C4BTFBX5250Z(3)MJ |
| 30                 | 400 | 250 | 600      | M         | 30                      | 45 | 57.5 | 45                                    | 1015                | 1.6                          | 45          | 34              | 24                 | C4BTFBX5300Z(3)MJ |
| 35                 | 400 | 250 | 600      | N         | 35                      | 50 | 57.5 | 52                                    | 1184                | 1.4                          | 48          | 34              | 21                 | C4BTFBX5350Z(3)NJ |
| 40                 | 400 | 250 | 600      | N         | 35                      | 50 | 57.5 | 54                                    | 1353                | 1.2                          | 48          | 34              | 21                 | C4BTFBX5400Z(3)NJ |
|                    |     |     |          |           |                         |    |      |                                       |                     |                              |             |                 |                    |                   |
| 2.5                | 600 | 330 | 800      | F         | 20                      | 40 | 41.5 | 18                                    | 176                 | 5.7                          | 41          | 70              | 52                 | C4BTHBX4250Z(1)FJ |
| 2.5                | 600 | 330 | 800      | F         | 20                      | 40 | 41.5 | 18                                    | 176                 | 5.7                          | 41          | 70              | 48                 | C4BTHBX4250Z(2)FJ |
| 2.5                | 600 | 330 | 800      | F         | 20                      | 40 | 41.5 | 18                                    | 176                 | 5.7                          | 41          | 70              | 40                 | C4BTHBX4250Z(4)FJ |
| 3                  | 600 | 330 | 800      | F         | 20                      | 40 | 41.5 | 20                                    | 211                 | 4.8                          | 41          | 70              | 52                 | C4BTHBX4300Z(1)FJ |
| 3                  | 600 | 330 | 800      | F         | 20                      | 40 | 41.5 | 20                                    | 211                 | 4.8                          | 41          | 70              | 48                 | C4BTHBX4300Z(2)FJ |
| 3                  | 600 | 330 | 800      | F         | 20                      | 40 | 41.5 | 20                                    | 211                 | 4.8                          | 41          | 70              | 40                 | C4BTHBX4300Z(4)FJ |
| 4                  | 600 | 330 | 800      | F         | 20                      | 40 | 41.5 | 23                                    | 281                 | 3.6                          | 41          | 70              | 52                 | C4BTHBX4400Z(1)FJ |
| 4                  | 600 | 330 | 800      | F         | 20                      | 40 | 41.5 | 23                                    | 281                 | 3.6                          | 41          | 70              | 48                 | C4BTHBX4400Z(2)FJ |
| 4                  | 600 | 330 | 800      | F         | 20                      | 40 | 41.5 | 23                                    | 281                 | 3.6                          | 41          | 70              | 40                 | C4BTHBX4400Z(4)FJ |
| 5                  | 600 | 330 | 800      | F         | 20                      | 40 | 41.5 | 25                                    | 351                 | 2.9                          | 41          | 70              | 52                 | C4BTHBX4500Z(1)FJ |
| 5                  | 600 | 330 | 800      | F         | 20                      | 40 | 41.5 | 25                                    | 351                 | 2.9                          | 41          | 70              | 48                 | C4BTHBX4500Z(2)FJ |
| 5                  | 600 | 330 | 800      | F         | 20                      | 40 | 41.5 | 25                                    | 351                 | 2.9                          | 41          | 70              | 40                 | C4BTHBX4500Z(4)FJ |
| 6.8                | 600 | 330 | 800      | J         | 28                      | 37 | 42.5 | 31                                    | 478                 | 2.2                          | 41          | 70              | 36                 | C4BTHBX4680Z(3)JJ |
| 8                  | 600 | 330 | 800      | H         | 24                      | 44 | 41.5 | 34                                    | 562                 | 1.9                          | 43          | 70              | 44                 | C4BTHBX4800Z(1)HJ |
| 8                  | 600 | 330 | 800      | H         | 24                      | 44 | 41.5 | 34                                    | 562                 | 1.9                          | 43          | 70              | 40                 | C4BTHBX4800Z(2)HJ |
| 10                 | 600 | 330 | 800      | L         | 30                      | 45 | 42   | 40                                    | 703                 | 1.6                          | 43          | 70              | 32                 | C4BTHBX5100Z(3)LJ |
| 12.5               | 600 | 330 | 800      | M         | 30                      | 45 | 57.5 | 35                                    | 592                 | 2.5                          | 45          | 47              | 24                 | C4BTHBX5125Z(3)MJ |
| 15                 | 600 | 330 | 800      | M         | 30                      | 45 | 57.5 | 38                                    | 710                 | 2.1                          | 45          | 47              | 24                 | C4BTHBX5150Z(3)MJ |
| 20                 | 600 | 330 | 800      | N         | 35                      | 50 | 57.5 | 47                                    | 947                 | 1.7                          | 48          | 47              | 21                 | C4BTHBX5200Z(3)NJ |
| Cap Value          | VDC | VAC | Peak VDC | Size Code | T                       | H  | L    | Ripple Current                        | Peak Current        | ESR                          | ESL         | dV/dt (V/µs)    | Packaging Quantity | Part Number       |
| Maximum Dimensions |     |     |          |           |                         |    |      |                                       |                     |                              |             |                 |                    |                   |

(1) = Code letter for lug style: A, D, G, H or M

(2) = Code letter for lug style: B, E\*, F, W, or X; \* Style E is possible only for size code F

(3) = Code letter for lug style: A, B, D, F, G, H, M, W or X

(4) = Code letter for lug style: T

Capacitance tolerance standard is J, K tolerance upon request.

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

| Cap Value<br>(μF) | VDC | VAC | Peak VDC | Size Code | Maximum Dimensions (mm) |    |      | Ripple Current<br>100 kHz<br>70°C (A) | Peak Current<br>(A) | ESR (max)<br>100 kHz<br>(mΩ) | ESL<br>(nH) | dV/dt<br>(V/μs) | Packaging Quantity | Part Number       |
|-------------------|-----|-----|----------|-----------|-------------------------|----|------|---------------------------------------|---------------------|------------------------------|-------------|-----------------|--------------------|-------------------|
|                   |     |     |          |           | T                       | H  | L    |                                       |                     |                              |             |                 |                    |                   |
| 1.5               | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 15                                    | 120                 | 8.2                          | 41          | 80              | 52                 | C4BTJBX4150Z(1)FJ |
| 1.5               | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 15                                    | 120                 | 8.2                          | 41          | 80              | 48                 | C4BTJBX4150Z(2)FJ |
| 1.5               | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 15                                    | 120                 | 8.2                          | 41          | 80              | 40                 | C4BTJBX4150Z(4)FJ |
| 2                 | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 17                                    | 161                 | 6.2                          | 41          | 80              | 52                 | C4BTJBX4200Z(1)FJ |
| 2                 | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 17                                    | 161                 | 6.2                          | 41          | 80              | 48                 | C4BTJBX4200Z(2)FJ |
| 2                 | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 17                                    | 161                 | 6.2                          | 41          | 80              | 40                 | C4BTJBX4200Z(4)FJ |
| 2.2               | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 18                                    | 177                 | 5.7                          | 41          | 80              | 52                 | C4BTJBX4220Z(1)FJ |
| 2.2               | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 18                                    | 177                 | 5.7                          | 41          | 80              | 48                 | C4BTJBX4220Z(2)FJ |
| 2.2               | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 18                                    | 177                 | 5.7                          | 41          | 80              | 40                 | C4BTJBX4220Z(4)FJ |
| 3                 | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 21                                    | 241                 | 4.2                          | 41          | 80              | 52                 | C4BTJBX4300Z(1)FJ |
| 3                 | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 21                                    | 241                 | 4.2                          | 41          | 80              | 48                 | C4BTJBX4300Z(2)FJ |
| 3                 | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 21                                    | 241                 | 4.2                          | 41          | 80              | 40                 | C4BTJBX4300Z(4)FJ |
| 4                 | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 24                                    | 321                 | 3.2                          | 41          | 80              | 52                 | C4BTJBX4400Z(1)FJ |
| 4                 | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 24                                    | 321                 | 3.2                          | 41          | 80              | 48                 | C4BTJBX4400Z(2)FJ |
| 4                 | 700 | 400 | 1,000    | F         | 20                      | 40 | 41.5 | 24                                    | 321                 | 3.2                          | 41          | 80              | 40                 | C4BTJBX4400Z(4)FJ |
| 5                 | 700 | 400 | 1,000    | J         | 28                      | 37 | 42.5 | 29                                    | 402                 | 2.6                          | 36          | 80              | 36                 | C4BTJBX4500Z(3)JJ |
| 8                 | 700 | 400 | 1,000    | L         | 30                      | 45 | 42.0 | 38                                    | 642                 | 1.7                          | 43          | 80              | 32                 | C4BTJBX4800Z(3)LJ |
| 10                | 700 | 400 | 1,000    | M         | 30                      | 45 | 57.5 | 34                                    | 541                 | 2.7                          | 45          | 54              | 24                 | C4BTJBX5100Z(3)MJ |
| 15                | 700 | 400 | 1,000    | N         | 35                      | 50 | 57.5 | 44                                    | 812                 | 1.9                          | 48          | 54              | 21                 | C4BTJBX5150Z(3)NJ |
|                   |     |     |          |           |                         |    |      |                                       |                     |                              |             |                 |                    |                   |
| 1                 | 850 | 450 | 1,200    | F         | 20                      | 40 | 41.5 | 14                                    | 100                 | 9.9                          | 41          | 100             | 52                 | C4BTMBX4100Z(1)FJ |
| 1                 | 850 | 450 | 1,200    | F         | 20                      | 40 | 41.5 | 14                                    | 100                 | 9.9                          | 41          | 100             | 48                 | C4BTMBX4100Z(2)FJ |
| 1                 | 850 | 450 | 1,200    | F         | 20                      | 40 | 41.5 | 14                                    | 100                 | 9.9                          | 41          | 100             | 40                 | C4BTMBX4100Z(4)FJ |
| 1.5               | 850 | 450 | 1,200    | F         | 20                      | 40 | 41.5 | 17                                    | 151                 | 6.7                          | 41          | 100             | 52                 | C4BTMBX4150Z(1)FJ |
| 1.5               | 850 | 450 | 1,200    | F         | 20                      | 40 | 41.5 | 17                                    | 151                 | 6.7                          | 41          | 100             | 48                 | C4BTMBX4150Z(2)FJ |
| 1.5               | 850 | 450 | 1,200    | F         | 20                      | 40 | 41.5 | 17                                    | 151                 | 6.7                          | 41          | 100             | 40                 | C4BTMBX4150Z(4)FJ |
| 2                 | 850 | 450 | 1,200    | F         | 20                      | 40 | 41.5 | 19                                    | 201                 | 5.1                          | 41          | 100             | 52                 | C4BTMBX4200Z(1)FJ |
| 2                 | 850 | 450 | 1,200    | F         | 20                      | 40 | 41.5 | 19                                    | 201                 | 5.1                          | 41          | 100             | 48                 | C4BTMBX4200Z(2)FJ |
| 2                 | 850 | 450 | 1,200    | F         | 20                      | 40 | 41.5 | 19                                    | 201                 | 5.1                          | 41          | 100             | 40                 | C4BTMBX4200Z(4)FJ |
| 3                 | 850 | 450 | 1,200    | F         | 20                      | 40 | 41.5 | 23                                    | 301                 | 3.4                          | 41          | 100             | 52                 | C4BTMBX4300Z(1)FJ |
| 3                 | 850 | 450 | 1,200    | F         | 20                      | 40 | 41.5 | 23                                    | 301                 | 3.4                          | 41          | 100             | 48                 | C4BTMBX4300Z(2)FJ |
| 3                 | 850 | 450 | 1,200    | F         | 20                      | 40 | 41.5 | 23                                    | 301                 | 3.4                          | 41          | 100             | 40                 | C4BTMBX4300Z(4)FJ |
| 4                 | 850 | 450 | 1,200    | H         | 24                      | 44 | 41.5 | 29                                    | 402                 | 2.6                          | 43          | 100             | 44                 | C4BTMBX4400Z(1)HJ |
| 4                 | 850 | 450 | 1,200    | H         | 24                      | 44 | 41.5 | 29                                    | 402                 | 2.6                          | 43          | 100             | 40                 | C4BTMBX4400Z(2)HJ |
| 5                 | 850 | 450 | 1,200    | L         | 30                      | 45 | 42   | 34                                    | 502                 | 2.2                          | 43          | 100             | 32                 | C4BTMBX4500Z(3)LJ |
| 8                 | 850 | 450 | 1,200    | N         | 35                      | 50 | 57.5 | 37                                    | 541                 | 2.8                          | 48          | 68              | 21                 | C4BTMBX4800Z(3)NJ |
| 10                | 850 | 450 | 1,200    | N         | 35                      | 50 | 57.5 | 40                                    | 677                 | 2.3                          | 48          | 68              | 21                 | C4BTMBX5100Z(3)NJ |
| Cap Value         | VDC | VAC | Peak VDC | Size Code | Maximum Dimensions      |    |      | Ripple Current                        | Peak Current        | ESR                          | ESL         | dV/dt (V/μs)    | Packaging Quantity | Part Number       |

(1) = Code letter for lug style: A, D, G, H or M

(2) = Code letter for lug style: B, E\*, F, W, or X; \* Style E is possible only for size code F

(3) = Code letter for lug style: A, B, D, F, G, H, M, W or X

(4) = Code letter for lug style: T

Capacitance tolerance standard is J, K tolerance upon request.

## 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 datasheets and using specific identifiers on the packaging labels.

All KEMET power film capacitors are RoHS compliant.

## 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

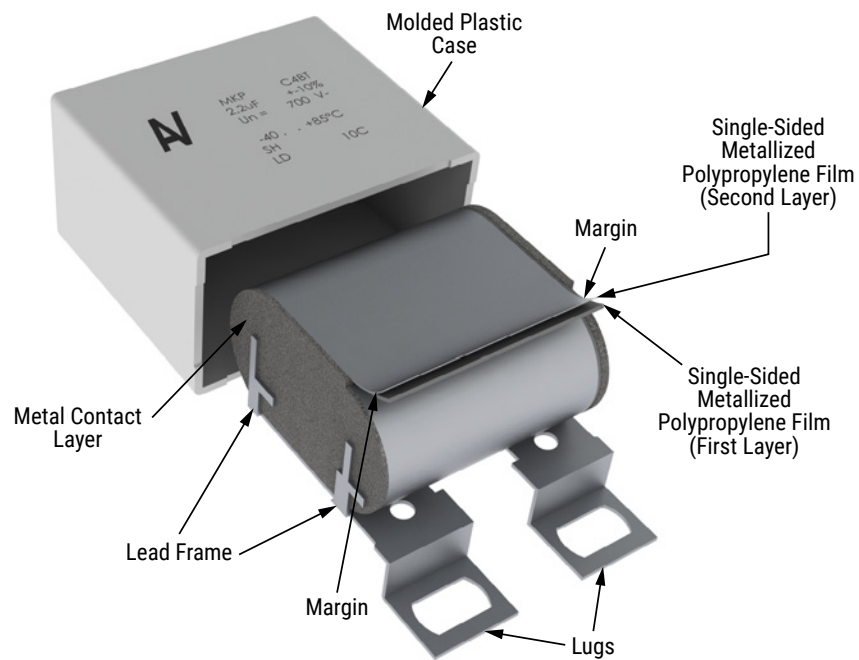
### Hermetically Sealed Capacitors

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.

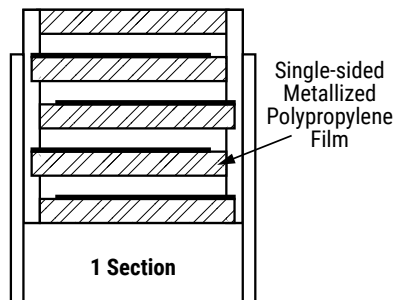
### Barometric Pressure

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.

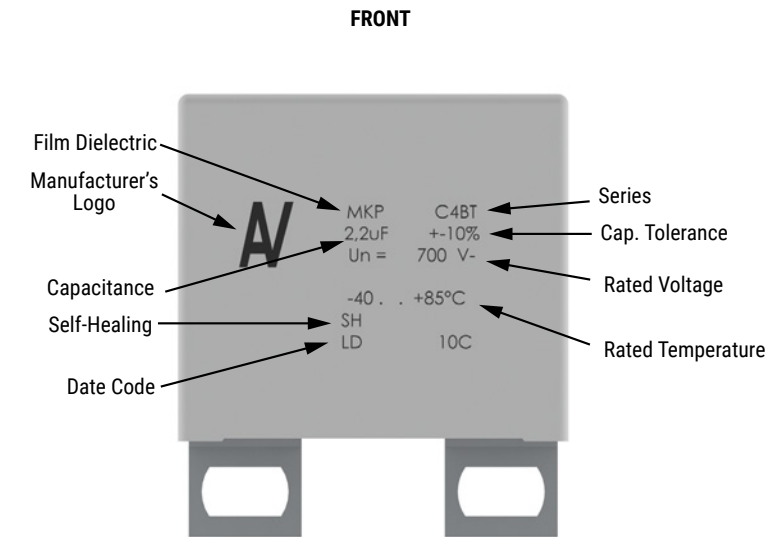
## Construction



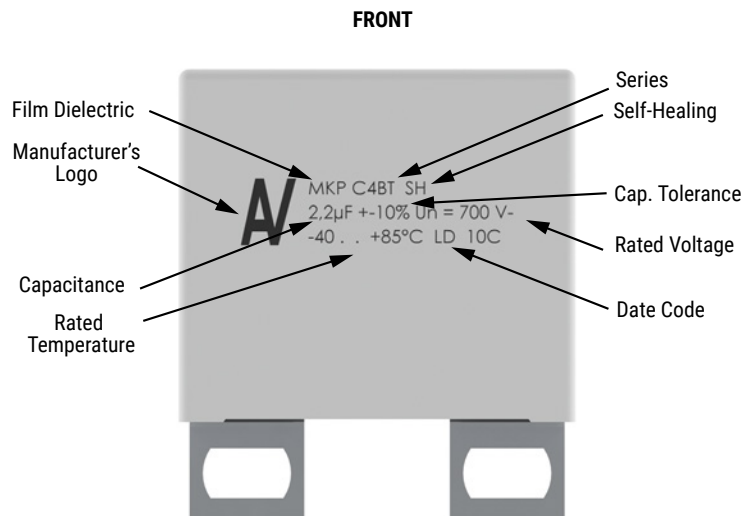
## Winding Scheme



## Marking



**OR**



\* Marking layout depends on the production line.

## KEMET Electronics Corporation Sales Offices

For a complete list of our global sales offices, please visit [www.kemet.com/sales](http://www.kemet.com/sales).

---

## Disclaimer

YAGEO Corporation and its affiliates do not recommend the use of commercial or automotive grade products for high reliability applications or manned space flight.

All product specifications, statements, information and data (collectively, the "Information") in this datasheet are subject to change. The customer is responsible for checking and verifying the extent to which the Information contained in this publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without guarantee, warranty, or responsibility of any kind, expressed or implied.

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

Although KEMET designs and manufactures its products to the most stringent quality and safety standards, given the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage.

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

Additional information about production site flexibility can be found [here](#)

*KEMET is a registered trademark of KEMET Electronics Corporation.*