

**DISCONTINUED
PRODUCTS**

Kingtronics®

GKT-VE

Aluminum Electrolytic Capacitor – SMD

FEATURES

- ◆ Wide temperature range -55~+105°C.
- ◆ Load life of 2000~3000 hours
- ◆ Comply with the RoHS directive.



Fig 1

Fig 2

Fig 3

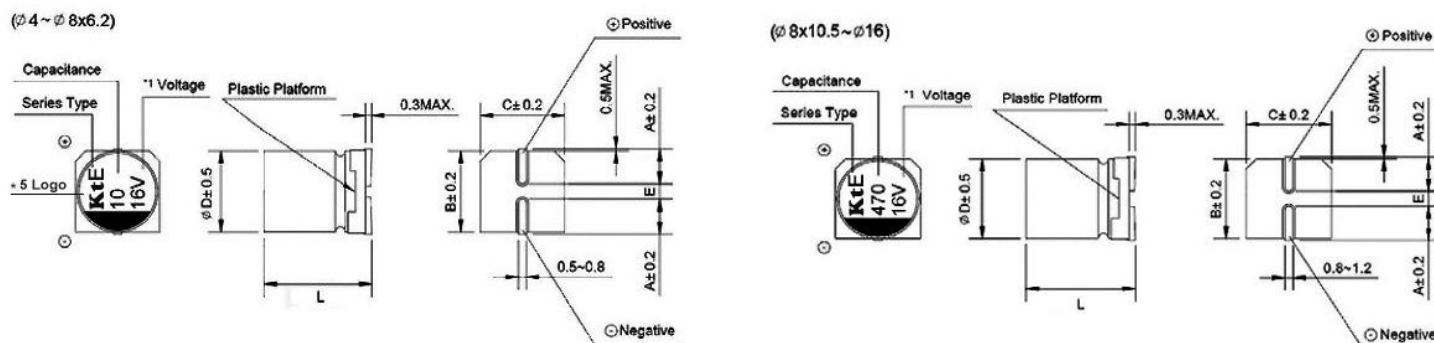
Note: Fig 1 & 2: Diameter 4 ~10mm

Fig 3 : Diameter: ≥12.5mm

SPECIFICATIONS

| | | | | | | | | |
|-------------------------------------|---|---|-------------------|------|------|------|------|------|
| OPERATING TEMPERATURE | -55°C ~ +105°C | | | | | | | |
| Voltage Range | 6.3V ~ 50V.DC | | | | | | | |
| Capacitance Range | 0.1 ~ 1500µF | | | | | | | |
| Capacitance Tolerance | ±20% at 120Hz, 20°C | | | | | | | |
| Leakage Current | Leakage current (Φ4~Φ10) ≤0.01CV or 3µA, whichever is greater (After 2 minutes application of rated voltage) Leakage current (Φ12.5~Φ16) ≤0.03CV or 4µA, whichever is greater (After 1 minutes application of rated voltage) | | | | | | | |
| Dissipation Factor (Tan δ) | Measurement Frequency: 120Hz, Temperature: 20°C | | | | | | | |
| | Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | |
| | Tan δ | Φ4~Φ10 | 0.28 | 0.24 | 0.20 | 0.16 | 0.13 | 0.12 |
| | (Max.) | Φ12.5~Φ16 | 0.38 | 0.34 | 0.30 | 0.26 | 0.22 | 0.18 |
| Stability At Low Temp. | Measurement Frequency: 120Hz | | | | | | | |
| | Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | |
| | Impedance Ratio | Φ4~Φ10 | Z(-25°C)/ Z(20°C) | 3 | 3 | 2 | 2 | 2 |
| | | | Z(-55°C)/ Z(20°C) | 8 | 5 | 4 | 3 | 3 |
| | ZT/Z20 (Max.) | Φ12.5~Φ16 | Z(-25°C)/ Z(20°C) | 5 | 4 | 3 | 2 | 2 |
| | | | Z(-55°C)/ Z(20°C) | 12 | 10 | 8 | 5 | 4 |
| Load Life | After 3000 hours' (2000 hours for Ø4~ Ø6.3 and Ø 8*6.2) application of rated voltage at 105°C , They meet the characteristics listed at right. | | | | | | | |
| | Capacitance Change | Within ± 25% of initial value | | | | | | |
| | Leakage Current | Initial specified value or less | | | | | | |
| | Dissipation Factor | 200% or less of initial specified value | | | | | | |
| Shelf Life | After leaving capacitors under no load at 105°C for 1000 hours, They meet the specified value for life characteristics listed above.. | | | | | | | |
| Resistance to Soldering Heat | After reflow soldering and restored at room temperature, they meet the characteristics listed at right. | | | | | | | |
| | Capacitance Change | Within ± 10% of initial value | | | | | | |
| | Dissipation Factor | Initial specified value or less | | | | | | |
| | Leakage Current | Initial specified value or less | | | | | | |

DRAWING (Unit: mm)



*1 Voltage mark for 6.3V is [6V] or [6.3V]

*5 Kt logo mark for D:4mm & 5mm is [K] Product Markings: KtE, KE, VL

Please visit our website to get more update data, those data & specification are subject to change without notice.

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DIMENSIONS(Unit: mm)

| ØD×L | 4×5.4 | 5×5.8 | 6.3×5.4 | 6.3×7.7 | 8×6.2 | 8×10.5 | 10×10.5 | 10×13.5 | 12.5×13.5 | 12.5×16 | 16×16.5 |
|-------|---------|---------|---------|---------|---------|----------|----------|----------|-----------|----------|----------|
| A | 2.0 | 2.2 | 2.6 | 2.6 | 3.4 | 3.0 | 3.3 | 3.3 | 4.9 | 4.9 | 5.8 |
| B | 4.3 | 5.3 | 6.6 | 6.6 | 8.4 | 8.4 | 10.4 | 10.4 | 13.0 | 13.0 | 17.0 |
| C | 4.3 | 5.3 | 6.6 | 6.6 | 8.4 | 8.4 | 10.4 | 10.4 | 13.0 | 13.0 | 17.0 |
| E±0.2 | 1.0 | 1.4 | 1.9 | 1.9 | 2.3 | 3.1 | 4.7 | 4.7 | 4.7 | 4.7 | 6.4 |
| L | 5.8±0.6 | 5.8±0.6 | 5.8±0.6 | 7.7±0.6 | 6.2±0.6 | 10.5±0.6 | 10.5±0.6 | 13.5±1.0 | 13.5±1.0 | 16.0±1.0 | 16.5±1.0 |

DIMENSIONS&MAXIMUM PERMISSIBLE RIPPLE CURRENT

| WV/V | | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | |
|--------|-----|----------------------|--------------|------------------------|--------------|-------------------------------------|-----------------------|--------------------|------------|------------------------|--------------|----------------------|----------------|
| Cap/μF | | 0J | | 1A | | 1C | | 1E | | 1V | | 1H | |
| 0.1 | 0R1 | | | | | | | | | | | 4×5.4 | 1 |
| 0.22 | R22 | | | | | | | | | | | 4×5.4 | 2 |
| 0.33 | R33 | | | | | | | | | | | 4×5.4 | 3 |
| 0.47 | R47 | | | | | | | | | | | 4×5.4 | 5 |
| 1 | 010 | | | | | | | | | | | 4×5.4 | 10 |
| 2.2 | 2R2 | | | | | | | | | | | 4×5.4 | 16 |
| 3.3 | 3R3 | | | | | | | | | | | 4×5.4 | 16 |
| 4.7 | 4R7 | | | | | | | | | | | 4×5.4 | 13 |
| 10 | 100 | -- | -- | -- | -- | 4×5.4 | 18 | 5×5.8 | 20 | 5×5.8 | 21 | 5×5.8 | 23 |
| 22 | 220 | 4×5.4 | 22 | 5×5.8 | 25 | 5×5.8 | 27 | 6.3×5.4 | 36 | 6.3×5.4 | 38 | 6.3×7.7 (8×6.2) | 70 (70) |
| 33 | 330 | 5×5.8 | 27 | 5×5.8 | 30 | 6.3×5.4 | 40 | 6.3×5.4 | 60 | 6.3×7.7 (8×6.2) | 84 (84) | 8×10.5 | 90 |
| 47 | 470 | 5×5.8 | 33 | 6.3×5.4 | 41 | 6.3×5.4 | 48 | 6.3×7.7 (8×6.2) | 90 (91) | 8×10.5 | 98 | 8×10.5 | 90 |
| 100 | 101 | 6.3×5.4 | 50 | 6.3×5.4 (8×6.2) | 53 (110) | 6.3×5.4 | 60 | 8×10.5 | 130 | 8×10.5 | 130 | 10×10.5 | 100 |
| 150 | 151 | 6.3×5.4 | 55 | 6.3×7.7 | 105 | 6.3×7.7 | 95 | 8×10.5 | 140 | 10×10.5 | 315 | 10×10.5 | 100 |
| 220 | 221 | 6.3×7.7 | 100 | 8×10.5 | 210 | 8×10.5 | 210 | 10×10.5 | 190 | 10×10.5 | 315 | 10×13.5 (10×10.5) | 250 (100) |
| 330 | 331 | 8×10.5 | 210 | 8×10.5 | 210 | 8×10.5 | 210 | 10×10.5 | 315 | 10×10.5 | 315 | 12.5×13.5 | 400 |
| 470 | 471 | 8×10.5 | 210 | 10×10.5 | 315 | 10×10.5 | 315 | 10×10.5 | 315 | 12.5×13.5 (10×13.5) | 500 (360) | 16×16.5 (12.5×16) | 650 (500) |
| 680 | 681 | 8×10.5 | 210 | 10×10.5 | 315 | 10×10.5 | 315 | 10×13.5 | 380 | 12.5×13.5 | 500 | | |
| 1000 | 102 | 10×10.5 | 315 | 10×13.5 (10×10.5) | 360 (315) | 12.5×13.5 (10×13.5) (10×10.5) | 450 (350) (315) | 12.5×13.5 | 550 | 16×16.5 (12.5×16) | 700 (550) | | |
| 1500 | 152 | 10×13.5 (10×10.5) | 450 (315) | 12.5×13.5 | 500 | 12.5×13.5 | 500 | 12.5×16 | 800 | | | | |
| 2200 | 222 | 12.5×13.5 | 620 | 12.5×16 (12.5×13.5) | 650 (600) | 16×16.5 | 900 | 16×16.5 | 1000 | | | | |
| 3300 | 332 | 12.5×16 | 750 | 16×16.5 | 950 | | | | | | | Case Size | Ripple Current |

FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

| Frequency | | 50Hz | 120Hz | 300Hz | 1KHz | 10KHz~ |
|-------------|-----------|------------|-------|-------|------|--------|
| Coefficient | Φ4~Φ10 | 0.1~100μF | 0.70 | 1.00 | 1.17 | 1.50 |
| | | 150~1500μF | 0.85 | 1.00 | 1.08 | 1.30 |
| | Φ12.5~Φ16 | ~470μF | 0.75 | 1.00 | 1.35 | 2.00 |
| | | 680~3300μF | 0.85 | 1.00 | 1.23 | 1.34 |

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Aluminum Electrolytic Capacitor – SMD

HOW TO ORDER

| <u>GKT</u> | <u>VE</u> | <u>0J</u> | <u>M</u> | <u>220</u> | <u>040054</u> | <u>T</u> | <u>R</u> |
|------------|------------|-----------|--------------------------|-------------|---------------|----------|----------|
| Series | Sub Series | Voltage | Capacitance Tolerance | Capacitance | Case Size | Packing | Pb |
| | | 1. | 2. | 3. | 4. | 5. | 6. |

NOTE:**1. Rated Voltage**

| Code | 0G | 0J | 1A | 1C | 1E | 1V | 1H | 1J | 2A |
|---------|----|-----|----|----|----|----|----|----|-----|
| Voltage | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 |

2. Capacitance Tolerance

| Code | K | M | Q | T |
|-----------|------|------|---------|---------|
| Tolerance | ±10% | ±20% | +30-10% | +50-10% |

3. Capacitance

| Code | 0R1 | R47 | 010 | 4R7 | 100 | 470 | 101 | 471 | 102 | 472 | 103 |
|---------------------|-----|------|-----|-----|-----|-----|-----|-----|------|------|-------|
| Capacitance (µF) | 0.1 | 0.47 | 1 | 4.7 | 10 | 47 | 100 | 470 | 1000 | 4700 | 10000 |

4. Case Size

| Code | 040054 | 050054 | 063054 | 080105 | 100105 | 125135 | 160215 |
|-------------------|--------|--------|---------|--------|---------|-----------|---------|
| Case Size (mm) | 4x5.4 | 5x5.4 | 6.3x5.4 | 8x10.5 | 10x10.5 | 12.5x13.5 | 16x21.5 |

5. Packing

| Code | T |
|---------|-------------|
| Packing | Tape & Reel |

6. Pb

| Code | R |
|------|------|
| Pb | RoHS |

Note: Specifications are subject to change without notice.

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