

# Kingtronics®

# GKT-VK

## Aluminum Electrolytic Capacitor– SMD

### FEATURES

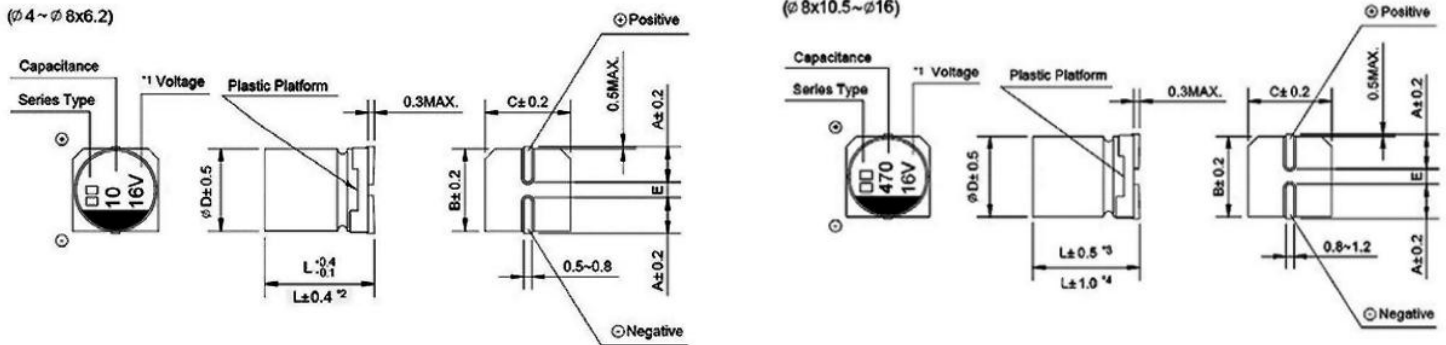
- ◆ Extra low impedance with temperature range -55 ~ +105°C
- ◆ Impedance 40~60% less than GKT-VZ series
- ◆ Comply with the RoHS directive.



### SPECIFICATIONS

<b>OPERATING TEMPERATURE</b>	-55°C ~ +105°C								
<b>Voltage Range</b>	6.3V ~ 50V.DC								
<b>Capacitance Range</b>	4.7 ~ 4700µF								
<b>Capacitance Tolerance</b>	±20% at 120Hz, 20°C								
<b>Leakage Current</b>	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)								
<b>Dissipation Factor (Tan δ)</b>	Measurement Frequency: 120Hz, Temperature: 20°C								
	Rated Voltage (V)		6.3	10	16	25	35	50	
	Tan δ (Max.)	Φ4~Φ10	0.22	0.19	0.16	0.14	0.12	0.12	
<b>Stability At Low Temp.</b>	Measurement Frequency: 120Hz		Rated Voltage (V)						
	Impedance Ratio ZT/Z20 (Max.)	Φ4~Φ10	Z(-25°C)/ Z(20°C)	3	2	2	2	2	2
			Z(-55°C)/ Z(20°C)	5	4	4	3	3	3
		Φ12.5~Φ16	Z(-25°C)/ Z(20°C)	3	3	2	2	2	2
			Z(-55°C)/ Z(20°C)	10	8	6	4	3	3
<b>Load Life</b>	After 3000 hours. (1000 hrs. for Ø4~ Ø6.3*5.4, 2000 hrs. for Ø 6.3*7.7& Ø 8) application of rated voltage at 105°C, they meet the characteristics listed at right.								
	Capacitance Change	Within ± 25% of initial value.							
	Dissipation Factor	200% or less of initial specified value							
	Leakage Current	Initial specified value or less							
<b>Shelf Life</b>	After leaving capacitors under no load at 105°C for 1000 hours, they meet the specified value for load life characteristics listed above.								
<b>Resistance to Soldering Heat</b>	After reflow soldering and restored at room temperature, they meet the characteristics listed at right.								
	Capacitance Change	Within ± 10% of initial value							
	Dissipation Factor	nitial specified value or less							
	Leakage Current	Initial specified value or less							

### DRAWING (Unit: mm)



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

\*2 Applicable to Φ6.3\*7.7

\*3 Applicable to Φ8\*10.5~ Φ10

\*4 Applicable to Φ12.5~ Φ16

**Kingtronics® International Company**

# Kingtronics®

# GKT-VK

## Aluminum Electrolytic Capacitor— SMD

### DIMENSIONS(Unit: mm)

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

### DIMENSIONS&MAXIMUM PERMISSIBLE RIPPLE CURRENT&IMPEDANCE

Cap. (µF)	WV	6.3			10			16		
		0J			1A			1C		
10	100							4×5.4	1.8	80
15	150							4×5.4	1.8	80
22	220	4×5.4	1.8	80	4×5.4	1.8	80	5×5.4 (4×5.4)	0.76 (1.8)	150 (80)
33	330	5×5.4 (4×5.4)	0.76 (1.8)	150 (80)	5×5.4 (4×5.4)	0.76 (1.8)	150 (80)	6.3×5.4 (5×5.4)	0.44 (0.76)	230 (150)
47	470	5×5.4 (4×5.4)	0.76 (1.8)	150 (80)	6.3×5.4 (5×5.4)	0.44 (0.76)	230 (150)	6.3×5.4 (5×5.4)	0.44 (0.76)	230 (150)
56	560	5×5.4	0.76	150	6.3×5.4	0.44	230	6.3×5.4	0.44	230
68	680	6.3×5.4 (5×5.4)	0.44 (0.76)	230 (150)	6.3×5.4	0.44	230	6.3×7.7 (6.3×5.4) (8×6.2)	0.34 (0.44) (0.34)	280 (230) (280)
100	101	6.3×5.4 (5×5.4)	0.44 (0.76)	230 (150)	6.3×7.7 (6.3×5.4) (8×6.2)	0.34 (0.44) (0.34)	280 (230) (280)	6.3×7.7 (6.3×5.4) (8×6.2)	0.34 (0.44) (0.34)	280 (230) (280)
150	151	6.3×5.4	0.44	230	6.3×7.7	0.34	280	6.3×7.7	0.34	280
220	221	6.3×7.7 (6.3×5.4) (8×6.2)	0.34 (0.44) (0.34)	280 (230) (280)	6.3×7.7 (8×6.2)	0.34 (0.34)	280 (280)	8×10.5 (6.3×7.7)	0.17 (0.34)	450 (280)
330	331	6.3×7.7 (8×6.2)	0.34 (0.34)	280 (280)	8×10.5	0.17	450	10×10.5 (8×10.5)	0.09 (0.17)	670 (450)
470	471	8×10.5	0.17	450	8×10.5	0.17	450	10×10.5 (8×10.5)	0.09 (0.17)	670 (450)
680	681	10×10.5 (8×10.5)	0.09 (0.17)	670 (450)	10×10.5	0.09	670	10×13.5 (10×10.5)	0.075 (0.09)	800 (670)
1000	102	10×10.5 (8×10.5)	0.09 (0.17)	670 (450)	10×10.5	0.09	670	16×16.5 (12.5×16) (12.5×13.5)	0.055 (0.06) (0.065)	1350 (1050) (900)
1500	152	10×13.5 (10×10.5)	0.075 (0.09)	800 (670)	12.5×13.5	0.065	900	16×16.5	0.055	1350
2200	222	12.5×13.5	0.065	900	12.5×16	0.060	1050	16×16.5	0.055	1350
3300	332	12.5×16	0.060	1050	16×16.5	0.055	1350	Case Size ØD×L(mm)	Impedance (Ω) at 20°C 100kHz	Ripple Current (mA rms) at 105°C 100kHz
4700	472	16×16.5	0.055	1350						

**Kingtronics® International Company**

**Kingtronics**®**GKT-VK**

Aluminum Electrolytic Capacitor– SMD

**DIMENSIONS&MAXIMUM PERMISSIBLE RIPPLE CURRENT&IMPEDANCE**

WV Cap.(μF)		25			35			50		
		1E			1V			1H		
4.7	4R7				4x5.4	1.8	80	5x5.4 (4x5.4)	1.52 (3.0)	85 (60)
10	100	4x5.4	1.8	80	5x5.4 (4x5.4)	0.76 (1.8)	150 (80)	6.3x5.4 (5x5.4)	0.88 (1.52)	165 (85)
15	150	5x5.4	0.76	150	5x5.4	0.76	150	6.3x5.4	0.88	165
22	220	6.3x5.4 (5x5.4)	0.44 (0.76)	230 (150)	6.3x5.4 (5x5.4)	0.44 (0.76)	230 (150)	6.3x7.7 (6.3x5.4) (8x6.2)	0.68 (0.88) (0.68)	185 (165) (185)
33	330	6.3x5.4 (5x5.4)	0.44 (0.76)	230 (150)	6.3x5.4 (8x6.2)	0.44 (0.34)	230 (280)	6.3x7.7 (8x6.2)	0.68 (0.68)	185 (185)
47	470	6.3x7.7 (6.3x5.4) (8x6.2)	0.34 (0.44) (0.34)	280 (230) (280)	6.3x7.7 (6.3x5.4) (8x6.2)	0.34 (0.44) (0.34)	280 (230) (280)	6.3x7.7 (8x6.2)	0.68 (0.68)	185 (185)
56	560	6.3x7.7 (6.3x5.4)	0.34 (0.44)	280 (230)	6.3x7.7	0.34	280	8x10.5 (6.3x7.7)	0.34 (0.68)	350 (185)
68	680	6.3x7.7	0.34	280	6.3x7.7	0.34	280	8x10.5	0.34	350
100	101	6.3x7.7 (8x6.2)	0.34 (0.34)	280 (280)	8x10.5	0.17	450	10x10.5 (8x10.5)	0.18 (0.34)	670 (350)
150	151	8x10.5 (6.3x7.7)	0.17 (0.34)	450 (280)	10x10.5	0.09	670	10x10.5	0.18	670
								Case Size ØDxL(mm)	Impedance (Ω) at 20°C 100kHz	Ripple Current (mA rms) at 105 °C 100kHz

**DIMENSIONS&MAXIMUM PERMISSIBLE RIPPLE CURRENT&IMPEDANCE**

WV Cap.(μF)		25			35			50		
		1E			1V			1H		
220	221	8x10.5	0.17	450	10x10.5	0.09	670	10x13.5 (10x10.5)	0.16 (0.18)	750 (670)
330	331	10x10.5 (8x10.5)	0.09 (0.17)	670 (450)	10x10.5	0.09	670	12.5x13.5	0.14	800
470	471	10x13.5 (10x10.5)	0.075 (0.09)	800 (670)	12.5x13.5 (10x13.5)	0.065 (0.075)	900 (800)	16x16.5 (12.5x16)	0.10 (0.12)	1150 (900)
680	681	12.5x13.5	0.065	900	12.5x16 (12x13.5)	0.060 (0.065)	1050 (900)			
1000	102	16x16.5 (12.5x16)	0.055 0.060	1350 (1050)	16x16.5	0.055	1350			
1500	152	16x16.5	0.055	1350				Case Size ØDxL(mm)	Impedance (Ω) at 20°C 100kHz	Ripple Current (mA rms) at 105°C 100kHz

**FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT**

Coefficient		Frequency		50Hz	120Hz	300Hz	1KHz	10KHz
		Ø4~Ø10	Ø12.5~Ø16					
		4.7~68μF		0.35	0.50	0.64	0.83	1.00
		100~1500μF		0.40	0.55	0.70	0.85	1.00
		~680μF		0.45	0.65	0.80	0.90	1.00
		1000~4700μF		0.65	0.85	0.95	1.00	1.00

**Kingtronics**® International Company

# Kingtronics®

# GKT-VK

## Aluminum Electrolytic Capacitor– SMD

### HOW TO ORDER

<u>GKT</u>	<u>VK</u>	<u>0J</u>	<u>M</u>	<u>220</u>	<u>040054</u>	<u>I</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.

**Kingtronics® International Company**

Website: [www.kingtronics.com](http://www.kingtronics.com)

Email: [info@kingtronics.com](mailto:info@kingtronics.com)

Tel: (852) 8106 7033

Fax: (852) 8106 7099