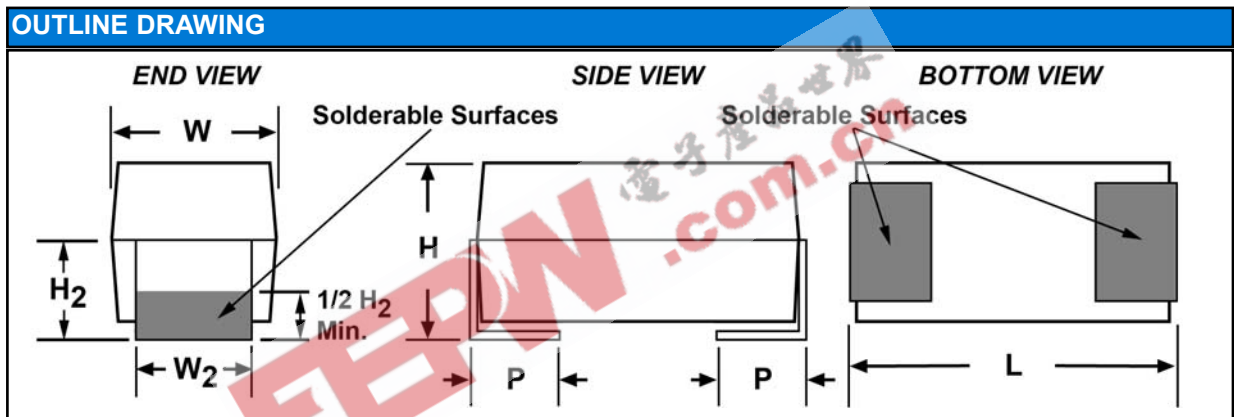


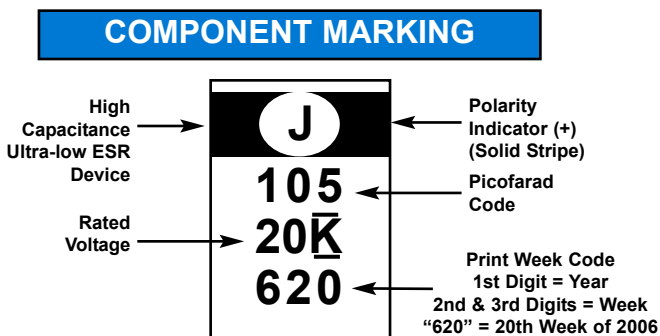
**T409/T419/T429 Series - MIL-PRF-55365/4 & /11  
Tantalum Surface Mount Capacitor**

| FEATURES  |  |
|---|--|
| Established Reliability Military Version of T497 Series High Grade COTS | Capacitance Values and Voltages as shown in following part number table.                         |
| Qualified to MIL-PRF-55365/4 & 11, Style CWR09, CWR19, CWR29            | Termination Options: B (Gold Plated), C (Hot Solder Dipped), H (Solder Plated), K (Solder Fused) |
| 100% Surge Current Test available for all sizes                         | Precision-molded, Laser-marked Case  |
| Operating Temperature -55°C to +125°C                                   | Offered in Nine Case Sizes (A - X)   |
| Weibull Failure Rate Codes, B, C, D# 50V Not Qualified                  | Tape & Reeled per EIA 481-1  |



**DIMENSIONS – MILLIMETERS (INCHES)**

| KEMET Size Code | L Length<br>± .38 (.015) | W Width<br>± 0.38 (.015) | H Height<br>± 0.38 (.015) | P<br>+0.25 (.010)<br>- 0.13 (.005) | W <sub>2</sub>                          | H <sub>2</sub> Minimum |
|-----------------|--------------------------|--------------------------|---------------------------|------------------------------------|---|------------------------|
| A               | 2.54 (.100)              | 1.27 (.050)              | 1.27 (.050)               | 0.76 (.030)                        | 1.27 ± 0.13 (.050 ± .005)               | 0.76 (.030)            |
| B               | 3.81 (.150)              | 1.27 (.050)              | 1.27 (.050)               | 0.76 (.030)                        | 1.27 ± 0.13 (.050 ± .005)               | 0.76 (.030)            |
| C               | 5.08 (.200)              | 1.27 (.050)              | 1.27 (.050)               | 0.76 (.030)                        | 1.27 ± 0.13 (.050 ± .005)               | 0.76 (.030)            |
| D               | 3.81 (.150)              | 2.54 (.100)              | 1.27 (.050)               | 0.76 (.030)                        | 2.41 + .13, -.25 (.095 + .005, -.010)   | 0.76 (.030)            |
| E               | 5.08 (.200)              | 2.54 (.100)              | 1.27 (.050)               | 0.76 (.030)                        | 2.41 + .13, -.25 (.095 + .005, -.010)   | 0.76 (.030)            |
| F               | 5.59 (.220)              | 3.43 (.135)              | 1.78 (.070)               | 0.76 (.030)                        | 3.30 ± 0.13 (.130 ± .005)               | 1.02 (.040)            |
| G               | 6.73 (.265)              | 2.79 (.110)              | 2.79 (.110)               | 1.27 (.050)                        | 2.67 ± 0.13 (.105 ± .005)               | 1.52 (.060)            |
| H               | 7.24 (.285)              | 3.81 (.150)              | 2.79 (.110)               | 1.27 (.050)                        | 3.68 + 0.13, -0.51 (.145 + .005 - .020) | 1.52 (.060)            |
| X               | 6.93 (.273)              | 5.41 (.213)              | 2.74 (.108)               | 1.19 (.047)                        | 3.05 ± 0.13 (.120 ± .005)               | 1.22 (.048)            |



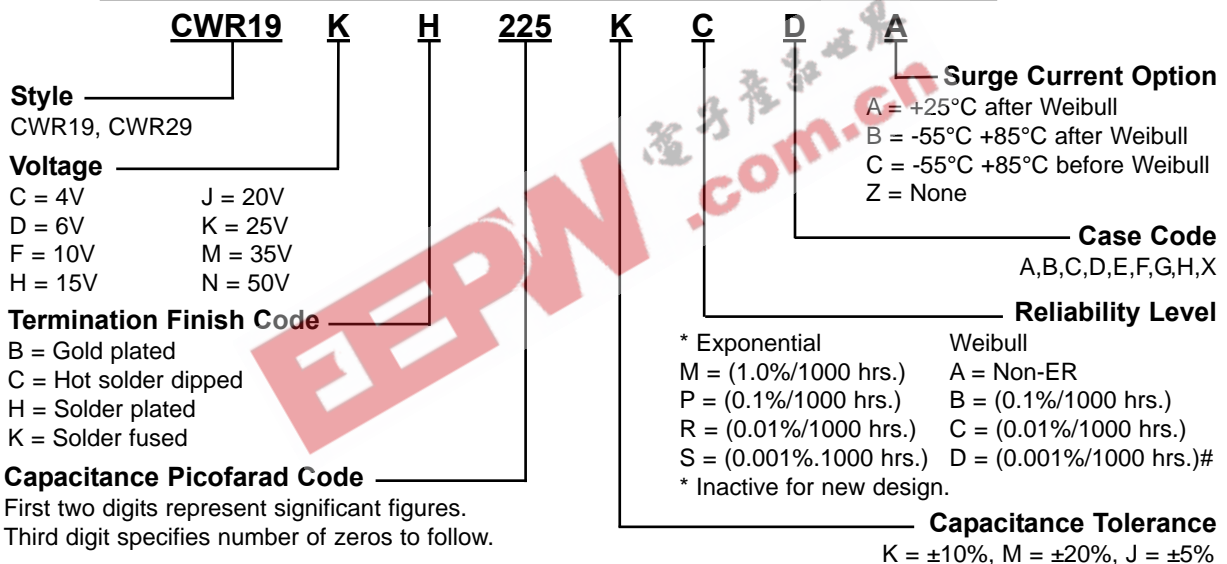
**COMPONENT WEIGHT**

| Case Size | Avg. Weight (gm) | Case Size | Avg. Weight (gm) |
|-----------|------------------|-----------|------------------|
| A         | 0.016            | F         | 0.153            |
| B         | 0.024            | G         | 0.235            |
| C         | 0.034            | H         | 0.365            |
| D         | 0.050            | X         | 0.406            |
| E         | 0.072            |           |                  |

## MIL-PRF-55365 (CWR09) ORDERING INFORMATION



## MIL-PRF-55365 (CWR19/29) ORDERING INFORMATION



## KEMET ORDERING INFORMATION



## T409 (CWR09) Ratings & Part Number Reference

| Capacitance<br>µF   | Case<br>Size | KEMET<br>Part Number    | Mil-C-55365/4F<br>Part Number | DC<br>Leakage<br>µA @ 25°C<br>Max | DF %<br>@ +25°C<br>120 Hz<br>Max | ESR Ω<br>@ +25°C<br>100 kHz<br>Max |
|---|--------------|-------------------------|-------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| <b>4 Volt Rating at +85°C (2.7 Volt Rating at +125°C)</b> |              |                         |                               |                                   |                                  |                                    |
| 2.2   | A            | T409A225(1)004(2)(3)(4) | CWR09C(3)225(1)(2)(5)         | 1.0                               | 6.0                              | 8.0                                |
| 4.7   | B            | T409B475(1)004(2)(3)(4) | CWR09C(3)475(1)(2)(5)         | 1.0                               | 6.0                              | 8.0                                |
| 6.8   | C            | T409C685(1)004(2)(3)(4) | CWR09C(3)685(1)(2)(5)         | 1.0                               | 6.0                              | 5.5                                |
| 10.0  | D            | T409D106(1)004(2)(3)(4) | CWR09C(3)106(1)(2)(5)         | 1.0                               | 8.0                              | 4.0                                |
| 15.0  | E            | T409E156(1)004(2)(3)(4) | CWR09C(3)156(1)(2)(5)         | 1.0                               | 8.0                              | 3.5                                |
| 33.0  | F            | T409F336(1)004(2)(3)(4) | CWR09C(3)336(1)(2)(5)         | 2.0                               | 8.0                              | 2.2                                |
| 68.0  | G            | T409G686(1)004(2)(3)(4) | CWR09C(3)686(1)(2)(5)         | 3.0                               | 10.0                             | 1.1                                |
| 100.0   | H            | T409H107(1)004(2)(3)(4) | CWR09C(3)107(1)(2)(5)         | 4.0                               | 10.0                             | 0.9                                |
| <b>6 Volt Rating at +85°C (4 Volt Rating at +125°C)</b>   |              |                         |                               |                                   |                                  |                                    |
| 1.5   | A            | T409A155(1)006(2)(3)(4) | CWR09D(3)155(1)(2)(5)         | 1.0                               | 6.0                              | 8.0                                |
| 3.3   | B            | T409B335(1)006(2)(3)(4) | CWR09D(3)335(1)(2)(5)         | 1.0                               | 6.0                              | 8.0                                |
| 4.7   | C            | T409C475(1)006(2)(3)(4) | CWR09D(3)475(1)(2)(5)         | 1.0                               | 6.0                              | 5.5                                |
| 6.8   | D            | T409D685(1)006(2)(3)(4) | CWR09D(3)685(1)(2)(5)         | 1.0                               | 6.0                              | 4.5                                |
| 10.0  | E            | T409E106(1)006(2)(3)(4) | CWR09D(3)106(1)(2)(5)         | 1.0                               | 8.0                              | 3.5                                |
| 22.0  | F            | T409F226(1)006(2)(3)(4) | CWR09D(3)226(1)(2)(5)         | 2.0                               | 8.0                              | 2.2                                |
| 47.0  | G            | T409G476(1)006(2)(3)(4) | CWR09D(3)476(1)(2)(5)         | 3.0                               | 10.0                             | 1.1                                |
| 68.0  | H            | T409H686(1)006(2)(3)(4) | CWR09D(3)686(1)(2)(5)         | 4.0                               | 10.0                             | 0.9                                |
| <b>10 Volt Rating at +85°C (7 Volt Rating at +125°C)</b>  |              |                         |                               |                                   |                                  |                                    |
| 1.0   | A            | T409A105(1)010(2)(3)(4) | CWR09F(3)105(1)(2)(5)         | 1.0                               | 6.0                              | 10.0                               |
| 2.2   | B            | T409B225(1)010(2)(3)(4) | CWR09F(3)225(1)(2)(5)         | 1.0                               | 6.0                              | 8.0                                |
| 3.3   | C            | T409C335(1)010(2)(3)(4) | CWR09F(3)335(1)(2)(5)         | 1.0                               | 6.0                              | 5.5                                |
| 4.7   | D            | T409D475(1)010(2)(3)(4) | CWR09F(3)475(1)(2)(5)         | 1.0                               | 6.0                              | 4.5                                |
| 6.8   | E            | T409E685(1)010(2)(3)(4) | CWR09F(3)685(1)(2)(5)         | 1.0                               | 6.0                              | 3.5                                |
| 15.0  | F            | T409F156(1)010(2)(3)(4) | CWR09F(3)156(1)(2)(5)         | 2.0                               | 8.0                              | 2.5                                |
| 33.0  | G            | T409G336(1)010(2)(3)(4) | CWR09F(3)336(1)(2)(5)         | 3.0                               | 10.0                             | 1.1                                |
| 47.0  | H            | T409H476(1)010(2)(3)(4) | CWR09F(3)476(1)(2)(5)         | 5.0                               | 10.0                             | 0.9                                |
| <b>15 Volt Rating at +85°C (10 Volt Rating at +125°C)</b> |              |                         |                               |                                   |                                  |                                    |
| 0.68  | A            | T409A684(1)015(2)(3)(4) | CWR09H(3)684(1)(2)(5)         | 1.0                               | 6.0                              | 12.0                               |
| 1.5   | B            | T409B155(1)015(2)(3)(4) | CWR09H(3)155(1)(2)(5)         | 1.0                               | 6.0                              | 8.0                                |
| 2.2   | C            | T409C225(1)015(2)(3)(4) | CWR09H(3)225(1)(2)(5)         | 1.0                               | 6.0                              | 5.5                                |
| 3.3   | D            | T409D335(1)015(2)(3)(4) | CWR09H(3)335(1)(2)(5)         | 1.0                               | 6.0                              | 5.0                                |
| 4.7   | E            | T409E475(1)015(2)(3)(4) | CWR09H(3)475(1)(2)(5)         | 1.0                               | 6.0                              | 4.0                                |
| 10.0  | F            | T409F106(1)015(2)(3)(4) | CWR09H(3)106(1)(2)(5)         | 2.0                               | 6.0                              | 2.5                                |
| 22.0  | G            | T409G226(1)015(2)(3)(4) | CWR09H(3)226(1)(2)(5)         | 4.0                               | 6.0                              | 1.1                                |
| 33.0  | H            | T409H336(1)015(2)(3)(4) | CWR09H(3)336(1)(2)(5)         | 5.0                               | 8.0                              | 0.9                                |
| <b>20 Volt Rating at +85°C (13 Volt Rating at +125°C)</b> |              |                         |                               |                                   |                                  |                                    |
| 0.47  | A            | T409A474(1)020(2)(3)(4) | CWR09J(3)474(1)(2)(5)         | 1.0                               | 8.0                              | 14.0                               |
| 0.68  | B            | T409B684(1)020(2)(3)(4) | CWR09J(3)684(1)(2)(5)         | 1.0                               | 6.0                              | 10.0                               |
| 1.0   | B            | T409B105(1)020(2)(3)(4) | CWR09J(3)105(1)(2)(5)         | 1.0                               | 6.0                              | 12.0                               |
| 1.5   | C            | T409C155(1)020(2)(3)(4) | CWR09J(3)155(1)(2)(5)         | 1.0                               | 6.0                              | 6.0                                |
| 2.2   | D            | T409D225(1)020(2)(3)(4) | CWR09J(3)225(1)(2)(5)         | 1.0                               | 6.0                              | 5.0                                |
| 3.3   | E            | T409E335(1)020(2)(3)(4) | CWR09J(3)335(1)(2)(5)         | 1.0                               | 6.0                              | 4.0                                |
| 6.8   | F            | T409F685(1)020(2)(3)(4) | CWR09J(3)685(1)(2)(5)         | 2.0                               | 6.0                              | 2.4                                |
| 15.0  | G            | T409G156(1)020(2)(3)(4) | CWR09J(3)156(1)(2)(5)         | 3.0                               | 6.0                              | 1.1                                |
| 22.0  | H            | T409H226(1)020(2)(3)(4) | CWR09J(3)226(1)(2)(5)         | 4.0                               | 6.0                              | 0.9                                |
| <b>25 Volt Rating at +85°C (17 Volt Rating at +125°C)</b> |              |                         |                               |                                   |                                  |                                    |
| 0.33  | A            | T409A334(1)025(2)(3)(4) | CWR09K(3)334(1)(2)(5)         | 1.0                               | 6.0                              | 15.0                               |
| 0.68  | B            | T409B684(1)025(2)(3)(4) | CWR09K(3)684(1)(2)(5)         | 1.0                               | 6.0                              | 7.5                                |
| 1.0   | C            | T409C105(1)025(2)(3)(4) | CWR09K(3)105(1)(2)(5)         | 1.0                               | 6.0                              | 6.5                                |
| 1.5   | D            | T409D155(1)025(2)(3)(4) | CWR09K(3)155(1)(2)(5)         | 1.0                               | 6.0                              | 6.5                                |
| 2.2   | E            | T409E225(1)025(2)(3)(4) | CWR09K(3)225(1)(2)(5)         | 1.0                               | 6.0                              | 3.5                                |
| 4.7   | F            | T409F475(1)025(2)(3)(4) | CWR09K(3)475(1)(2)(5)         | 2.0                               | 6.0                              | 2.5                                |
| 6.8   | G            | T409G685(1)025(2)(3)(4) | CWR09K(3)685(1)(2)(5)         | 2.0                               | 6.0                              | 1.2                                |
| 10.0  | G            | T409G106(1)025(2)(3)(4) | CWR09K(3)106(1)(2)(5)         | 3.0                               | 6.0                              | 1.4                                |
| 15.0  | H            | T409H156(1)025(2)(3)(4) | CWR09K(3)156(1)(2)(5)         | 4.0                               | 6.0                              | 1.0                                |
| <b>35 Volt Rating at +85°C (23 Volt Rating at +125°C)</b> |              |                         |                               |                                   |                                  |                                    |
| 0.22  | A            | T409A224(1)035(2)(3)(4) | CWR09M(3)224(1)(2)(5)         | 1.0                               | 6.0                              | 18.0                               |
| 0.47  | B            | T409B474(1)035(2)(3)(4) | CWR09M(3)474(1)(2)(5)         | 1.0                               | 6.0                              | 10.0                               |
| 0.68  | C            | T409C684(1)035(2)(3)(4) | CWR09M(3)684(1)(2)(5)         | 1.0                               | 6.0                              | 8.0                                |
| 1.0   | D            | T409D105(1)035(2)(3)(4) | CWR09M(3)105(1)(2)(5)         | 1.0                               | 6.0                              | 6.5                                |
| 1.5   | E            | T409E155(1)035(2)(3)(4) | CWR09M(3)155(1)(2)(5)         | 1.0                               | 6.0                              | 4.5                                |
| 3.3   | F            | T409F335(1)035(2)(3)(4) | CWR09M(3)335(1)(2)(5)         | 1.0                               | 6.0                              | 2.5                                |
| 4.7   | G            | T409G475(1)035(2)(3)(4) | CWR09M(3)475(1)(2)(5)         | 2.0                               | 6.0                              | 1.5                                |
| 6.8   | H            | T409H685(1)035(2)(3)(4) | CWR09M(3)685(1)(2)(5)         | 3.0                               | 6.0                              | 1.3                                |

- (1) To complete KEMET/CWR part number, insert K = ±10%; M = ±20% and J = ±5% Capacitance tolerance.  
(2) To complete KEMET/CWR part number, insert A = Non-ER; Weibull: B = 0.1%/1000 Hrs.; C = 0.01%/1000 Hrs or D = 0.001%/1000 Hrs. or Exponential: M = 1.0%/1000 hrs., P = 0.1%/1000 hrs., R = 0.01%/1000 hrs. or S = 0.001%/1000 hrs. Reliability Level.  
(3) To complete KEMET part number, insert B = Gold plated; C = Hot solder dipped; H = Solder plated or K = Solder Fused Termination Finish.  
(4) To complete KEMET part number, insert 4250 = +25°C after Weibull; 4251 = -55° + 85°C after Weibull; or 4252 = -55, & +85°C before Weibull Surge Current Option.  
(5) To complete CWR part number, insert A = +25°C after Weibull; B = -55° + 85°C after Weibull; or C = -55, & +85°C before Weibull Surge Current Option.

## T409 (CWR09) Ratings & Part Number Reference

| Capacitance<br>μF  | Case Size | KEMET Part Number       | Mil-C-55365/4F Part Number | DC Leakage<br>μA @ 25°C<br>Max | DF %<br>@ +25°C<br>120 Hz<br>Max | ESR Ω<br>@ +25°C<br>100 kHz<br>Max |
|--|-----------|-------------------------|----------------------------|--------------------------------|----------------------------------|------------------------------------|
| <b>50 Volt Rating at +85 C (33 Volt Rating at + 125 C)</b> |           |                         |                            |                                |                                  |                                    |
| 0.10   | A         | T409A104(1)050(2)(3)(4) | CWR09N(3)104(1)(2)(5)      | 1.0                            | 6.0                              | 22.0                               |
| 0.15   | A         | T409A154(1)050(2)(3)(4) | CWR09N(3)154(1)(2)(5)      | 1.0                            | 6.0                              | 17.0                               |
| 0.22   | B         | T409B224(1)050(2)(3)(4) | CWR09N(3)224(1)(2)(5)      | 1.0                            | 6.0                              | 14.0                               |
| 0.33   | B         | T409B334(1)050(2)(3)(4) | CWR09N(3)334(1)(2)(5)      | 1.0                            | 6.0                              | 12.0                               |
| 0.47   | C         | T409C474(1)050(2)(3)(4) | CWR09N(3)474(1)(2)(5)      | 1.0                            | 6.0                              | 8.0                                |
| 0.68   | D         | T409D684(1)050(2)(3)(4) | CWR09N(3)684(1)(2)(5)      | 1.0                            | 6.0                              | 7.0                                |
| 1.0  | E         | T409E105(1)050(2)(3)(4) | CWR09N(3)105(1)(2)(5)      | 1.0                            | 6.0                              | 6.0                                |
| 1.5  | F         | T409F155(1)050(2)(3)(4) | CWR09N(3)155(1)(2)(5)      | 1.0                            | 6.0                              | 4.0                                |
| 2.2  | F         | T409F225(1)050(2)(3)(4) | CWR09N(3)225(1)(2)(5)      | 2.0                            | 6.0                              | 2.5                                |
| 3.3  | G         | T409G335(1)050(2)(3)(4) | CWR09N(3)335(1)(2)(5)      | 2.0                            | 6.0                              | 2.0                                |
| 4.7  | H         | T409H475(1)050(2)(3)(4) | CWR09N(3)475(1)(2)(5)      | 3.0                            | 6.0                              | 1.5                                |

- (1) To complete KEMET/CWR part number, insert K = ±10%; M = ±20% and J = ±5% Capacitance tolerance.  
 (2) To complete KEMET/CWR part number, insert A = Non-ER; Weibull: B = 0.1%/1000 Hrs.; C = 0.01%/1000 Hrs. or D# = 0.001%/1000 Hrs. or Exponential: M = 1.0%/1000 hrs., P = 0.1%/1000 hrs., R = 0.01%/1000 hrs. or S = 0.001%/1000 hrs. Reliability Level.  
 Note: D# - 50 Volt Components not Qualified to D Product Level.  
 (3) To complete KEMET part number, insert B = Gold plated; C = Hot solder dipped; H = Solder plated or K = Solder Fused Termination Finish.  
 (4) To complete KEMET part number, insert 4250 = +25°C after Weibull; 4251 = -55° + 85°C after Weibull; or 4252 = -55, & +85°C before Weibull Surge Current Option.  
 (5) To complete CWR part number, insert A = +25°C after Weibull; B = -55° + 85°C after Weibull; or C = -55, & +85°C before Weibull Surge Current Option.

## Packaging Information

| KEMET Case Codes |      | Tape and Reel Dimensions |                  |          |                     |                      |
|------------------|------|--------------------------|------------------|----------|---------------------|----------------------|
|                  |      | Tape Width - mm          | Pitch - mm ± 0.1 |          | Reel Quantity       |                      |
|                  |      |                          | Part             | Sprocket | 180mm (7" diameter) | 330mm (13" diameter) |
| A                | 1005 | 8                        | 4                | 4        | 2500                | 9500                 |
| B                | 1505 | 12                       | 4                | 4        | 2500                | 9500                 |
| C                | 2005 | 12                       | 4                | 4        | 2500                | 9500                 |
| D                | 1510 | 12                       | 4                | 4        | 2500                | 9500                 |
| E                | 2010 | 12                       | 4                | 4        | 2500                | 9500                 |
| F                | 2214 | 12                       | 8                | 4        | 1000                | 3500                 |
| G                | 2711 | 12                       | 8                | 4        | 500                 | 2500                 |
| H                | 2915 | 12                       | 8                | 4        | 500                 | 2500                 |
| X                | 2824 | 12                       | 8                | 4        | 500                 | 2500                 |

- No c-spec required for 7" reel packaging. C-7280 required for 13" reel packaging
- Standard reel packaging is not mandatory
- Bulk packaging also available using C-7610

## T419 (CWR19) Ratings & Part Number Reference

| Capacitance<br>µF   | Case<br>Size | KEMET<br>Part Number    | Mil-C-55365/11A<br>Part Number | DC<br>Leakage<br>µA @ 25°C<br>Max | DF %<br>@ +25°C<br>120 Hz<br>Max | ESR Ω<br>@ +25°C<br>100 kHz<br>Max |
|---|--------------|-------------------------|--------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| <b>4 Volt Rating at +85°C (2.7 Volt Rating at +125°C)</b> |              |                         |                                |                                   |                                  |                                    |
| 3.3   | A            | T419A335(1)004(2)(3)(4) | CWR19C(3)335(1)(2)A(5)         | 1.0                               | 6.0                              | 12.0                               |
| 4.7   | A            | T419A475(1)004(2)(3)(4) | CWR19C(3)475(1)(2)A(5)         | 1.0                               | 6.0                              | 12.0                               |
| 6.8   | A            | T419A685(1)004(2)(3)(4) | CWR19C(3)685(1)(2)A(5)         | 1.0                               | 6.0                              | 12.0                               |
| 10.0  | B            | T419B106(1)004(2)(3)(4) | CWR19C(3)106(1)(2)B(5)         | 1.0                               | 8.0                              | 8.0                                |
| 15.0  | B            | T419B156(1)004(2)(3)(4) | CWR19C(3)156(1)(2)B(5)         | 1.0                               | 8.0                              | 8.0                                |
| 22.0  | B            | T419B226(1)004(2)(3)(4) | CWR19C(3)226(1)(2)B(5)         | 1.0                               | 8.0                              | 8.0                                |
| 22.0  | D            | T419D226(1)004(2)(3)(4) | CWR19C(3)226(1)(2)D(5)         | 1.0                               | 8.0                              | 4.0                                |
| 33.0  | D            | T419D336(1)004(2)(3)(4) | CWR19C(3)336(1)(2)D(5)         | 2.0                               | 8.0                              | 4.0                                |
| 33.0  | E            | T419E336(1)004(2)(3)(4) | CWR19C(3)336(1)(2)E(5)         | 2.0                               | 8.0                              | 3.0                                |
| 47.0  | E            | T419E476(1)004(2)(3)(4) | CWR19C(3)476(1)(2)E(5)         | 2.0                               | 8.0                              | 3.0                                |
| 68.0  | E            | T419E686(1)004(2)(3)(4) | CWR19C(3)686(1)(2)E(5)         | 3.0                               | 8.0                              | 3.0                                |
| 100.0   | F            | T419F107(1)004(2)(3)(4) | CWR19C(3)107(1)(2)F(5)         | 4.0                               | 10.0                             | 2.0                                |
| 150.0   | G            | T419G157(1)004(2)(3)(4) | CWR19C(3)157(1)(2)G(5)         | 6.0                               | 10.0                             | 1.0                                |
| 220.0   | H            | T419H227(1)004(2)(3)(4) | CWR19C(3)227(1)(2)H(5)         | 8.0                               | 10.0                             | 1.0                                |
| 330.0   | H            | T419H337(1)004(2)(3)(4) | CWR19C(3)337(1)(2)H(5)         | 10.0                              | 10.0                             | 0.9                                |
| <b>6 Volt Rating at +85°C (4 Volt Rating at +125°C)</b>   |              |                         |                                |                                   |                                  |                                    |
| 3.3   | A            | T419A335(1)006(2)(3)(4) | CWR19D(3)335(1)(2)A(5)         | 1.0                               | 6.0                              | 12.0                               |
| 4.7   | A            | T419A475(1)006(2)(3)(4) | CWR19D(3)475(1)(2)A(5)         | 1.0                               | 6.0                              | 12.0                               |
| 6.8   | B            | T419B685(1)006(2)(3)(4) | CWR19D(3)685(1)(2)B(5)         | 1.0                               | 6.0                              | 8.0                                |
| 10.0  | B            | T419B106(1)006(2)(3)(4) | CWR19D(3)106(1)(2)B(5)         | 1.0                               | 6.0                              | 8.0                                |
| 15.0  | B            | T419B156(1)006(2)(3)(4) | CWR19D(3)156(1)(2)B(5)         | 1.0                               | 8.0                              | 8.0                                |
| 15.0  | D            | T419D156(1)006(2)(3)(4) | CWR19D(3)156(1)(2)D(5)         | 1.0                               | 8.0                              | 5.0                                |
| 15.0  | E            | T419E156(1)006(2)(3)(4) | CWR19D(3)156(1)(2)E(5)         | 1.0                               | 8.0                              | 3.0                                |
| 22.0  | D            | T419D226(1)006(2)(3)(4) | CWR19D(3)226(1)(2)D(5)         | 1.0                               | 6.0                              | 5.0                                |
| 22.0  | E            | T419E226(1)006(2)(3)(4) | CWR19D(3)226(1)(2)E(5)         | 2.0                               | 8.0                              | 3.5                                |
| 33.0  | E            | T419E336(1)006(2)(3)(4) | CWR19D(3)336(1)(2)E(5)         | 2.0                               | 6.0                              | 3.5                                |
| 47.0  | F            | T419F476(1)006(2)(3)(4) | CWR19D(3)476(1)(2)F(5)         | 3.0                               | 8.0                              | 3.5                                |
| 68.0  | F            | T419F686(1)006(2)(3)(4) | CWR19D(3)686(1)(2)F(5)         | 4.0                               | 10.0                             | 1.5                                |
| 68.0  | G            | T419G686(1)006(2)(3)(4) | CWR19D(3)686(1)(2)G(5)         | 4.0                               | 10.0                             | 1.0                                |
| 100.0   | G            | T419G107(1)006(2)(3)(4) | CWR19D(3)107(1)(2)G(5)         | 6.0                               | 10.0                             | 1.1                                |
| 150.0   | G            | T419G157(1)006(2)(3)(4) | CWR19D(3)157(1)(2)G(5)         | 10.0                              | 10.0                             | 1.1                                |
| 220.0   | H            | T419H227(1)006(2)(3)(4) | CWR19D(3)227(1)(2)H(5)         | 10.0                              | 10.0                             | 0.9                                |
| 330.0   | H            | T419H337(1)006(2)(3)(4) | CWR19D(3)337(1)(2)H(5)         | 20.0                              | 10.0                             | 0.9                                |
| <b>10 Volt Rating at +85°C (7 Volt Rating at +125°C)</b>  |              |                         |                                |                                   |                                  |                                    |
| 2.2   | A            | T419A225(1)010(2)(3)(4) | CWR19F(3)225(1)(2)A(5)         | 1.0                               | 6.0                              | 12.0                               |
| 3.3   | A            | T419A335(1)010(2)(3)(4) | CWR19F(3)335(1)(2)A(5)         | 1.0                               | 6.0                              | 12.0                               |
| 4.7   | B            | T419B475(1)010(2)(3)(4) | CWR19F(3)475(1)(2)B(5)         | 1.0                               | 6.0                              | 8.0                                |
| 4.7   | C            | T419C475(1)010(2)(3)(4) | CWR19F(3)475(1)(2)C(5)         | 1.0                               | 6.0                              | 5.5                                |
| 6.8   | B            | T419B685(1)010(2)(3)(4) | CWR19F(3)685(1)(2)B(5)         | 1.0                               | 6.0                              | 8.0                                |
| 6.8   | C            | T419C685(1)010(2)(3)(4) | CWR19F(3)685(1)(2)C(5)         | 1.0                               | 6.0                              | 5.5                                |
| 6.8   | D            | T419D685(1)010(2)(3)(4) | CWR19F(3)685(1)(2)D(5)         | 1.0                               | 6.0                              | 5.0                                |
| 10.0  | B            | T419B106(1)010(2)(3)(4) | CWR19F(3)106(1)(2)B(5)         | 1.0                               | 8.0                              | 8.0                                |
| 10.0  | C            | T419C106(1)010(2)(3)(4) | CWR19F(3)106(1)(2)C(5)         | 1.0                               | 6.0                              | 5.5                                |
| 10.0  | D            | T419D106(1)010(2)(3)(4) | CWR19F(3)106(1)(2)D(5)         | 1.0                               | 6.0                              | 4.0                                |
| 10.0  | E            | T419E106(1)010(2)(3)(4) | CWR19F(3)106(1)(2)E(5)         | 1.0                               | 6.0                              | 3.5                                |
| 15.0  | D            | T419D156(1)010(2)(3)(4) | CWR19F(3)156(1)(2)D(5)         | 2.0                               | 6.0                              | 5.0                                |
| 15.0  | E            | T419E156(1)010(2)(3)(4) | CWR19F(3)156(1)(2)E(5)         | 2.0                               | 8.0                              | 3.0                                |
| 22.0  | E            | T419E226(1)010(2)(3)(4) | CWR19F(3)226(1)(2)E(5)         | 3.0                               | 8.0                              | 2.0                                |
| 33.0  | F            | T419F336(1)010(2)(3)(4) | CWR19F(3)336(1)(2)F(5)         | 3.0                               | 8.0                              | 1.5                                |
| 47.0  | F            | T419F476(1)010(2)(3)(4) | CWR19F(3)476(1)(2)F(5)         | 4.0                               | 10.0                             | 1.5                                |
| 47.0  | G            | T419G476(1)010(2)(3)(4) | CWR19F(3)476(1)(2)G(5)         | 4.0                               | 10.0                             | 1.0                                |
| 68.0  | G            | T419G686(1)010(2)(3)(4) | CWR19F(3)686(1)(2)G(5)         | 6.0                               | 10.0                             | 1.1                                |
| 100.0   | G            | T419G107(1)010(2)(3)(4) | CWR19F(3)107(1)(2)G(5)         | 10.0                              | 10.0                             | 1.1                                |
| 100.0   | H            | T419H107(1)010(2)(3)(4) | CWR19F(3)107(1)(2)H(5)         | 10.0                              | 10.0                             | 0.9                                |
| 150.0   | H            | T419H157(1)010(2)(3)(4) | CWR19F(3)157(1)(2)H(5)         | 15.0                              | 10.0                             | 0.9                                |
| 150.0   | X            | T419X157(1)010(2)(3)(4) | CWR19F(3)157(1)(2)X(5)         | 15.0                              | 10.0                             | 0.9                                |
| 220.0   | H            | T419H227(1)010(2)(3)(4) | CWR19F(3)227(1)(2)H(5)         | 20.0                              | 10.0                             | 0.9                                |

- (1) To complete KEMET/CWR part number, insert K = ±10%; M = ±20% and J = ±5% Capacitance tolerance.
- (2) To complete KEMET/CWR part number, insert A = Non-ER; Weibull: B = 0.1%/1000 Hrs.; C = 0.01%/1000 Hrs. or D = 0.001%/1000 Hrs. or Exponential: M = 1.0%/1000 hrs., P = 0.1%/1000 hrs., R = 0.01%/1000 hrs. or S = 0.001%/1000 hrs. Reliability Level.
- (3) To complete KEMET part number, insert B = Gold plated; C = Hot solder dipped; H = Solder plated or K = Solder Fused Termination Finish.
- (4) To complete KEMET part number, insert 4250 = +25°C after Weibull; 4251 = -55° + 85°C after Weibull; or 4252 = -55, & +85°C before Weibull Surge Current Option.
- (5) To complete CWR part number, insert A = +25°C after Weibull; B = -55° + 85°C after Weibull; or C = -55, & +85°C before Weibull Surge Current Option.

## T419 (CWR19) Ratings & Part Number Reference

| Capacitance<br>μF   | Case<br>Size | KEMET<br>Part Number    | Mil-C-55365/11A<br>Part Number | DC<br>Leakage<br>μA @ 25°C<br>Max | DF %<br>@ +25°C<br>120 Hz<br>Max | ESR Ω<br>@ +25°C<br>100 kHz<br>Max |
|---|--------------|-------------------------|--------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| <b>15 Volt Rating at +85°C (10 Volt Rating at +125°C)</b> |              |                         |                                |                                   |                                  |                                    |
| 1.0   | A            | T419A105(1)015(2)(3)(4) | CWR19H(3)105(1)(2)A(5)         | 1.0                               | 6.0                              | 15.0                               |
| 1.5   | A            | T419A155(1)015(2)(3)(4) | CWR19H(3)155(1)(2)A(5)         | 1.0                               | 6.0                              | 15.0                               |
| 2.2   | A            | T419A225(1)015(2)(3)(4) | CWR19H(3)225(1)(2)A(5)         | 1.0                               | 6.0                              | 15.0                               |
| 3.3   | B            | T419B335(1)015(2)(3)(4) | CWR19H(3)335(1)(2)B(5)         | 1.0                               | 6.0                              | 9.0                                |
| 4.7   | B            | T419B475(1)015(2)(3)(4) | CWR19H(3)475(1)(2)B(5)         | 1.0                               | 6.0                              | 5.0                                |
| 4.7   | C            | T419C475(1)015(2)(3)(4) | CWR19H(3)475(1)(2)C(5)         | 1.0                               | 6.0                              | 5.5                                |
| 4.7   | D            | T419D475(1)015(2)(3)(4) | CWR19H(3)475(1)(2)D(5)         | 1.0                               | 6.0                              | 6.0                                |
| 6.8   | D            | T419D685(1)015(2)(3)(4) | CWR19H(3)685(1)(2)D(5)         | 1.0                               | 6.0                              | 6.0                                |
| 6.8   | E            | T419E685(1)015(2)(3)(4) | CWR19H(3)685(1)(2)E(5)         | 1.0                               | 8.0                              | 3.0                                |
| 10.0  | D            | T419D106(1)015(2)(3)(4) | CWR19H(3)106(1)(2)D(5)         | 2.0                               | 6.0                              | 6.0                                |
| 10.0  | E            | T419E106(1)015(2)(3)(4) | CWR19H(3)106(1)(2)E(5)         | 2.0                               | 6.0                              | 4.0                                |
| 15.0  | E            | T419E156(1)015(2)(3)(4) | CWR19H(3)156(1)(2)E(5)         | 2.0                               | 6.0                              | 4.0                                |
| 15.0  | F            | T419F156(1)015(2)(3)(4) | CWR19H(3)156(1)(2)F(5)         | 2.0                               | 8.0                              | 3.0                                |
| 22.0  | F            | T419F226(1)015(2)(3)(4) | CWR19H(3)226(1)(2)F(5)         | 3.0                               | 8.0                              | 3.0                                |
| 33.0  | F            | T419F336(1)015(2)(3)(4) | CWR19H(3)336(1)(2)F(5)         | 5.0                               | 6.0                              | 3.0                                |
| 33.0  | G            | T419G336(1)015(2)(3)(4) | CWR19H(3)336(1)(2)G(5)         | 6.0                               | 8.0                              | 1.1                                |
| 47.0  | G            | T419G476(1)015(2)(3)(4) | CWR19H(3)476(1)(2)G(5)         | 10.0                              | 8.0                              | 1.1                                |
| 47.0  | H            | T419H476(1)015(2)(3)(4) | CWR19H(3)476(1)(2)H(5)         | 10.0                              | 8.0                              | 0.9                                |
| 68.0  | G            | T419G686(1)015(2)(3)(4) | CWR19H(3)686(1)(2)G(5)         | 10.0                              | 8.0                              | 1.1                                |
| 68.0  | H            | T419H686(1)015(2)(3)(4) | CWR19H(3)686(1)(2)H(5)         | 10.0                              | 8.0                              | 0.9                                |
| 100.0   | H            | T419H107(1)015(2)(3)(4) | CWR19H(3)107(1)(2)H(5)         | 15.0                              | 10.0                             | 0.9                                |
| <b>20 Volt Rating at +85°C (13 Volt Rating at +125°C)</b> |              |                         |                                |                                   |                                  |                                    |
| 0.68  | A            | T419A684(1)020(2)(3)(4) | CWR19J(3)684(1)(2)A(5)         | 1.0                               | 6.0                              | 15.0                               |
| 1.0   | A            | T419A105(1)020(2)(3)(4) | CWR19J(3)105(1)(2)A(5)         | 1.0                               | 6.0                              | 15.0                               |
| 1.5   | B            | T419B155(1)020(2)(3)(4) | CWR19J(3)155(1)(2)B(5)         | 1.0                               | 6.0                              | 9.0                                |
| 2.2   | B            | T419B225(1)020(2)(3)(4) | CWR19J(3)225(1)(2)B(5)         | 1.0                               | 6.0                              | 9.0                                |
| 3.3   | D            | T419D335(1)020(2)(3)(4) | CWR19J(3)335(1)(2)D(5)         | 1.0                               | 6.0                              | 6.0                                |
| 4.7   | E            | T419E475(1)020(2)(3)(4) | CWR19J(3)475(1)(2)E(5)         | 1.0                               | 6.0                              | 6.0                                |
| 6.8   | E            | T419E685(1)020(2)(3)(4) | CWR19J(3)685(1)(2)E(5)         | 2.0                               | 6.0                              | 5.0                                |
| 10.0  | E            | T419E106(1)020(2)(3)(4) | CWR19J(3)106(1)(2)E(5)         | 2.0                               | 6.0                              | 5.0                                |
| 10.0  | F            | T419F106(1)020(2)(3)(4) | CWR19J(3)106(1)(2)F(5)         | 2.0                               | 6.0                              | 3.0                                |
| 15.0  | F            | T419F156(1)020(2)(3)(4) | CWR19J(3)156(1)(2)F(5)         | 3.0                               | 6.0                              | 3.0                                |
| 22.0  | G            | T419G226(1)020(2)(3)(4) | CWR19J(3)226(1)(2)G(5)         | 4.0                               | 6.0                              | 2.5                                |
| 33.0  | H            | T419H336(1)020(2)(3)(4) | CWR19J(3)336(1)(2)H(5)         | 6.0                               | 8.0                              | 0.9                                |
| 47.0  | H            | T419H476(1)020(2)(3)(4) | CWR19J(3)476(1)(2)H(5)         | 10.0                              | 8.0                              | 0.9                                |
| 47.0  | X            | T419X476(1)020(2)(3)(4) | CWR19J(3)476(1)(2)X(5)         | 10.0                              | 8.0                              | 0.9                                |
| <b>25 Volt Rating at +85°C (17 Volt Rating at +125°C)</b> |              |                         |                                |                                   |                                  |                                    |
| 0.47  | A            | T419A474(1)025(2)(3)(4) | CWR19K(3)474(1)(2)A(5)         | 1.0                               | 6.0                              | 15.0                               |
| 1.0   | B            | T419B105(1)025(2)(3)(4) | CWR19K(3)105(1)(2)B(5)         | 1.0                               | 6.0                              | 10.0                               |
| 2.2   | D            | T419D225(1)025(2)(3)(4) | CWR19K(3)225(1)(2)D(5)         | 1.0                               | 6.0                              | 6.0                                |
| 3.3   | E            | T419E335(1)025(2)(3)(4) | CWR19K(3)335(1)(2)E(5)         | 1.0                               | 6.0                              | 4.0                                |
| 6.8   | F            | T419F685(1)025(2)(3)(4) | CWR19K(3)685(1)(2)F(5)         | 2.0                               | 6.0                              | 3.0                                |
| 15.0  | G            | T419G156(1)025(2)(3)(4) | CWR19K(3)156(1)(2)G(5)         | 4.0                               | 6.0                              | 1.4                                |
| 22.0  | G            | T419G226(1)025(2)(3)(4) | CWR19K(3)226(1)(2)G(5)         | 6.0                               | 6.0                              | 1.4                                |
| 22.0  | H            | T419H226(1)025(2)(3)(4) | CWR19K(3)226(1)(2)H(5)         | 6.0                               | 6.0                              | 0.9                                |
| 22.0  | X            | T419X226(1)025(2)(3)(4) | CWR19K(3)226(1)(2)X(5)         | 6.0                               | 6.0                              | 0.9                                |
| 33.0  | H            | T419H336(1)025(2)(3)(4) | CWR19K(3)336(1)(2)H(5)         | 10.0                              | 8.0                              | 0.9                                |
| 33.0  | X            | T419X336(1)025(2)(3)(4) | CWR19K(3)336(1)(2)X(5)         | 10.0                              | 8.0                              | 0.9                                |
| <b>35 Volt Rating at +85°C (23 Volt Rating at +125°C)</b> |              |                         |                                |                                   |                                  |                                    |
| 0.33  | A            | T419A334(1)035(2)(3)(4) | CWR19M(3)334(1)(2)A(5)         | 1.0                               | 6.0                              | 22.0                               |
| 6.8   | G            | T419G685(1)035(2)(3)(4) | CWR19M(3)685(1)(2)G(5)         | 3.0                               | 6.0                              | 1.5                                |
| 10.0  | H            | T419H106(1)035(2)(3)(4) | CWR19M(3)106(1)(2)H(5)         | 4.0                               | 8.0                              | 0.9                                |
| 15.0  | X            | T419X156(1)035(2)(3)(4) | CWR19M(3)156(1)(2)X(5)         | 6.0                               | 6.0                              | 0.9                                |

(1) To complete KEMET/CWR part number, insert K = ±10%; M = ±20% and J = ±5% Capacitance tolerance.

(2) To complete KEMET/CWR part number, insert A = Non-ER; Weibull: B = 0.1%/1000 Hrs.; C = 0.01%/1000 Hrs or D = 0.001%/1000 Hrs. or Exponential: M = 1.0%/1000 hrs., P = 0.1%/1000 hrs., R = 0.01%/1000 hrs. or S = 0.001%/1000 hrs. Reliability Level.

(3) To complete KEMET part number, insert B = Gold plated; C = Hot solder dipped; H = Solder plated or K = Solder Fused Termination Finish.

(4) To complete KEMET part number, insert 4250 = +25°C after Weibull; 4251 = -55° + 85°C after Weibull; or 4252 = -55, & +85°C before Weibull Surge Current Option.

(5) To complete CWR part number, insert A = +25°C after Weibull; B = -55° + 85°C after Weibull; or C = -55, & +85°C before Weibull Surge Current Option.

## T429 (CWR29) Ratings & Part Number Reference

| Capacitance<br>µF   | Case<br>Size | KEMET<br>Part Number    | Mil-C-55365/11A<br>Part Number | DC<br>Leakage<br>µA @ 25°C<br>Max | DF %<br>@ +25°C<br>120 Hz<br>Max | ESR Ω<br>@ +25°C<br>100 kHz<br>Max |
|---|--------------|-------------------------|--------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| <b>4 Volt Rating at +85°C (2.7 Volt Rating at +125°C)</b> |              |                         |                                |                                   |                                  |                                    |
| 2.2   | A            | T429A225(1)004(2)(3)(4) | CWR29C(3)225(1)(2)A(5)         | 1.0                               | 6.0                              | 4.0                                |
| 3.3   | A            | T429A335(1)004(2)(3)(4) | CWR29C(3)335(1)(2)A(5)         | 1.0                               | 6.0                              | 6.0                                |
| 4.7   | A            | T429A475(1)004(2)(3)(4) | CWR29C(3)475(1)(2)A(5)         | 1.0                               | 6.0                              | 6.0                                |
| 4.7   | B            | T429B475(1)004(2)(3)(4) | CWR29C(3)475(1)(2)B(5)         | 1.0                               | 6.0                              | 3.2                                |
| 6.8   | A            | T429A685(1)004(2)(3)(4) | CWR29C(3)685(1)(2)A(5)         | 1.0                               | 6.0                              | 6.0                                |
| 6.8   | C            | T429C685(1)004(2)(3)(4) | CWR29C(3)685(1)(2)C(5)         | 1.0                               | 6.0                              | 2.2                                |
| 10.0  | B            | T429B106(1)004(2)(3)(4) | CWR29C(3)106(1)(2)B(5)         | 1.0                               | 8.0                              | 3.2                                |
| 10.0  | D            | T429D106(1)004(2)(3)(4) | CWR29C(3)106(1)(2)D(5)         | 10                                | 8.0                              | 1.3                                |
| 15.0  | B            | T429B156(1)004(2)(3)(4) | CWR29C(3)156(1)(2)B(5)         | 1.0                               | 8.0                              | 3.2                                |
| 15.0  | E            | T429E156(1)004(2)(3)(4) | CWR29C(3)156(1)(2)E(5)         | 1.0                               | 8.0                              | 1                                  |
| 22.0  | B            | T429B226(1)004(2)(3)(4) | CWR29C(3)226(1)(2)B(5)         | 1.0                               | 8.0                              | 3.2                                |
| 22.0  | D            | T429D226(1)004(2)(3)(4) | CWR29C(3)226(1)(2)D(5)         | 1.0                               | 8.0                              | 1.3                                |
| 33.0  | D            | T429D336(1)004(2)(3)(4) | CWR29C(3)336(1)(2)D(5)         | 2.0                               | 8.0                              | 1.3                                |
| 33.0  | E            | T429E336(1)004(2)(3)(4) | CWR29C(3)336(1)(2)E(5)         | 2.0                               | 8.0                              | 0.9                                |
| 33.0  | F            | T429F336(1)004(2)(3)(4) | CWR29C(3)336(1)(2)F(5)         | 2.0                               | 8.0                              | 0.6                                |
| 47.0  | E            | T429E476(1)004(2)(3)(4) | CWR29C(3)476(1)(2)E(5)         | 2.0                               | 8.0                              | 0.9                                |
| 68.0  | E            | T429E686(1)004(2)(3)(4) | CWR29C(3)686(1)(2)E(5)         | 3.0                               | 8.0                              | 0.9                                |
| 68.0  | G            | T429G686(1)004(2)(3)(4) | CWR29C(3)686(1)(2)G(5)         | 3.0                               | 10.0                             | 0.275                              |
| 100.0   | F            | T429F107(1)004(2)(3)(4) | CWR29C(3)107(1)(2)F(5)         | 4.0                               | 10.0                             | 0.55                               |
| 100.0   | H            | T429H107(1)004(2)(3)(4) | CWR29C(3)107(1)(2)H(5)         | 4.0                               | 10.0                             | 0.18                               |
| 150.0   | G            | T429G157(1)004(2)(3)(4) | CWR29C(3)157(1)(2)G(5)         | 6.0                               | 10.0                             | 0.25                               |
| 220.0   | H            | T429H227(1)004(2)(3)(4) | CWR29C(3)227(1)(2)H(5)         | 8.0                               | 10.0                             | 0.20                               |
| 330.0   | H            | T429H337(1)004(2)(3)(4) | CWR29C(3)337(1)(2)H(5)         | 10.0                              | 10.0                             | 0.18                               |
| <b>6 Volt Rating at +85°C (4 Volt Rating at +125°C)</b>   |              |                         |                                |                                   |                                  |                                    |
| 1.5   | A            | T429A155(1)006(2)(3)(4) | CWR29D(3)155(1)(2)A(5)         | 1.0                               | 6.0                              | 4.0                                |
| 3.3   | A            | T429A335(1)006(2)(3)(4) | CWR29D(3)335(1)(2)A(5)         | 1.0                               | 6.0                              | 6.0                                |
| 3.3   | B            | T429B335(1)006(2)(3)(4) | CWR29D(3)335(1)(2)B(5)         | 1.0                               | 6.0                              | 3.2                                |
| 4.7   | A            | T429A475(1)006(2)(3)(4) | CWR29D(3)475(1)(2)A(5)         | 1.0                               | 6.0                              | 6.0                                |
| 4.7   | C            | T429C475(1)006(2)(3)(4) | CWR29D(3)475(1)(2)C(5)         | 1.0                               | 6.0                              | 2.2                                |
| 6.8   | B            | T429B685(1)006(2)(3)(4) | CWR29D(3)685(1)(2)B(5)         | 1.0                               | 6.0                              | 3.2                                |
| 6.8   | D            | T429D685(1)006(2)(3)(4) | CWR29D(3)685(1)(2)D(5)         | 1.0                               | 6.0                              | 1.5                                |
| 10.0  | B            | T429B106(1)006(2)(3)(4) | CWR29D(3)106(1)(2)B(5)         | 1.0                               | 6.0                              | 3.2                                |
| 10.0  | E            | T429E106(1)006(2)(3)(4) | CWR29D(3)106(1)(2)E(5)         | 1.0                               | 8.0                              | 1.0                                |
| 15.0  | B            | T429B156(1)006(2)(3)(4) | CWR29D(3)156(1)(2)B(5)         | 1.0                               | 8.0                              | 3.2                                |
| 15.0  | D            | T429D156(1)006(2)(3)(4) | CWR29D(3)156(1)(2)D(5)         | 1.0                               | 8.0                              | 1.7                                |
| 15.0  | E            | T429E156(1)006(2)(3)(4) | CWR29D(3)156(1)(2)E(5)         | 1.0                               | 8.0                              | 0.9                                |
| 22.0  | D            | T429D226(1)006(2)(3)(4) | CWR29D(3)226(1)(2)D(5)         | 1.0                               | 6.0                              | 1.7                                |
| 22.0  | E            | T429E226(1)006(2)(3)(4) | CWR29D(3)226(1)(2)E(5)         | 2.0                               | 8.0                              | 1.0                                |
| 22.0  | F            | T429F226(1)006(2)(3)(4) | CWR29D(3)226(1)(2)F(5)         | 2.0                               | 8.0                              | 0.6                                |
| 33.0  | E            | T429E336(1)006(2)(3)(4) | CWR29D(3)336(1)(2)E(5)         | 2.0                               | 6.0                              | 1.0                                |
| 47.0  | F            | T429F476(1)006(2)(3)(4) | CWR29D(3)476(1)(2)F(5)         | 3.0                               | 8.0                              | 1.0                                |
| 47.0  | G            | T429G476(1)006(2)(3)(4) | CWR29D(3)476(1)(2)G(5)         | 3.0                               | 10.0                             | 0.275                              |
| 68.0  | F            | T429F686(1)006(2)(3)(4) | CWR29D(3)686(1)(2)F(5)         | 4.0                               | 10.0                             | 0.4                                |
| 68.0  | G            | T429G686(1)006(2)(3)(4) | CWR29D(3)686(1)(2)G(5)         | 4.0                               | 10.0                             | 0.25                               |
| 68.0  | H            | T429H686(1)006(2)(3)(4) | CWR29D(3)686(1)(2)H(5)         | 4.0                               | 10.0                             | 0.18                               |
| 100.0   | G            | T429G107(1)006(2)(3)(4) | CWR29D(3)107(1)(2)G(5)         | 6.0                               | 10.0                             | 0.275                              |
| 150.0   | G            | T429G157(1)006(2)(3)(4) | CWR29D(3)157(1)(2)G(5)         | 10.0                              | 10.0                             | 0.275                              |
| 220.0   | H            | T429H227(1)006(2)(3)(4) | CWR29D(3)227(1)(2)H(5)         | 10.0                              | 10.0                             | 0.18                               |
| 330.0   | H            | T429H337(1)006(2)(3)(4) | CWR29D(3)337(1)(2)H(5)         | 20.0                              | 10.0                             | 0.18                               |
| <b>10 Volt Rating at +85°C (7 Volt Rating at +125°C)</b>  |              |                         |                                |                                   |                                  |                                    |
| 1.0   | A            | T429A105(1)010(2)(3)(4) | CWR29F(3)105(1)(2)A(5)         | 1.0                               | 6.0                              | 5.0                                |
| 2.2   | A            | T429A225(1)010(2)(3)(4) | CWR29F(3)225(1)(2)A(5)         | 1.0                               | 6.0                              | 6.0                                |
| 2.2   | B            | T429B225(1)010(2)(3)(4) | CWR29F(3)225(1)(2)B(5)         | 1.0                               | 6.0                              | 3.2                                |
| 3.3   | A            | T429A335(1)010(2)(3)(4) | CWR29F(3)335(1)(2)A(5)         | 1.0                               | 6.0                              | 6.0                                |
| 3.3   | C            | T429C335(1)010(2)(3)(4) | CWR29F(3)335(1)(2)C(5)         | 1.0                               | 6.0                              | 2.2                                |
| 4.7   | B            | T429B475(1)010(2)(3)(4) | CWR29F(3)475(1)(2)B(5)         | 1.0                               | 6.0                              | 3.2                                |
| 4.7   | C            | T429C475(1)010(2)(3)(4) | CWR29F(3)475(1)(2)C(5)         | 1.0                               | 6.0                              | 2.2                                |
| 4.7   | D            | T429D475(1)010(2)(3)(4) | CWR29F(3)475(1)(2)D(5)         | 1.0                               | 6.0                              | 1.5                                |

- (1) To complete KEMET/CWR part number, insert K = ±10%; M = ±20% and J = ±5% Capacitance tolerance.
- (2) To complete KEMET/CWR part number, insert A = Non-ER; Weibull: B = 0.1%/1000 Hrs.; C = 0.01%/1000 Hrs. or Exponential: M = 1.0%/1000 hrs., P = 0.1%/1000 hrs., R = 0.01%/1000 hrs. or S = 0.001%/1000 hrs. Reliability Level.
- (3) To complete KEMET part number, insert B = Gold plated; C = Hot solder dipped; H = Solder plated or K = Solder Fused Termination Finish.
- (4) To complete KEMET part number, insert 4250 = +25°C after Weibull; 4251 = -55° + 85°C after Weibull; or 4252 = -55, & +85°C before Weibull Surge Current Option.
- (5) To complete CWR part number, insert A = +25°C after Weibull; B = -55° + 85°C after Weibull; or C = -55, & +85°C before Weibull Surge Current Option.

## T429 (CWR29) Ratings & Part Number Reference

| Capacitance<br>µF  | Case<br>Size | KEMET<br>Part Number    | Mil-C-55365/11A<br>Part Number | DC<br>Leakage<br>µA @ 25°C<br>Max | DF %<br>@ +25°C<br>120 Hz<br>Max | ESR Ω<br>@ +25°C<br>100 kHz<br>Max |
|--|--------------|-------------------------|--------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| <b>10 Volt Rating at +85°C (7 Volt Rating at +125°C) cont.</b> |              |                         |                                |                                   |                                  |                                    |
| 6.8  | B            | T429B685(1)010(2)(3)(4) | CWR29F(3)685(1)(2)B(5)         | 1.0                               | 6.0                              | 3.2                                |
| 6.8  | C            | T429C685(1)010(2)(3)(4) | CWR29F(3)685(1)(2)C(5)         | 1.0                               | 6.0                              | 2.2                                |
| 6.8  | D            | T429D685(1)010(2)(3)(4) | CWR29F(3)685(1)(2)D(5)         | 1.0                               | 6.0                              | 1.7                                |
| 6.8  | E            | T429E685(1)010(2)(3)(4) | CWR29F(3)685(1)(2)E(5)         | 1.0                               | 6.0                              | 1.0                                |
| 10.0   | B            | T429B106(1)010(2)(3)(4) | CWR29F(3)106(1)(2)B(5)         | 1.0                               | 8.0                              | 3.2                                |
| 10.0   | C            | T429C106(1)010(2)(3)(4) | CWR29F(3)106(1)(2)C(5)         | 1.0                               | 6.0                              | 2.2                                |
| 10.0   | D            | T429D106(1)010(2)(3)(4) | CWR29F(3)106(1)(2)D(5)         | 1.0                               | 6.0                              | 1.3                                |
| 10.0   | E            | T429E106(1)010(2)(3)(4) | CWR29F(3)106(1)(2)E(5)         | 1.0                               | 6.0                              | 1.0                                |
| 15.0   | D            | T429D156(1)010(2)(3)(4) | CWR29F(3)156(1)(2)D(5)         | 2.0                               | 6.0                              | 1.7                                |
| 15.0   | E            | T429E156(1)010(2)(3)(4) | CWR29F(3)156(1)(2)E(5)         | 2.0                               | 8.0                              | 0.9                                |
| 15.0   | F            | T429F156(1)010(2)(3)(4) | CWR29F(3)156(1)(2)F(5)         | 2.0                               | 8.0                              | 0.7                                |
| 22.0   | E            | T429E226(1)010(2)(3)(4) | CWR29F(3)226(1)(2)F(5)         | 3.0                               | 8.0                              | 0.6                                |
| 33.0   | F            | T429F336(1)010(2)(3)(4) | CWR29F(3)336(1)(2)F(5)         | 3.0                               | 8.0                              | 0.4                                |
| 33.0   | G            | T429G336(1)010(2)(3)(4) | CWR29F(3)336(1)(2)G(5)         | 3.0                               | 10.0                             | 0.275                              |
| 47.0   | F            | T429F476(1)010(2)(3)(4) | CWR29F(3)476(1)(2)F(5)         | 4.0                               | 10.0                             | 0.4                                |
| 47.0   | G            | T429G476(1)010(2)(3)(4) | CWR29F(3)476(1)(2)G(5)         | 4.0                               | 10.0                             | 0.25                               |
| 47.0   | H            | T429H476(1)010(2)(3)(4) | CWR29F(3)476(1)(2)H(5)         | 5.0                               | 10.0                             | 0.18                               |
| 68.0   | G            | T429G686(1)010(2)(3)(4) | CWR29F(3)686(1)(2)G(5)         | 6.0                               | 10.0                             | 0.275                              |
| 100.0  | G            | T429G107(1)010(2)(3)(4) | CWR29F(3)107(1)(2)G(5)         | 10.0                              | 10.0                             | 0.275                              |
| 100.0  | H            | T429H107(1)010(2)(3)(4) | CWR29F(3)107(1)(2)H(5)         | 10.0                              | 10.0                             | 0.18                               |
| 150.0  | H            | T429H157(1)010(2)(3)(4) | CWR29F(3)157(1)(2)H(5)         | 15.0                              | 10.0                             | 0.18                               |
| 150.0  | X            | T429X157(1)010(2)(3)(4) | CWR29F(3)157(1)(2)X(5)         | 15.0                              | 10.0                             | 0.065                              |
| 220.0  | H            | T429H227(1)010(2)(3)(4) | CWR29F(3)227(1)(2)H(5)         | 20.0                              | 10.0                             | 0.18                               |
| <b>15 Volt Rating at +85°C (10 Volt Rating at +125°C)</b>      |              |                         |                                |                                   |                                  |                                    |
| 0.68   | A            | T429A684(1)015(2)(3)(4) | CWR29H(3)684(1)(2)A(5)         | 1.0                               | 6.0                              | 6.0                                |
| 1.0  | A            | T429A105(1)015(2)(3)(4) | CWR29H(3)105(1)(2)A(5)         | 1.0                               | 6.0                              | 7.5                                |
| 1.5  | A            | T429A155(1)015(2)(3)(4) | CWR29H(3)155(1)(2)A(5)         | 1.0                               | 6.0                              | 7.5                                |
| 1.5  | B            | T429B155(1)015(2)(3)(4) | CWR29H(3)155(1)(2)B(5)         | 1.0                               | 6.0                              | 3.2                                |
| 2.2  | A            | T429A225(1)015(2)(3)(4) | CWR29H(3)225(1)(2)A(5)         | 1.0                               | 6.0                              | 7.5                                |
| 2.2  | C            | T429C225(1)015(2)(3)(4) | CWR29H(3)225(1)(2)C(5)         | 1.0                               | 6.0                              | 2.2                                |
| 3.3  | B            | T429B335(1)015(2)(3)(4) | CWR29H(3)335(1)(2)B(5)         | 1.0                               | 6.0                              | 3.6                                |
| 3.3  | D            | T429D335(1)015(2)(3)(4) | CWR29H(3)335(1)(2)D(5)         | 1.0                               | 6.0                              | 1.7                                |
| 4.7  | B            | T429B475(1)015(2)(3)(4) | CWR29H(3)475(1)(2)B(5)         | 1.0                               | 6.0                              | 2                                  |
| 4.7  | C            | T429C475(1)015(2)(3)(4) | CWR29H(3)475(1)(2)C(4)         | 1.0                               | 6.0                              | 2.2                                |
| 4.7  | D            | T429D475(1)015(2)(3)(4) | CWR29H(3)475(1)(2)D(5)         | 1.0                               | 6.0                              | 2                                  |
| 4.7  | E            | T429E475(1)015(2)(3)(4) | CWR29H(3)475(1)(2)E(5)         | 1.0                               | 6.0                              | 1.2                                |
| 6.8  | D            | T429D685(1)015(2)(3)(4) | CWR29H(3)685(1)(2)D(5)         | 1.0                               | 6.0                              | 2.0                                |
| 6.8  | E            | T429E685(1)015(2)(3)(4) | CWR29H(3)685(1)(2)E(5)         | 1.0                               | 8.0                              | 0.9                                |
| 10.0   | D            | T429D106(1)015(2)(3)(4) | CWR29H(3)106(1)(2)D(5)         | 2.0                               | 6.0                              | 2.0                                |
| 10.0   | E            | T429E106(1)015(2)(3)(4) | CWR29H(3)106(1)(2)E(5)         | 2.0                               | 6.0                              | 1.2                                |
| 10.0   | F            | T429F106(1)015(2)(3)(4) | CWR29H(3)106(1)(2)F(5)         | 2.0                               | 6.0                              | 0.667                              |
| 15.0   | E            | T429E156(1)015(2)(3)(4) | CWR29H(3)156(1)(2)E(5)         | 2.0                               | 6.0                              | 1.2                                |
| 15.0   | F            | T429F156(1)015(2)(3)(4) | CWR29H(3)156(1)(2)F(5)         | 2.0                               | 8.0                              | 0.8                                |
| 22.0   | F            | T429F226(1)015(2)(3)(4) | CWR29H(3)226(1)(2)F(5)         | 3.0                               | 8.0                              | 0.8                                |
| 22.0   | G            | T429G226(1)015(2)(3)(4) | CWR29H(3)226(1)(2)G(5)         | 4.0                               | 6.0                              | 0.275                              |
| 33.0   | F            | T429F336(1)015(2)(3)(4) | CWR29H(3)336(1)(2)F(5)         | 5.0                               | 6.0                              | 0.8                                |
| 33.0   | G            | T429G336(1)015(2)(3)(4) | CWR29H(3)336(1)(2)G(5)         | 6.0                               | 8.0                              | 0.275                              |
| 33.0   | H            | T429H336(1)015(2)(3)(4) | CWR29H(3)336(1)(2)H(5)         | 5.0                               | 8.0                              | 0.18                               |
| 47.0   | G            | T429G476(1)015(2)(3)(4) | CWR29H(3)476(1)(2)G(5)         | 10.0                              | 8.0                              | 0.275                              |
| 47.0   | H            | T429H476(1)015(2)(3)(4) | CWR29H(3)476(1)(2)H(5)         | 10.0                              | 8.0                              | 0.18                               |
| 68.0   | G            | T429G686(1)015(2)(3)(4) | CWR29H(3)686(1)(2)G(5)         | 10.0                              | 8.0                              | 0.275                              |
| 68.0   | H            | T429H686(1)015(2)(3)(4) | CWR29H(3)686(1)(2)H(5)         | 10.0                              | 8.0                              | 0.18                               |
| 100.0  | H            | T429H107(1)015(2)(3)(4) | CWR29H(3)107(1)(2)H(5)         | 15.0                              | 10.0                             | 0.18                               |
| <b>20 Volt Rating at +85°C (13 Volt Rating at +125°C)</b>      |              |                         |                                |                                   |                                  |                                    |
| 0.47   | A            | T429A474(1)020(2)(3)(4) | CWR29J(3)474(1)(2)A(5)         | 1.0                               | 8.0                              | 7.5                                |
| 0.68   | A            | T429A684(1)020(2)(3)(4) | CWR29J(3)684(1)(2)A(5)         | 1.0                               | 6.0                              | 7.5                                |
| 0.68   | B            | T429B684(1)020(2)(3)(4) | CWR29J(3)684(1)(2)B(5)         | 1.0                               | 6.0                              | 5.6                                |
| 1.0  | A            | T429A105(1)020(2)(3)(4) | CWR29J(3)105(1)(2)A(5)         | 1.0                               | 6.0                              | 7.5                                |
| 1.0  | B            | T429B105(1)020(2)(3)(4) | CWR29J(3)105(1)(2)B(5)         | 1.0                               | 6.0                              | 4.8                                |
| 1.5  | B            | T429B155(1)020(2)(3)(4) | CWR29J(3)155(1)(2)B(5)         | 1.0                               | 6.0                              | 3.6                                |
| 1.5  | C            | T429C155(1)020(2)(3)(4) | CWR29J(3)155(1)(2)C(5)         | 1.0                               | 6.0                              | 2.4                                |

- (1) To complete KEMET/CWR part number, insert K = ±10%; M = ±20% and J = ±5% Capacitance tolerance.
- (2) To complete KEMET/CWR part number, insert A = Non-ER; Weibull: B = 0.1%/1000 Hrs.; C = 0.01%/1000 Hrs or D = 0.001%/1000 Hrs. or Exponential: M = 1.0%/1000 hrs., P = 0.1%/1000 hrs., R = 0.01%/1000 hrs. or S = 0.001%/1000 hrs. Reliability Level.
- (3) To complete KEMET part number, insert B = Gold plated; C = Hot solder dipped; H = Solder plated or K = Solder Fused Termination Finish.
- (4) To complete KEMET part number, insert 4250 = +25°C after Weibull; 4251 = -55° + 85°C after Weibull; or 4252 = -55, & +85°C before Weibull Surge Current Option.
- (5) To complete CWR part number, insert A = +25°C after Weibull; B = -55° + 85°C after Weibull; or C = -55, & +85°C before Weibull Surge Current Option.



## T429 (CWR29) Ratings & Part Number Reference

| Capacitance<br>μF   | Case<br>Size | KEMET<br>Part Number    | Mil-C-55365/11A<br>Part Number | DC<br>Leakage<br>μA @ 25°C<br>Max | DF %<br>@ +25°C<br>120 Hz<br>Max | ESR Ω<br>@ +25°C<br>100 kHz<br>Max |
|---|--------------|-------------------------|--------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| <b>20 Volt Rating at +85°C (13 Volt Rating at +125°C) cont.</b> |              |                         |                                |                                   |                                  |                                    |
| 2.2   | B            | T429B225(1)020(2)(3)(4) | CWR29J(3)225(1)(2)B(5)         | 1.0                               | 6.0                              | 3.6                                |
| 2.2   | D            | T429D225(1)020(2)(3)(4) | CWR29J(3)225(1)(2)D(5)         | 1.0                               | 6.0                              | 1.7                                |
| 3.3   | D            | T429D335(1)020(2)(3)(4) | CWR29J(3)335(1)(2)D(5)         | 1.0                               | 6.0                              | 2.0                                |
| 3.3   | E            | T429E335(1)020(2)(3)(4) | CWR29J(3)335(1)(2)E(5)         | 1.0                               | 6.0                              | 1.2                                |
| 4.7   | E            | T429E475(1)020(2)(3)(4) | CWR29J(3)475(1)(2)E(5)         | 1.0                               | 6.0                              | 1.7                                |
| 6.8   | E            | T429E685(1)020(2)(3)(4) | CWR29J(3)685(1)(2)E(5)         | 2.0                               | 6.0                              | 1.5                                |
| 6.8   | F            | T429F685(1)020(2)(3)(4) | CWR29J(3)685(1)(2)F(5)         | 2.0                               | 6.0                              | 0.7                                |
| 10.0  | E            | T429E106(1)020(2)(3)(4) | CWR29J(3)106(1)(2)E(5)         | 2.0                               | 6.0                              | 1.5                                |
| 100   | F            | T429F106(1)020(2)(3)(4) | CWR29J(3)106(1)(2)F(5)         | 2.0                               | 6.0                              | 0.8                                |
| 15.0  | F            | T429F156(1)020(2)(3)(4) | CWR29J(3)156(1)(2)F(5)         | 3.0                               | 6.0                              | 0.8                                |
| 15.0  | G            | T429G156(1)020(2)(3)(4) | CWR29J(3)156(1)(2)G(5)         | 3.0                               | 6.0                              | 0.275                              |
| 22.0  | G            | T429G226(1)020(2)(3)(4) | CWR29J(3)226(1)(2)G(5)         | 4.0                               | 6.0                              | 0.625                              |
| 22.0  | H            | T429H226(1)020(2)(3)(4) | CWR29J(3)226(1)(2)H(5)         | 4.0                               | 6.0                              | 0.18                               |
| 33.0  | H            | T429H336(1)020(2)(3)(4) | CWR29J(3)336(1)(2)H(5)         | 6.0                               | 8.0                              | 0.18                               |
| 47.0  | H            | T429H476(1)020(2)(3)(4) | CWR29J(3)476(1)(2)H(5)         | 10.0                              | 8.0                              | 0.18                               |
| 47.0  | X            | T429X476(1)020(2)(3)(4) | CWR29J(3)476(1)(2)X(5)         | 10.0                              | 8.0                              | 0.11                               |
| <b>25 Volt Rating at +85°C (17 Volt Rating at +125°C)</b>       |              |                         |                                |                                   |                                  |                                    |
| 0.33  | A            | T429A334(1)025(2)(3)(4) | CWR29K(3)334(1)(2)A(5)         | 1.0                               | 6.0                              | 7.5                                |
| 0.47  | A            | T429A474(1)025(2)(3)(4) | CWR29K(3)474(1)(2)A(5)         | 1.0                               | 6.0                              | 7.5                                |
| 0.68  | B            | T429B684(1)025(2)(3)(4) | CWR29K(3)684(1)(2)B(5)         | 1.0                               | 6.0                              | 4.0                                |
| 1.0   | B            | T429B105(1)025(2)(3)(4) | CWR29K(3)105(1)(2)B(5)         | 1.0                               | 6.0                              | 4.0                                |
| 1.0   | C            | T429C105(1)025(2)(3)(4) | CWR29K(3)105(1)(2)C(5)         | 1.0                               | 6.0                              | 2.6                                |
| 1.5   | D            | T429D155(1)025(2)(3)(4) | CWR29K(3)155(1)(2)D(5)         | 1.0                               | 6.0                              | 1.7                                |
| 2.2   | D            | T429D225(1)025(2)(3)(4) | CWR29K(3)225(1)(2)D(5)         | 1.0                               | 6.0                              | 2.0                                |
| 2.2   | E            | T429E225(1)025(2)(3)(4) | CWR29K(3)225(1)(2)E(5)         | 1.0                               | 6.0                              | 1.0                                |
| 3.3   | E            | T429E335(1)025(2)(3)(4) | CWR29K(3)335(1)(2)E(5)         | 1.0                               | 6.0                              | 1.2                                |
| 4.7   | F            | T429F475(1)025(2)(3)(4) | CWR29K(3)475(1)(2)F(5)         | 2.0                               | 6.0                              | 0.7                                |
| 6.8   | F            | T429F685(1)025(2)(3)(4) | CWR29K(3)685(1)(2)F(5)         | 2.0                               | 6.0                              | 0.8                                |
| 6.8   | G            | T429G685(1)025(2)(3)(4) | CWR29K(3)685(1)(2)G(5)         | 2.0                               | 6.0                              | 0.3                                |
| 10.0  | G            | T429G106(1)025(2)(3)(4) | CWR29K(3)106(1)(2)G(5)         | 3.0                               | 6.0                              | 0.35                               |
| 15.0  | G            | T429G156(1)025(2)(3)(4) | CWR29K(3)156(1)(2)G(5)         | 4.0                               | 6.0                              | 0.35                               |
| 15.0  | H            | T429H156(1)025(2)(3)(4) | CWR29K(3)156(1)(2)H(5)         | 4.0                               | 6.0                              | 0.2                                |
| 22.0  | G            | T429G226(1)025(2)(3)(4) | CWR29K(3)226(1)(2)G(5)         | 6.0                               | 6.0                              | 0.35                               |
| 22.0  | H            | T429H226(1)025(2)(3)(4) | CWR29K(3)226(1)(2)H(5)         | 6.0                               | 6.0                              | 0.18                               |
| 22.0  | X            | T429X226(1)025(2)(3)(4) | CWR29K(3)226(1)(2)X(5)         | 6.0                               | 6.0                              | 0.16                               |
| 33.0  | H            | T429H336(1)025(2)(3)(4) | CWR29K(3)336(1)(2)H(5)         | 10.0                              | 8.0                              | 0.18                               |
| 33.0  | X            | T429X336(1)025(2)(3)(4) | CWR29K(3)336(1)(2)X(5)         | 10.0                              | 8.0                              | 0.13                               |
| <b>35 Volt Rating at +85°C (23 Volt Rating at +125°C)</b>       |              |                         |                                |                                   |                                  |                                    |
| 0.22  | A            | T429A224(1)035(2)(3)(4) | CWR29M(3)224(1)(2)A(5)         | 1.0                               | 6.0                              | 12.0                               |
| 0.33  | A            | T429A334(1)035(2)(3)(4) | CWR29M(3)334(1)(2)A(5)         | 1.0                               | 6.0                              | 12.0                               |
| 0.47  | B            | T429B474(1)035(2)(3)(4) | CWR29M(3)474(1)(2)B(5)         | 1.0                               | 6.0                              | 6.8                                |
| 0.68  | C            | T429C684(1)035(2)(3)(4) | CWR29M(3)684(1)(2)C(5)         | 1.0                               | 6.0                              | 4.0                                |
| 1.0   | D            | T429D105(1)035(2)(3)(4) | CWR29M(3)105(1)(2)D(5)         | 1.0                               | 6.0                              | 2.2                                |
| 1.5   | E            | T429E155(1)035(2)(3)(4) | CWR29M(3)155(1)(2)E(5)         | 1.0                               | 6.0                              | 1.3                                |
| 3.3   | F            | T429F335(1)035(2)(3)(4) | CWR29M(3)335(1)(2)F(5)         | 1.0                               | 6.0                              | 0.7                                |
| 4.7   | G            | T429G475(1)035(2)(3)(4) | CWR29M(3)475(1)(2)G(5)         | 2.0                               | 6.0                              | 0.375                              |
| 6.8   | G            | T429G685(1)035(2)(3)(4) | CWR29M(3)685(1)(2)G(5)         | 3.0                               | 6.0                              | 0.375                              |
| 6.8   | H            | T429H685(1)035(2)(3)(4) | CWR29M(3)685(1)(2)H(5)         | 3.0                               | 6.0                              | 0.5                                |
| 10.0  | H            | T429H106(1)035(2)(3)(4) | CWR29M(3)106(1)(2)H(5)         | 4.0                               | 8.0                              | 0.5                                |
| 15.0  | X            | T429X156(1)035(2)(3)(4) | CWR29M(3)156(1)(2)X(5)         | 6.0                               | 6.0                              | 0.19                               |
| <b>50 Volt Rating at +85°C (33 Volt Rating at +125°C)</b>       |              |                         |                                |                                   |                                  |                                    |
| 0.10  | A            | T429A104(1)050(2)(3)(4) | CWR29N(3)104(1)(2)A(5)         | 1.0                               | 6.0                              | 12.0                               |
| 0.15  | A            | T429A154(1)050(2)(3)(4) | CWR29N(3)154(1)(2)A(5)         | 1.0                               | 6.0                              | 12.0                               |
| 0.22  | B            | T429B224(1)050(2)(3)(4) | CWR29N(3)224(1)(2)B(5)         | 1.0                               | 6.0                              | 6.8                                |
| 0.33  | B            | T429B334(1)050(2)(3)(4) | CWR29N(3)334(1)(2)B(5)         | 1.0                               | 6.0                              | 4.8                                |
| 0.47  | C            | T429C474(1)050(2)(3)(4) | CWR29N(3)474(1)(2)C(5)         | 1.0                               | 6.0                              | 3.2                                |
| 0.68  | D            | T429D684(1)050(2)(3)(4) | CWR29N(3)684(1)(2)D(5)         | 1.0                               | 6.0                              | 2.3                                |
| 1.0   | E            | T429E105(1)050(2)(3)(4) | CWR29N(3)105(1)(2)E(5)         | 1.0                               | 6.0                              | 1.7                                |
| 1.5   | F            | T429F155(1)050(2)(3)(4) | CWR29N(3)155(1)(2)F(5)         | 1.0                               | 6.0                              | 1.1                                |
| 2.2   | F            | T429F225(1)050(2)(3)(4) | CWR29N(3)225(1)(2)F(5)         | 2.0                               | 6.0                              | 0.7                                |
| 3.3   | G            | T429G335(1)050(2)(3)(4) | CWR29N(3)335(1)(2)G(5)         | 2.0                               | 6.0                              | 0.5                                |
| 4.7   | H            | T429H475(1)050(2)(3)(4) | CWR29N(3)475(1)(2)H(5)         | 3.0                               | 6.0                              | 0.5                                |

- (1) To complete KEMET/CWR part number, insert K = ±10%; M = ±20% and J = ±5% Capacitance tolerance.
- (2) To complete KEMET/CWR part number, insert A = Non-ER; Weibull: B = 0.1%/1000 Hrs.; C = 0.01%/1000 Hrs or D# = 0.001%/1000 Hrs. or Exponential: M = 1.0%/1000 hrs., P = 0.1%/1000 hrs., R = 0.01%/1000 hrs. or S = 0.001%/1000 hrs. Reliability Level.  
Note: D# - 50 Volt Components not Qualified to D Product Level.
- (3) To complete KEMET part number, insert B = Gold plated; C = Hot solder dipped; H = Solder plated or K = Solder Fused Termination Finish.
- (4) To complete KEMET part number, insert 4250 = +25°C after Weibull; 4251 = -55° + 85°C after Weibull; or 4252 = -55, & +85°C before Weibull Surge Current Option.
- (5) To complete CWR part number, insert A = +25°C after Weibull; B = -55° + 85°C after Weibull; or C = -55, & +85°C before Weibull SurgeCurrent Option.

## Land Pattern Dimensions for Reflow Solder

| Size Code |      | Pad Dimensions (mm) |      |      |         |         |
|-----------|------|---------------------|------|------|---------|---------|
| KEMET     | EIA  | Z                   | G    | X    | Y (Ref) | C (ref) |
| A         | 1005 | 3.42                | 0.18 | 1.85 | 1.73    | 1.78    |
| B         | 1505 | 4.65                | 1.45 | 1.85 | 1.73    | 3.05    |
| C         | 2005 | 5.72                | 2.72 | 1.85 | 1.73    | 4.32    |
| D         | 1510 | 4.65                | 1.45 | 2.87 | 1.73    | 3.05    |
| E         | 2010 | 5.72                | 2.72 | 2.87 | 1.73    | 4.32    |
| F         | 2214 | 6.43                | 3.23 | 3.89 | 1.73    | 4.83    |
| G         | 2711 | 7.57                | 3.35 | 3.25 | 2.24    | 5.46    |
| H         | 2915 | 8.08                | 3.86 | 3.89 | 2.24    | 5.97    |
| X         | 2824 | 8.08                | 3.28 | 3.07 | 2.54    | 5.66    |



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