

Kingtronics®

GKT-SC

Aluminum Electrolytic Capacitor— Snap-in

FEATURES

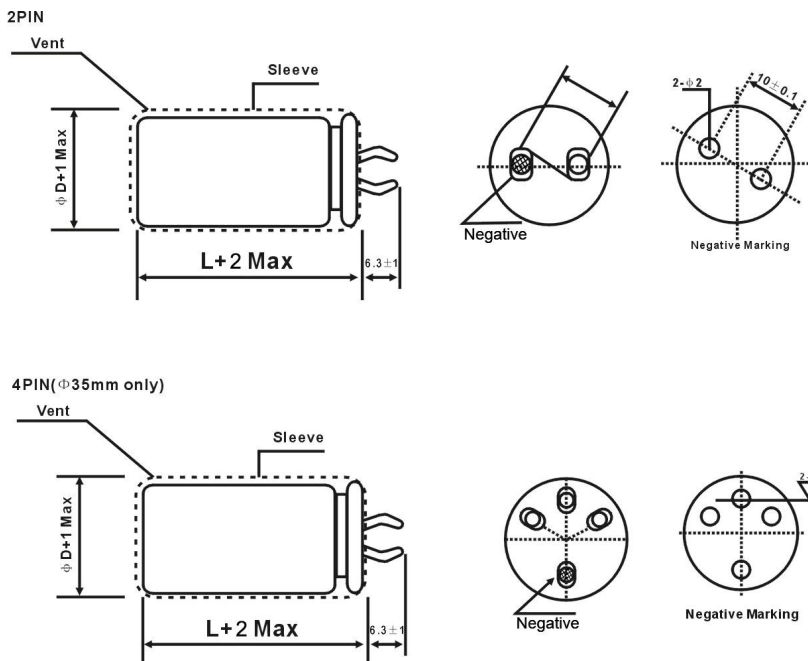
- ◆ Load life of 5000 hours at 85°C, equal to 80000 hours (9 years) at 45°C
- ◆ Smaller size
- ◆ High ripple current
- ◆ PCB Mounting



SPECIFICATIONS

| | | | | | | | | | |
|-------------------------------------|--|--|------|-------|--------|---------|---------|---------|---------|
| OPERATING TEMPERATURE RANGE (°C) | -40°C ~ +85°C | | | | | | | | |
| CAPACITANCE TOLERANCE (25°C, 120Hz) | ±20% | | | | | | | | |
| LEAKAGE CURRENT (µA) | 0.01CV or 1.5mA whichever is smaller. (25°C, after 5 minutes) C: Nominal Capacitance (µF) V: Rated Voltage (V) | | | | | | | | |
| DISSIPATION FACTOR (25°C, 120Hz) | Rated Voltage (V) | 10 | 16 | 25 | 35 | 50 | 63~100 | 160~250 | 315~450 |
| | Tan δ (Max) | 0.80 | 0.60 | 0.50 | 0.40 | 0.30 | 0.20 | 0.15 | 0.15 |
| TEMPERATURE STABILITY (120Hz) | Rated Voltage (V) | | 10 | 16~35 | 50~100 | 160~200 | 250~400 | 450 | |
| | Impedance Ratio | Z-25°C/Z+20°C | 5 | 4 | 3 | 3 | 4 | 4 | |
| | | Z-40°C/Z+20°C | 18 | 15 | 10 | 6 | 8 | -- | |
| LOAD LIFE (+85°C) | Time | 5000hours | | | | | | | |
| | Leakage Current | Not more than the specified value. | | | | | | | |
| | Capacitance Change | Within±20% of the initial value | | | | | | | |
| | Dissipation Factor | Not more than 200% of the specified value. | | | | | | | |
| SHELF LIFE (+85°C) | After storage for 1000hours at 85°C with no voltage applied, the capacitor shall meet the specified limits for "Load Life" after test: U _R to be applied for 60 minutes, 24 to 48 hours before measurement. | | | | | | | | |

DIMENSIONS (mm)



MULTIPLIER FOR RIPPLE CURRENT

| Frequency Coefficient | | | | | |
|-----------------------|------|-----|------|------|------|
| Frequency(Hz) | 50 | 120 | 1K | 10K | 20K |
| Rated Voltage(V) ≤50 | 0.95 | 1 | 1.10 | 1.15 | 1.15 |
| 63~100 | 0.95 | 1 | 1.16 | 1.30 | 1.33 |
| ≥160 | 0.90 | 1 | 1.20 | 1.50 | 1.55 |

| Temperature Coefficient | | | | | |
|-------------------------|------|-----|-----|-----|-----|
| Temperature(°C) | +40 | +55 | +70 | +85 | |
| Rated Voltage (V) | <160 | 2.1 | 1.9 | 1.5 | 1.0 |
| | ≥160 | 1.7 | 1.5 | 1.3 | 1.0 |

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Aluminum Electrolytic Capacitor– Snap-in

STANDARD RATINGS

| WV(V) / DxL (mm) | 10 | | 16 | | 25 | | 35 | | 50 | | 63 | | 80 | | 100 | |
|---------------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|------|--------|------|--------|
| | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple |
| | uF | Arms | uF | Arms | uF | Arms | uF | Arms | uF | Arms | uF | Arms | uF | Arms | uF | Arms |
| 22x25 | 10000 | 2.5 | 8200 | 2.2 | 5600 | 2.0 | 3300 | 1.8 | 2200 | 1.7 | 1500 | 1.6 | 1000 | 1.3 | 680 | 1.1 |
| 22x30 | 15000 | 3.2 | 10000 | 2.6 | 6800 | 2.3 | 3900 | 2.1 | 2700 | 1.9 | 2200 | 2.0 | 1200 | 1.5 | 820 | 1.2 |
| 22x35 | 18000 | 3.6 | 12000 | 2.9 | 8200 | 2.6 | 5600 | 2.3 | 3900 | 2.1 | 2700 | 2.2 | 1800 | 1.9 | 1200 | 1.6 |
| 22x40 | 22000 | 4.0 | 15000 | 3.3 | 10000 | 2.9 | 6800 | 2.9 | 4700 | 2.4 | 3300 | 2.3 | 2200 | 2.1 | 1500 | 1.8 |
| 22x45 | -- | -- | 18000 | 3.8 | 12000 | 3.3 | -- | -- | -- | -- | 3900 | 2.5 | -- | -- | -- | -- |
| 22x50 | -- | -- | 22000 | 4.2 | -- | -- | 8200 | 2.8 | 5600 | 2.5 | -- | -- | 2700 | 2.5 | 1800 | 2.1 |
| 25x25 | 15000 | 3.1 | 10000 | 2.6 | 6800 | 2.3 | 4700 | 2.2 | 2700 | 1.9 | 2200 | 2.0 | 1500 | 1.7 | 1000 | 1.4 |
| 25x30 | 18000 | 3.6 | 15000 | 3.3 | 10000 | 2.8 | 5600 | 2.3 | 3900 | 2.1 | 2700 | 2.3 | 1800 | 1.9 | 1200 | 1.6 |
| 25x35 | 22000 | 4.1 | 18000 | 3.7 | 12000 | 3.2 | 6800 | 2.6 | 4700 | 2.4 | 3300 | 2.3 | 2200 | 2.2 | 1500 | 1.7 |
| 25x40 | -- | -- | 22000 | 4.2 | 15000 | 3.7 | 8200 | 2.8 | 5600 | 2.5 | 3900 | 2.6 | 2700 | 2.5 | 1800 | 2.0 |
| 25x45 | -- | -- | -- | -- | -- | -- | 10000 | 3.1 | 6800 | 2.8 | 5600 | 3.1 | 3300 | 2.8 | 2200 | 2.2 |
| 25x50 | -- | -- | -- | -- | 18000 | 4.3 | 12000 | 3.5 | 8200 | 3.2 | -- | -- | 3900 | 3.1 | 2700 | 2.6 |
| 30x25 | 22000 | 4.1 | 15000 | 3.4 | 10000 | 3.0 | 6800 | 2.7 | 3900 | 2.4 | 3300 | 2.3 | 2200 | 2.2 | 1500 | 1.8 |
| 30x30 | -- | -- | 22000 | 4.2 | 12000 | 3.4 | 8200 | 2.8 | 5600 | 2.5 | 3900 | 2.6 | 2700 | 2.5 | 1800 | 2.1 |
| 30x35 | -- | -- | -- | -- | 18000 | 4.2 | 10000 | 3.2 | 6800 | 2.8 | 5600 | 3.2 | 3300 | 2.8 | 2200 | 2.3 |
| 30x40 | -- | -- | -- | -- | 22000 | 4.8 | 12000 | 3.5 | 8200 | 3.0 | 6800 | 3.6 | 3900 | 3.2 | 2700 | 2.7 |
| 30x45 | -- | -- | -- | -- | -- | -- | 15000 | 4.1 | 10000 | 3.4 | -- | -- | 4700 | 3.6 | 3300 | 3.0 |
| 30x50 | -- | -- | -- | -- | -- | -- | 18000 | 4.6 | 12000 | 3.8 | 8200 | 3.7 | 5600 | 3.5 | 3900 | 3.4 |
| 35x25 | -- | -- | 22000 | 4.4 | 15000 | 3.9 | 8200 | 2.9 | 5600 | 2.6 | 3900 | 2.7 | 2700 | 2.5 | 1800 | 2.2 |
| 35x30 | -- | -- | -- | -- | 18000 | 4.4 | 12000 | 3.6 | 8200 | 3.0 | 5600 | 3.3 | 3900 | 3.2 | 2200 | 2.5 |
| 35x35 | -- | -- | -- | -- | 22000 | 5.0 | 15000 | 4.1 | 10000 | 3.4 | 6800 | 3.7 | 4700 | 3.6 | 3300 | 3.1 |
| 35x40 | -- | -- | -- | -- | -- | -- | 18000 | 4.7 | 12000 | 3.8 | 8200 | 3.8 | 5600 | 3.5 | 3900 | 3.4 |
| 35x45 | -- | -- | -- | -- | -- | -- | 22000 | 5.3 | -- | -- | 10000 | 4.3 | -- | -- | -- | -- |
| 35x50 | -- | -- | -- | -- | -- | -- | -- | -- | 15000 | 4.5 | 12000 | 4.8 | 6800 | 4.4 | 4700 | 4.0 |

| WV(V) / DxL (mm) | 160 | | 180 | | 200 | | 250 | | 315 | | 350 | | 400 | | 450 | |
|---------------------------|------|--------|------|--------|------|--------|------|--------|-----|--------|-----|--------|-----|--------|-----|--------|
| | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple |
| | uF | Arms | uF | Arms | uF | Arms | uF | Arms | uF | Arms | uF | Arms | uF | Arms | uF | Arms |
| 22x25 | 330 | 1.3 | 270 | 1.2 | 220 | 1.1 | 180 | 0.94 | 100 | 0.67 | 82 | 0.64 | 68 | 0.55 | -- | -- |
| 22x30 | 390 | 1.5 | 330 | 1.4 | 330 | 1.4 | 220 | 1.1 | 150 | 0.85 | 120 | 0.82 | 100 | 0.70 | 68 | 0.57 |
| 22x35 | 560 | 1.9 | 470 | 1.7 | 390 | 1.6 | 270 | 1.2 | 180 | 0.96 | 150 | 0.94 | 120 | 0.79 | 100 | 0.72 |
| 22x40 | 680 | 2.1 | 560 | 1.9 | 470 | 1.8 | 330 | 1.4 | 220 | 1.1 | 180 | 1.1 | 150 | 0.90 | 120 | 0.80 |
| 22x45 | -- | -- | -- | -- | 560 | 2.0 | 390 | 1.6 | 270 | 1.2 | 220 | 1.2 | 180 | 1.0 | -- | -- |
| 22x50 | 820 | 2.5 | 680 | 2.3 | -- | -- | 470 | 1.8 | -- | -- | -- | -- | 220 | 1.1 | 150 | 0.95 |
| 25x25 | 390 | 1.5 | 390 | 1.5 | 330 | 1.4 | 220 | 1.1 | 150 | 0.85 | 120 | 0.81 | 100 | 0.70 | -- | -- |
| 25x30 | 560 | 1.9 | 470 | 1.7 | 390 | 1.6 | 330 | 1.4 | 180 | 0.96 | 150 | 0.94 | 150 | 0.89 | 100 | 0.73 |
| 25x35 | 680 | 2.2 | 560 | 2.0 | 560 | 2.0 | 390 | 1.6 | 220 | 1.1 | 220 | 1.2 | 180 | 1.0 | 120 | 0.83 |
| 25x40 | 820 | 2.4 | 680 | 2.2 | 680 | 2.3 | 470 | 1.8 | 270 | 1.3 | -- | -- | 220 | 1.2 | 150 | 0.95 |
| 25x45 | 1000 | 2.7 | 820 | 2.5 | -- | -- | 560 | 2.0 | 330 | 1.4 | 270 | 1.4 | 270 | 1.3 | 180 | 1.1 |
| 25x50 | 1200 | 3.1 | 1000 | 2.9 | 820 | 2.6 | -- | -- | 390 | 1.6 | 330 | 1.6 | -- | -- | 220 | 1.2 |
| 30x25 | 560 | 2.0 | 470 | 1.8 | 470 | 1.9 | 330 | 1.5 | 220 | 1.1 | 180 | 1.1 | 150 | 0.95 | -- | -- |
| 30x30 | 820 | 2.5 | 680 | 2.3 | 560 | 2.1 | 470 | 1.8 | 270 | 1.3 | 220 | 1.2 | 180 | 1.1 | 150 | 0.98 |
| 30x35 | 1000 | 2.8 | 820 | 2.6 | 680 | 2.4 | 560 | 2.0 | 330 | 1.4 | 270 | 1.4 | 220 | 1.2 | 180 | 1.1 |
| 30x40 | 1200 | 3.2 | 1000 | 2.9 | 820 | 2.7 | 680 | 2.3 | 390 | 1.6 | 390 | 1.7 | 270 | 1.4 | 220 | 1.3 |
| 30x45 | 1500 | 3.7 | 1200 | 3.3 | 1000 | 3.1 | 820 | 2.6 | 470 | 1.8 | 470 | 2.0 | 330 | 1.6 | 270 | 1.4 |
| 30x50 | -- | -- | -- | -- | 1200 | 3.4 | -- | -- | 560 | 2.0 | -- | -- | 390 | 1.8 | -- | -- |
| 35x25 | 820 | 2.4 | 680 | 2.2 | 560 | 2.0 | 470 | 1.9 | 270 | 1.3 | 220 | 1.3 | 180 | 1.2 | 180 | 1.2 |
| 35x30 | 1000 | 2.7 | 820 | 2.5 | 820 | 2.5 | 680 | 2.4 | 390 | 1.6 | 330 | 1.6 | 270 | 1.5 | 220 | 1.3 |
| 35x35 | 1200 | 3.0 | 1200 | 3.1 | 1000 | 2.8 | 820 | 2.6 | 470 | 1.8 | 390 | 1.8 | 330 | 1.7 | 270 | 1.5 |
| 35x40 | 1500 | 3.5 | -- | -- | 1200 | 3.2 | 1000 | 3.0 | 560 | 2.0 | 470 | 2.0 | 390 | 1.8 | -- | -- |
| 35x45 | 1800 | 3.9 | 1500 | 3.6 | -- | -- | 1200 | 3.4 | 680 | 2.3 | 560 | 2.3 | 470 | 2.1 | 390 | 1.9 |
| 35x50 | 2200 | 4.5 | 1800 | 4.1 | 1500 | 3.8 | -- | -- | -- | -- | 680 | 2.6 | 560 | 2.3 | 470 | 2.2 |

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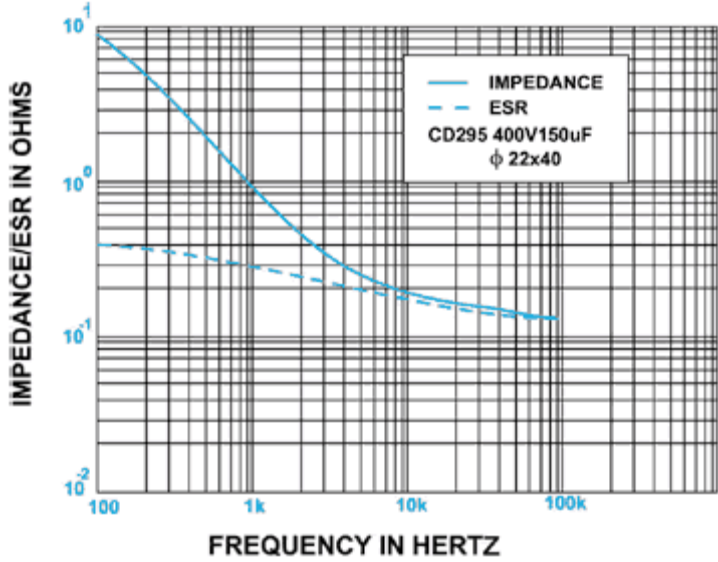
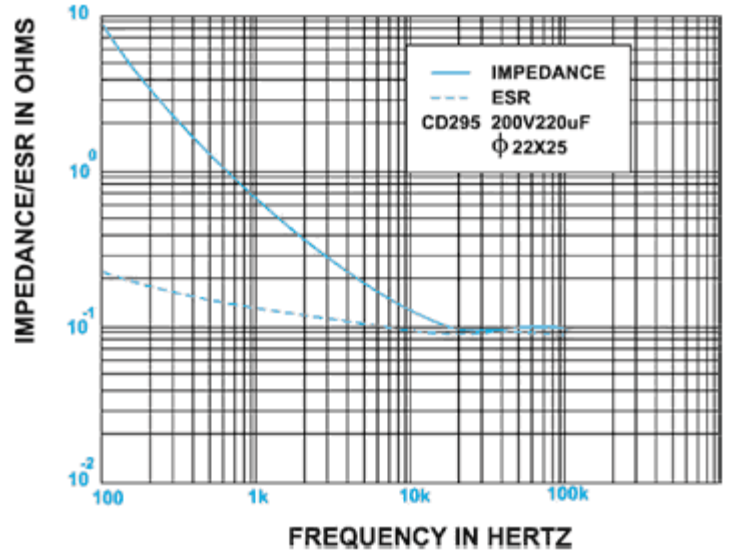
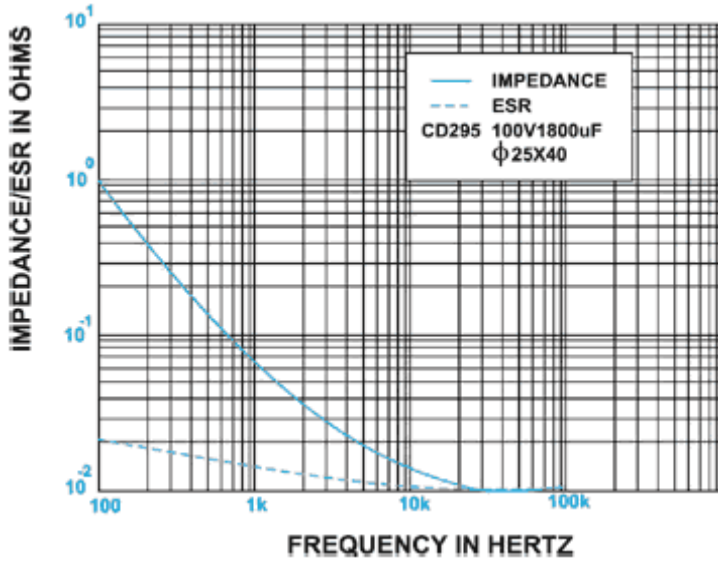
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Aluminum Electrolytic Capacitor— Snap-in

TYPICAL CURVES



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GKT-SC

Aluminum Electrolytic Capacitor– Snap-in

HOW TO ORDER

| GKT | SC | 0J | 0R1 | M | 00500110 | 020 | 000 | B | R |
|--------|------------|---------------|-------------|-----------------------|-----------|------------|-------------|---------|----|
| Series | Sub Series | Rated Voltage | Capacitance | Capacitance Tolerance | Dimension | Pitch/Pins | Lead Length | Packing | Pb |
| | | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. |

NOTE:

1. Rated Voltage

| Code | 0J | 1A | 1C | 1D | 1E | 1V | 1G | 1H | 1J | 1K |
|---------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Voltage | 6.3V | 10V | 16V | 20V | 25V | 35V | 40V | 50V | 63V | 80V |

| Code | 2A | 2B | 2C | 2K | 2D | 2E | 2F | 2U | 2V | 2G | 2X | 2W | 2H | 2Y |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Voltage | 100V | 120V | 160V | 180V | 200V | 250V | 315V | 330V | 350V | 400V | 420V | 450V | 500V | 550V |

2. Capacitance

| Code | 0R1 | R22 | R33 | R47 | 010 | 2R2 | 3R3 | 4R7 | 100 | 220 | 330 | 470 | 101 |
|------------------|-----|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Capacitance (µF) | 0.1 | 0.22 | 0.33 | 0.47 | 1 | 2.2 | 3.3 | 4.7 | 10 | 22 | 33 | 47 | 100 |

| Code | 221 | 271 | 331 | 391 | 471 | 561 | 681 | 102 | 222 | 332 | 472 | 103 | 223 |
|------------------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|-------|-------|
| Capacitance (µF) | 220 | 270 | 330 | 390 | 470 | 560 | 680 | 1000 | 2200 | 3300 | 4700 | 10000 | 22000 |

3. Capacitance Tolerance

| Code | K | L | M | P | Q | R | T | U | V | H | F |
|-----------|------|------|------|---------|---------|--------|---------|---------|---------|--------|-------|
| Tolerance | ±10% | ±15% | ±20% | +100-0% | +30-10% | +20-0% | +50-10% | +75-10% | +20-10% | +20-5% | +30-0 |

4. Dimension

| Code | 00500110 | 00630120 | 01250200 | 01600300 | 03500450 |
|----------------|----------|----------|----------|----------|----------|
| Dimension (mm) | 5x11 | 6.3x12 | 12.5x20 | 16x30 | 35x45 |

5. Pitch/Pins

| Code | 020 | 025 | 035 | 050 | 075 | 100 | 127 | 4pins |
|------------------|-----|-----|-----|-----|-----|------|------|-------|
| Pitch (mm)/ Pins | 2.0 | 2.5 | 3.5 | 5.0 | 7.5 | 10.0 | 12.7 | 4PS |

6. Lead Length

| Code | 000 | 040 | 045 | 050 |
|-------------|----------|-----|-----|-----|
| Lead Length | Standard | 4.0 | 4.5 | 5.0 |

7. Packing

| Code | A | B |
|---------|------|------|
| Packing | Ammo | Bulk |

8. Pb

| Code | L | R |
|------|--------|------|
| Pb | Leaded | RoHS |

Note: Specifications are subject to change without notice.

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