

# Aluminum Electrolytic Capacitors

## 105°C 5000Hrs

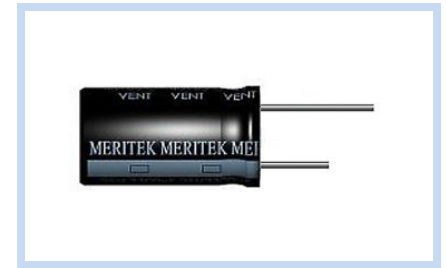
HTY Series

**MERITEK**

### FEATURE

- Operating Temperature: -40°C ~ +105°C
- Low Impedance at High Frequency
- Large Permissible Ripple Current
- Suitable for Electronic Ballast, Adaptor and Switching Power
- Load Life at +105°C

|           |          |
|-----------|----------|
| Diameter  | 6.3~18mm |
| Load Life | 5000hrs  |



### SPECIFICATIONS

| Item                                     | Characteristic                                                                                                           |                                   |       |              |                                                                                                                                       |        |      |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------|--------------|---------------------------------------------------------------------------------------------------------------------------------------|--------|------|
| Operation Temperature                    | -40 ~ +105°C                                                                                                             |                                   |       | -25 ~ +105°C |                                                                                                                                       |        |      |
| Rated Working Voltage                    | 160 ~ 250VDC                                                                                                             |                                   |       | 350 ~ 450VDC |                                                                                                                                       |        |      |
| Capacitance Tolerance                    | ±20% (M); at 120Hz 20°C                                                                                                  |                                   |       |              |                                                                                                                                       |        |      |
| Leakage Current                          | I ≤ 0.02CV or 15μA, *After 5 minutes, at 20±2°C<br>I : Leakage Current (μA), C: Capacitance (μF), V: Working Voltage (V) |                                   |       |              |                                                                                                                                       |        |      |
| Dissipation Factor- tan δ at 120Hz 20°C  | Rated Voltage (V)                                                                                                        | 160                               | 200   | 250          | 350                                                                                                                                   | 400    | 450  |
|                                          | tan δ max                                                                                                                | 0.15                              | 0.15  | 0.15         | 0.20                                                                                                                                  | 0.20   | 0.20 |
| Ripple Current Coefficient - Frequency   | Capacitance (μF)                                                                                                         | 120Hz                             | 400Hz | 1KHz         | 10KHz                                                                                                                                 | 100KHz | --   |
|                                          | ≤10                                                                                                                      | 1.00                              | 1.62  | 1.91         | 2.50                                                                                                                                  | 2.94   | --   |
|                                          | 10<Cap≤100                                                                                                               | 1.00                              | 1.89  | 1.94         | 2.54                                                                                                                                  | 2.70   | --   |
|                                          | 100<Cap                                                                                                                  | 1.00                              | 1.34  | 1.25         | 1.73                                                                                                                                  | 1.92   | --   |
| Ripple Current Coefficient - Temperature | Temperature                                                                                                              | ≤ 70°C                            |       | 85°C         |                                                                                                                                       | 105°C  |      |
|                                          | Factor                                                                                                                   | 1.65                              |       | 1.37         |                                                                                                                                       | 1.00   |      |
| Low Temperature Stability                | Rated Voltage (V)                                                                                                        | 160                               | 200   | 250          | 350                                                                                                                                   | 400    | 450  |
|                                          | -25°C / +20°C                                                                                                            | 3                                 | 3     | 3            | 6                                                                                                                                     | 6      | 6    |
|                                          | -40°C / +20°C                                                                                                            | 6                                 | 6     | 6            | -                                                                                                                                     | -      | -    |
|                                          | Impedance ratio at 120Hz                                                                                                 |                                   |       |              |                                                                                                                                       |        |      |
| Damp Heat                                | Capacitance Change                                                                                                       | ≤ ±20% of initial value           |       |              | After storage conditions of 40 ±2°C and R.H. of 90% to 95% for 240±8 hours, Stabilizing for 1 to 2 hours.                             |        |      |
|                                          | Dissipation Factor                                                                                                       | ≤ specified initial value         |       |              |                                                                                                                                       |        |      |
|                                          | Leakage current                                                                                                          | ≤ specified initial value         |       |              |                                                                                                                                       |        |      |
| Load Life                                | Capacitance Change                                                                                                       | ≤ ±20% of initial value           |       |              | Apply rated voltage for rated load life / temperature, Stabilized at +20°C                                                            |        |      |
|                                          | Dissipation Factor                                                                                                       | ≤ 200% of initial specified value |       |              |                                                                                                                                       |        |      |
|                                          | Leakage current                                                                                                          | ≤ initial specified value         |       |              |                                                                                                                                       |        |      |
| Shelf Life                               | Capacitance Change                                                                                                       | ≤ ±20% of initial value           |       |              | After storage conditions without voltage applied for 1000 hours at Rated Temperature, Stabilizing at +20°C                            |        |      |
|                                          | Dissipation Factor                                                                                                       | ≤ 200% of initial specified value |       |              |                                                                                                                                       |        |      |
|                                          | Leakage current                                                                                                          | ≤ 300% of initial specified value |       |              |                                                                                                                                       |        |      |
| Resistance to Soldering Heat             | Capacitance Change                                                                                                       | ≤ ±20% of initial value           |       |              | For other procedures than those specified, Soldering bath method: Temperature: 260 ±5°C<br>Application time of soldering bath: 10 sec |        |      |
|                                          | Dissipation Factor                                                                                                       | ≤ initial specified value         |       |              |                                                                                                                                       |        |      |
|                                          | Leakage current                                                                                                          | ≤ initial specified value         |       |              |                                                                                                                                       |        |      |

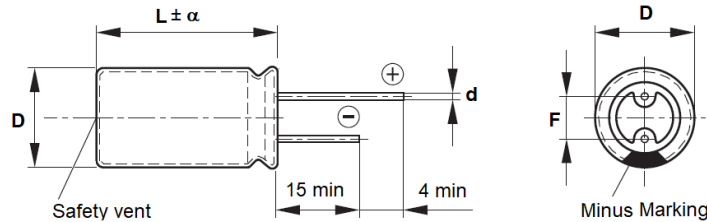
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## 105°C 5000Hrs

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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 |
| $\alpha$   | 1.0 | 1.0 | 1.0 | 1.5 | 1.5  | 1.5 | 1.5 |

### CASE SIZE AND MAX RIPPLE CURRENT

| Capacitance   |      | 160VDC (2C) |              |         | 200VDC (2D) |              |         | 250VDC (2E) |              |         |
|---------------|------|-------------|--------------|---------|-------------|--------------|---------|-------------|--------------|---------|
|               |      | DxL         | Impedance    | RC      | DxL         | Impedance    | RC      | DxL         | Impedance    | RC      |
| $\mu\text{F}$ | Code | (mm)        | ( $\Omega$ ) | mA(rms) | (mm)        | ( $\Omega$ ) | mA(rms) | (mm)        | ( $\Omega$ ) | mA(rms) |
| 10            | 100  | --          | --           | --      | --          | --           | --      | 10x20       | 3.50         | 330     |
| 22            | 220  | 10x16       | 1.30         | 500     | 10x20       | 1.50         | 500     | 12.5x20     | 2.30         | 510     |
| 33            | 330  | 10x16       | 1.30         | 590     | 12.5x20     | 0.91         | 620     | 12.5x20     | 1.70         | 670     |
| 47            | 470  | 10x20       | 0.91         | 760     | 12.5x20     | 0.91         | 810     | 12.5x25     | 1.70         | 680     |
| 68            | 680  | 12.5x25     | 0.63         | 990     | 12.5x25     | 0.63         | 990     | 16x25       | 0.78         | 1040    |
| 100           | 101  | 16x25       | 0.43         | 1310    | 16x25       | 0.27         | 1330    | 16x31.5     | 0.63         | 1430    |
| 150           | 151  | 16x31.5     | 0.22         | 1350    | 16x31.5     | 0.25         | 1360    | 18x35.5     | 0.42         | 1480    |
| 220           | 221  | 16x31.5     | 0.22         | 1380    | 16x31.5     | 0.22         | 1740    | 18x40       | 0.35         | 1510    |
| 330           | 331  | 18x35.5     | 0.22         | 1740    | --          | --           | --      | --          | --           | --      |

| Capacitance   |      | 350VDC (2V) |              |         | 400VDC (2G) |              |         | 450VDC (2W) |              |         |
|---------------|------|-------------|--------------|---------|-------------|--------------|---------|-------------|--------------|---------|
|               |      | DxL         | Impedance    | RC      | DxL         | Impedance    | RC      | DxL         | Impedance    | RC      |
| $\mu\text{F}$ | Code | (mm)        | ( $\Omega$ ) | mA(rms) | (mm)        | ( $\Omega$ ) | mA(rms) | (mm)        | ( $\Omega$ ) | mA(rms) |
| 3.3           | 3R3  | 6.3x11      | 4.00         | 185     | 8x11.5      | 3.90         | 160     | 10x20       | 3.50         | 280     |
| 4.7           | 4R7  | 8x11.5      | 3.50         | 190     | 8x11.5      | 3.40         | 200     | 10x20       | 3.00         | 300     |
| 4.7           | 4R7  | 10x20       | 2.90         | 220     | 10x20       | 2.90         | 220     | 12.5x20     | 2.50         | 340     |
| 10            | 100  | 8x11.5      | 3.50         | 190     | 8x11.5      | 3.40         | 200     | 10x20       | 3.00         | 300     |
| 10            | 100  | 10x20       | 2.90         | 220     | 10x20       | 2.90         | 220     | 12.5x20     | 2.50         | 340     |
| 15            | 150  | 10x20       | 2.50         | 280     | 12.5x20     | 2.00         | 280     | 12.5x25     | 2.20         | 410     |
| 22            | 220  | 12.5x20     | 2.10         | 310     | 12.5x25     | 1.30         | 310     | 16x25       | 1.70         | 610     |
| 33            | 330  | 16x20       | 0.91         | 630     | 16x25       | 0.91         | 630     | 16x31.5     | 1.10         | 650     |
| 47            | 470  | 16x25       | 0.73         | 730     | 16x31.5     | 0.73         | 730     | 18x31.5     | 0.93         | 930     |
| 68            | 680  | 16x31.5     | 0.49         | 1130    | 18x35.5     | 0.49         | 1130    | 18x35.5     | 0.71         | 1010    |
| 100           | 101  | 18x35.5     | 0.40         | 1210    | 18x40       | 0.40         | 1280    | --          | --           | --      |

Note:

1. Max ripple current: mA (rms) at 105°C. 100KHz

2. Max impedance( $\Omega$ ) at 100KHz

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### PART NUMBERING SYSTEM

HTY   2E   101   M   L315   A   D  
(1)   (2)   (3)   (4)   (5)   (6)   (7)

| No  | Item               | Code | Description                      | Series Reference                                 |
|-----|--------------------|------|----------------------------------|--------------------------------------------------|
| (1) | Meritek Series     | HTQ  | Aluminum Electrolytic Capacitors | High temperature, 5000Hrs 105°C                  |
| (2) | Rated Voltage Code | 2E   | 2E: 250V                         | DC working voltage, See Table Below              |
| (3) | Capacitance        | 101  | 101:100μF                        | First two digits: significant, Third: Multiplier |
| (4) | Tolerance          | M    | M: ± 20%                         | -20% ~ +20%                                      |
| (5) | Case Code          | L315 | DxL: 16x31.5 mm                  | See Table Below                                  |
| (6) | Package            | A    | A: Tape & Ammo                   | R: Tape & Reel, Blank : Bulk                     |
| (7) | Pitch Code         | F    | F: 7.5 mm                        | See Table Below, Blank: Bulk                     |

| Voltage | 4  | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | 160 | 200 | 250 | 350 | 400 | 450 | 500 |
|---------|----|-----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| Code    | 0G | 0J  | 1A | 1C | 1E | 1V | 1H | 1J | 1K | 2A  | 2C  | 2D  | 2E  | 2V  | 2G  | 2W  | 2H  |

| Diameter (mm) | 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 (mm) | 1.5 | 2 | 2.5 | 3.5 | 5 | 7.5 | 10 | 12.5 |
|------------|-----|---|-----|-----|---|-----|----|------|
| Code       | A   | B | C   | D   | E | F   | J  | K    |

\*Specifications subject to change without notice.