

# Aluminum Electrolytic Capacitors

## 105°C 2000~5000Hrs

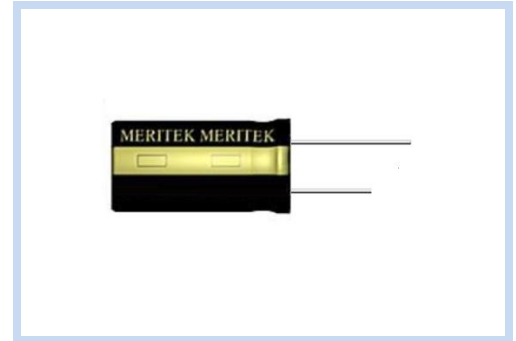
REZ Series

MERITEK

### FEATURE

- Operating Temperature: -55°C ~ +105°C
- Low Impedance and Long Life with Standing 5000 Hours Load Life.
- Suitable for Electronic Ballast, Adaptor and Switching Power
- Load Life

|      |         |         |         |
|------|---------|---------|---------|
| Dia  | 5~6.3mm | 8mm     | ≥10mm   |
| Life | 2000hrs | 3000hrs | 5000hrs |



### SPECIFICATIONS

| Item                                      | Characteristic  |                                   |      |      |      |      |   |         |         |
|---|---|-----------------------------------|------|------|------|------|---|---------|---------|
| Operation Temperature                     | -55°C ~ + 105°C   |                                   |      |      |      |      |   |         |         |
| Rated Working Voltage                     | 6.3 ~ 63VDC   |                                   |      |      |      |      |   |         |         |
| Capacitance Tolerance                     | ±20% (M); 120Hz 20°C  |                                   |      |      |      |      |   |         |         |
| Leakage Current at 20°C                   | I ≤ 0.01CV or 3 (μA)<br>*Whichever is greater after 2 minutes |                                   |      |      |      | I:   | Leakage Current (μA)  |         |         |
|   |   |                                   |      |      |      | C:   | Capacitance (μF)  |         |         |
|   |   |                                   |      |      |      | V:   | Working Voltage (V)   |         |         |
| Surge Voltage at 20°C                     | Rated Voltage (V)   | 6.3                               | 10   | 16   | 25   | 35   | 50  | 63      |         |
|   | Surge Voltage (V)   | 8                                 | 13   | 20   | 32   | 44   | 63  | 79      |         |
| Dissipation Factor-tan δ<br>At 120Hz 20°C | Rated Voltage (V)   | 6.3                               | 10   | 16   | 25   | 35   | 50  | 63      |         |
|   | tan δ max   | 0.22                              | 0.19 | 0.16 | 0.14 | 0.12 | 0.10  | 0.09    |         |
|   | Add 0.02 per 1000 μF for more than 1000 μF                    |                                   |      |      |      |      |   |         |         |
| Low Temperature Stability                 | Rated Voltage (V)   | 6.3                               | 10   | 16   | 25   | 35   | 50  | 63      |         |
|   | -25°C / +20°C   | 2                                 | 2    | 2    | 2    | 2    | 2   | 2       |         |
|   | -55°C / +20°C   | 3                                 | 3    | 3    | 3    | 3    | 3   | 3       |         |
|   | Impedance ratio at 120Hz                                      |                                   |      |      |      |      |   |         |         |
| Load Life                                 | Capacitance Change  | ≤ ±20% of initial value           |      |      |      |      | After working hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage) |         |         |
|   | Dissipation Factor  | ≤ 200% of initial specified value |      |      |      |      |   |         |         |
|   | Leakage current   | ≤ initial specified value         |      |      |      |      |   |         |         |
|   |   |                                   |      |      |      | Dia  | 5~6.3mm   | 8mm     | ≥10mm   |
|   |   |                                   |      |      |      | Lif  | 2000hrs   | 3000hrs | 5000hrs |
| Shelf Life                                | Capacitance Change  | ≤ ±20% of initial value           |      |      |      |      | At +105°C no voltage application after 1000 hours the capacitor shall meet the following limits. (with voltage treatment)   |         |         |
|   | Dissipation Factor  | ≤ 150% of initial specified value |      |      |      |      |   |         |         |
|   | Leakage current   | ≤ 200% of initial specified value |      |      |      |      |   |         |         |

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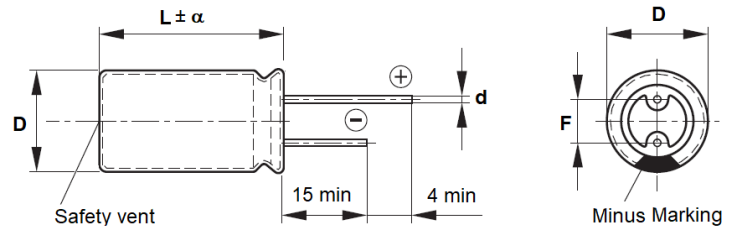
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### DIMENSION

Unit: mm

| D+0.5(max) | 5   | 6.3 | 8   | 10  | 12.5 | 16  | 18  |
|------------|-----|-----|-----|-----|------|-----|-----|
| F±0.5      | 2.0 | 2.5 | 3.5 | 5.0 | 5.0  | 7.5 | 7.5 |
| d±0.05     | 0.5 | 0.5 | 0.6 | 0.6 | 0.6  | 0.8 | 0.8 |
| α          | 1.5 | 1.5 | 1.5 | 1.5 | 2.0  | 2.0 | 2.0 |



### RIPPLE CURRENT COEFFICIENTS

| Working Voltage | Frequency Coefficient |       |       |      |       |          |
|-----------------|-----------------------|-------|-------|------|-------|----------|
|                 | 60Hz                  | 120Hz | 400Hz | 1KHz | 10KHz | ≥ 100KHz |
| 6.3~16V         | 0.45                  | 0.60  | 0.83  | 0.94 | 0.98  | 1.00     |
| 25~35V          | 0.38                  | 0.50  | 0.75  | 0.90 | 0.97  | 1.00     |
| 50~63V          | 0.36                  | 0.46  | 0.70  | 0.88 | 0.94  | 1.00     |

| Temperature Coefficient |        |
|-------------------------|--------|
| °C                      | Factor |
| 65°C                    | 2.12   |
| 75°C                    | 1.92   |
| 85°C                    | 1.69   |
| 95°C                    | 1.50   |
| 105°C                   | 1.00   |

### CASE SIZE AND MAX RIPPLE CURRENT

| Capacitance |      | 6.3VDC (0J) |           |          |        | 10VDC (1A) |           |          |        |
|-------------|------|-------------|-----------|----------|--------|------------|-----------|----------|--------|
|             |      | DxL         | Impedance |          | RC     | DxL        | Impedance |          | RC     |
| μF          | Code | (mm)        | 20°C(Ω)   | -10°C(Ω) | A(rms) | (mm)       | 20°C(Ω)   | -10°C(Ω) | A(rms) |
| 47          | 470  | --          | --        | --       | --     | --         | --        | --       | --     |
| 68          | 680  | --          | --        | --       | --     | --         | --        | --       | --     |
| 100         | 101  | --          | --        | --       | --     | 5x11       | 0.500     | 1.250    | 0.24   |
| 220         | 221  | 6.3x11      | 0.308     | 0.769    | 0.39   | 6.3x11     | 0.249     | 0.623    | 0.41   |
| 330         | 331  | 6.3x11      | 0.246     | 0.615    | 0.48   | 8x11       | 0.169     | 0.423    | 0.61   |
| 470         | 471  | 8x11        | 0.178     | 0.446    | 0.70   | 8x11       | 0.139     | 0.346    | 0.73   |
| 680         | 681  | 10x12.5     | 0.081     | 0.203    | 1.00   | 10x12.5    | 0.077     | 0.194    | 1.03   |
| 1000        | 102  | 8x20        | 0.066     | 0.166    | 1.31   | 10x16      | 0.063     | 0.158    | 1.39   |
| 1200        | 122  | 10x16       | 0.058     | 0.144    | 1.47   | 10x20      | 0.055     | 0.137    | 1.68   |
| 1500        | 152  | 10x20       | 0.049     | 0.123    | 1.75   | 10x25      | 0.047     | 0.116    | 2.01   |
| 2200        | 222  | 10x25       | 0.038     | 0.094    | 2.27   | 12.5x20    | 0.036     | 0.090    | 2.41   |
| 3300        | 332  | 12.5x20     | 0.032     | 0.079    | 2.69   | 12.5x25    | 0.030     | 0.075    | 3.05   |
| 4700        | 472  | 12.5x30     | 0.027     | 0.067    | 3.56   | 16x25      | 0.025     | 0.051    | 3.35   |
| 6800        | 682  | 16x25       | 0.024     | 0.048    | 3.61   | 16x32      | 0.023     | 0.045    | 3.46   |
| 10000       | 103  | 16x32       | 0.022     | 0.043    | 3.64   | 18x36      | 0.021     | 0.041    | 3.92   |
| 15000       | 153  | 18x36       | 0.020     | 0.041    | 4.12   | 18x40      | 0.019     | 0.039    | 4.40   |

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### CASE SIZE AND MAX RIPPLE CURRENT

| Capacitance |      | 16VDC (1C) |           |          |        |
|-------------|------|------------|-----------|----------|--------|
|             |      | DxL        | Impedance |          | RC     |
| μF          | Code | (mm)       | 20°C(Ω)   | -10°C(Ω) | A(rms) |
| 47          | 470  | 5x11       | 0.568     | 1.421    | 0.17   |
| 68          | 680  | 5x11       | 0.500     | 1.250    | 0.21   |
| 100         | 101  | 6.3x11     | 0.367     | 0.918    | 0.29   |
| 220         | 221  | 8x11       | 0.190     | 0.474    | 0.52   |
| 330         | 331  | 10x12.5    | 0.114     | 0.285    | 0.75   |
| 470         | 471  | 10x12.5    | 0.093     | 0.233    | 0.90   |
| 680         | 681  | 10x16      | 0.074     | 0.184    | 1.20   |
| 1000        | 102  | 10x20      | 0.060     | 0.150    | 1.60   |
| 1200        | 122  | 10x25      | 0.052     | 0.130    | 1.94   |
| 1500        | 152  | 12.5x20    | 0.044     | 0.111    | 2.13   |
| 2200        | 222  | 12.5x25    | 0.034     | 0.086    | 2.75   |
| 3300        | 332  | 16x25      | 0.029     | 0.057    | 3.14   |
| 4700        | 472  | 16x32      | 0.024     | 0.048    | 3.24   |
| 6800        | 682  | 18x36      | 0.022     | 0.043    | 3.75   |
| 10000       | 103  | 18x40      | 0.019     | 0.039    | 4.20   |
| 15000       | 153  | --         | --        | --       | --     |

| Capacitance |      | 25VDC (1E) |           |          |        | 35VDC (1V) |           |          |        |
|-------------|------|------------|-----------|----------|--------|------------|-----------|----------|--------|
|             |      | DxL        | Impedance |          | RC     | DxL        | Impedance |          | RC     |
| μF          | Code | (mm)       | 20°C(Ω)   | -10°C(Ω) | A(rms) | (mm)       | 20°C(Ω)   | -10°C(Ω) | A(rms) |
| 10          | 100  | --         | --        | --       | --     | 5x11       | 1.498     | 3.745    | 0.11   |
| 22          | 220  | --         | --        | --       | --     | 5x11       | 0.817     | 2.043    | 0.16   |
| 33          | 330  | --         | --        | --       | --     | 5x11       | 0.636     | 1.589    | 0.20   |
| 47          | 470  | 5x11       | 0.539     | 1.348    | 0.22   | 6.3x11     | 0.510     | 1.275    | 0.27   |
| 68          | 680  | 6.3x11     | 0.419     | 1.049    | 0.30   | 6.3x11     | 0.397     | 0.991    | 0.33   |
| 100         | 101  | 6.3x11     | 0.349     | 0.871    | 0.36   | 8x11       | 0.330     | 0.824    | 0.49   |
| 220         | 221  | 8x11       | 0.180     | 0.450    | 0.65   | 10x12.5    | 0.128     | 0.319    | 0.85   |
| 330         | 331  | 10x12.5    | 0.108     | 0.270    | 0.94   | 10x16      | 0.102     | 0.255    | 1.15   |
| 470         | 471  | 10x16      | 0.088     | 0.221    | 1.25   | 10x20      | 0.084     | 0.209    | 1.52   |
| 680         | 681  | 10x20      | 0.070     | 0.175    | 1.65   | 12.5x20    | 0.066     | 0.165    | 2.07   |
| 1000        | 102  | 12.5x20    | 0.057     | 0.143    | 2.27   | 12.5x25    | 0.054     | 0.135    | 2.77   |
| 1200        | 122  | 12.5x20    | 0.050     | 0.124    | 2.49   | 12.5x30    | 0.047     | 0.117    | 3.29   |
| 1500        | 152  | 12.5x25    | 0.042     | 0.105    | 2.94   | 16x25      | 0.040     | 0.079    | 3.32   |
| 2200        | 222  | 16x25      | 0.032     | 0.065    | 3.42   | 16x32      | 0.031     | 0.077    | 3.49   |
| 3300        | 332  | 16x32      | 0.027     | 0.054    | 3.66   | 18x36      | 0.026     | 0.064    | 4.17   |
| 4700        | 472  | 18x36      | 0.023     | 0.046    | 4.23   | --         | --        | --       | --     |

# Aluminum Electrolytic Capacitors

## 105°C 2000~5000Hrs

REZ Series

MERITEK

### CASE SIZE AND MAX RIPPLE CURRENT

| Capacitance |      | 50VDC (1H) |           |          |        | 63VDC (1J) |           |          |        |
|-------------|------|------------|-----------|----------|--------|------------|-----------|----------|--------|
|             |      | DxL        | Impedance |          | RC     | DxL        | Impedance |          | RC     |
| μF          | Code | (mm)       | 20°C(Ω)   | -10°C(Ω) | A(rms) | (mm)       | 20°C(Ω)   | -10°C(Ω) | A(rms) |
| 10          | 100  | 5x11       | 1.331     | 3.992    | 0.13   | 5x11       | 1.331     | 3.992    | 0.13   |
| 22          | 220  | 5x11       | 0.726     | 2.177    | 0.19   | 6.3x11     | 0.726     | 1.814    | 0.22   |
| 33          | 330  | 6.3x11     | 0.564     | 1.411    | 0.26   | 6.3x15     | 0.564     | 1.411    | 0.30   |
| 47          | 470  | 6.3x11     | 0.453     | 1.132    | 0.31   | 8x11       | 0.453     | 1.132    | 0.38   |
| 68          | 680  | 8x11       | 0.352     | 0.880    | 0.46   | 10x12.5    | 0.264     | 0.660    | 0.54   |
| 100         | 101  | 8x20       | 0.220     | 0.549    | 0.71   | 10x16      | 0.220     | 0.549    | 0.73   |
| 220         | 221  | 10x16      | 0.113     | 0.283    | 1.09   | 10x25      | 0.113     | 0.283    | 1.33   |
| 330         | 331  | 10x20      | 0.091     | 0.227    | 1.47   | 12.5x20    | 0.091     | 0.227    | 1.66   |
| 470         | 471  | 12.5x20    | 0.074     | 0.186    | 1.99   | 12.5x25    | 0.074     | 0.186    | 2.19   |
| 680         | 681  | 12.5x25    | 0.059     | 0.147    | 2.63   | 16x25      | 0.059     | 0.117    | 2.63   |
| 1000        | 102  | 16x25      | 0.048     | 0.096    | 3.19   | 16x36      | 0.048     | 0.096    | 3.17   |
| 1200        | 122  | 16x32      | 0.042     | 0.083    | 3.29   | 18x36      | 0.042     | 0.083    | 3.48   |
| 1500        | 152  | 16x36      | 0.035     | 0.071    | 3.44   | 18x40      | 0.035     | 0.071    | 3.87   |
| 2200        | 222  | 18x36      | 0.027     | 0.055    | 4.20   | --         | --        | --       | --     |
| 3300        | 332  | 18x40      | 0.023     | 0.046    | 4.97   | --         | --        | --       | --     |

Note:

1. Max ripple current :A(rms) at 105°C. 100KHz
2. Max impedance(Ω) at 100KHz

# Aluminum Electrolytic Capacitors

## 105°C 2000~5000Hrs

REZ Series

**MERITEK**

### PART NUMBERING SYSTEM

REZ   1H   101   M   H   200   A   D  
 (1)   (2)   (3)   (4)   (5)   (6)   (7)   (8)

| No  | Item               | Code | Description                      | Series Reference                                |
|-----|--------------------|------|----------------------------------|---|
| (1) | Meritek Series     | REZ  | Aluminum Electrolytic Capacitors | Low Impedance, up to 5000 Hrs +105°C            |
| (2) | Rated Voltage Code | 1H   | 50V:50V                          | DC working voltage, See Table Below             |
| (3) | Capacitance        | 101  | 101:100µF                        | First two digit: significant, Third: Multiplier |
| (4) | Tolerance          | M    | M: ± 20%                         | -20% ~ +20%                                     |
| (5) | Case Diameter Code | H    | H: 8.0 mm                        | See Table Below                                 |
| (6) | Case Height        | 200  | 200: 20 mm                       | Third digit denotes the first decimal place     |
| (7) | Package            | A    | A: Tape & Ammo                   | R: Tape & Reel, Blank : Bulk                    |
| (8) | Taping Pitch Code  | D    | D: 3.5 mm                        | See Table Below, Blank: Bulk                    |

| Voltage | 4  | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 | 500 |
|---------|----|-----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| Code    | 0G | 0J  | 1A | 1C | 1E | 1V | 1H | 1J | 2A  | 2C  | 2D  | 2E  | 2V  | 2G  | 2W  | 2H  |

| Diameter | 4 | 5 | 6.3 | 8 | 10 | 12.5 | 14.5 | 16 | 18 | 20 | 22 | 25 |
|----------|---|---|-----|---|----|------|------|----|----|----|----|----|
| Code     | D | E | F   | H | J  | K    | U    | L  | M  | N  | P  | Q  |

| Pitch | 1.5 | 2 | 2.5 | 3.5 | 5 | 7.5 |
|-------|-----|---|-----|-----|---|-----|
| Code  | A   | B | C   | D   | E | F   |

### LEGACY PART NUMBERING SYSTEM

REZ   50V   101   M   TA   0820  
 (1)   (2)   (3)   (4)   (5)   (6)

| No   | (1)            | (2)           | (3)         | (4)       | (5)     | (6)       |
|------|----------------|---------------|-------------|-----------|---------|-----------|
| Item | Meritek Series | Rated Voltage | Capacitance | Tolerance | Package | Case Size |

\*Specifications subject to change without notice.