

# Kingtronics®

# GKT-VA

## Aluminum Electrolytic Capacitor – SMD

### FEATURES

- ◆ Designed for surface mounting on high density circuit board.
- ◆ Emboss carrier tape packing system is available for automatic insertion.



Fig 1

Fig 2

Fig 3

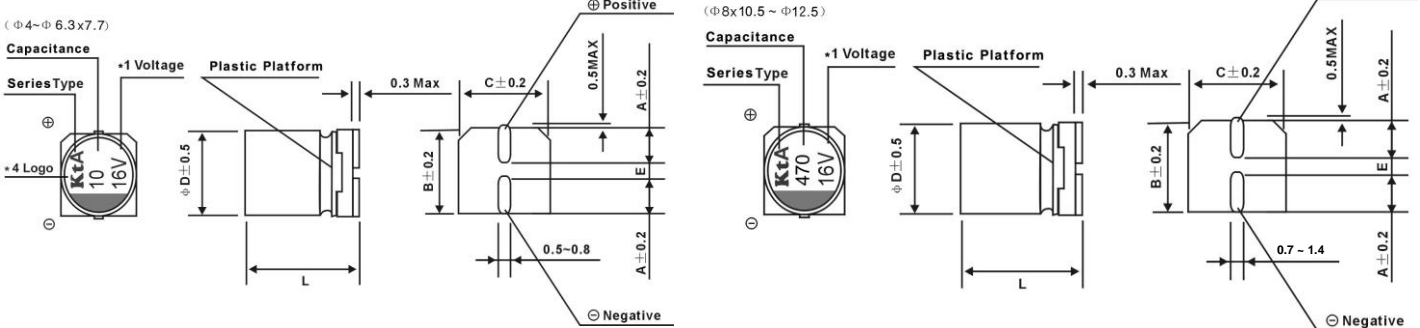
Note: Fig 1 & 2: Diameter 4 ~10mm

Fig 3 : Diameter: ≥12.5mm

### SPECIFICATIONS

<b>OPERATING TEMPERATURE</b>	-40°C ~ +85°C									
<b>Voltage Range</b>	4V ~ 100V.DC									
<b>Capacitance Range</b>	1 ~ 10000µF									
<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) ≤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)	4	6.3	10	16	25	35	50	63	100
	Tan δ	Φ4~Φ10	0.35	0.32	0.26	0.20	0.18	0.16	0.14	0.14
	(Max.)	Φ12.5	0.42	0.42	0.38	0.30	0.28	0.22	0.18	0.16
<b>Stability At Low Temp.</b>	Measurement Frequency: 120Hz									
	Rated Voltage (V)		4	6.3	10	16	25	35	50	50~100
	Impedance Ratio ZT/Z20 (Max.)	Φ4~Φ10	Z(-25°C)/ Z(20°C)	7	4	4	3	2	2	2
			Z(-40°C)/ Z(20°C)	15	8	6	4	4	3	3
		Φ12.5	Z(-25°C)/ Z(20°C)	7	5	4	3	2	2	2
			Z(-40°C)/ Z(20°C)	17	12	10	8	5	4	3
<b>Load Life</b>	After 2000 hours application of rated voltage at 85°C, capacitors meet the characteristics requirements listed below.									
	Capacitance Change	Within ± 20% of initial value (Within ± 30% of initial value for 4V)								
	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 85°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 below.									
	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]

\*4 Kt logo mark for D:4mm & 5mm is [K] Product Markings: KtA, KA, XS, CS

ΦDxL	4x5.4	5x5.4	6.3x5.4	6.3x7.7	8x6.5	8x10.5	10x10.5	10x13.5	12.5x13.5
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2	3.2	4.7
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0
E	1.0±0.2	1.3±0.2	2.2±0.2	2.2±0.2	3.1±0.2	3.1±0.2	4.4±0.2	4.4±0.2	4.8±0.6
L	5.4±0.6	5.4±0.6	5.4±0.6	7.7±0.6	6.5±0.6	10.5±0.6	10.5±0.6	13.5±1.0	13.5±1.0

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### FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

Frequency	50Hz	120Hz	1KHz	10KHz~
Coefficient	0.70	1.00	1.20	1.30
≤ 1000uF	0.70	1.00	1.20	1.30
>1000uF	0.80	1.00	1.10	1.20

### STANDARD RATINGS

WV Cap.(uF)		4 0G		6.3 0J		10 1A		16 1C		25 1E	
4.7	4R7	--	--	--	--	--	--	--	--	4x5.4	13
10	100	--	--	--	--	--	--	4x5.4	18	4x5.4 5x5.4	14 20
15	150	--	--	--	--	--	--	4x5.4	25	5x5.4	27
22	220	--	--	4x5.4	20	4x5.4 5x5.4	20 25	4x5.4 5x5.4	20 27	5x5.4 6.3x5.4	25 36
33	330	4x5.4	18	4x5.4 5x5.4	22 27	4x5.4 5x5.4	22 30	5x5.4 6.3x5.4	28 31	5x5.4 6.3x5.4	29 44
47	470	4x5.4	24	4x5.4 5x5.4	23 30	5x5.4 6.3x5.4	30 49	5x5.4 6.3x5.4	30 48	6.3x5.4 8x6.5	48 80
56	560	4x5.4	27	5x5.4	32	6.3x5.4	40	6.3x5.4	52	6.3x5.4	48
68	680	5x5.4	31	5x5.4 6.3x5.4	41 43	6.3x5.4	50	6.3x5.4	56	6.3x5.4	50
100	101	5x5.4	39	5x5.4 6.3x5.4	40 50	5x5.4 6.3x5.4	40 53	6.3x5.4 6.3x7.7 8x6.5	60 109 100	6.3x5.4 6.3x7.7 8x6.5 8x10.5	80 91 100 180
150	151	6.3x5.4	52	6.3x5.4	55	6.3x5.4	62	6.3x7.7 8x6.5	80 120	6.3x7.7 8x10.5	100 140
220	221	6.3x5.4	57	6.3x5.4 6.3x7.7	67 105	6.3x5.4 6.3x7.7 8x6.5	67 88 105	6.3x7.7 8x6.5 8x10.5	86 105 150	8x10.5 10x7.7	175 160
330	331	6.3x7.7	100	6.3x7.7 8x6.5	105 105	6.3x7.7 8x10.5	135 195	8x10.5 10x7.7	195 175	8x10.5 10x10.5	220 220
470	471	6.3x7.7	105	6.3x7.7 8x10.5	120 230	6.3x7.7 8x10.5 10x10.5	120 210 232	8x10.5 10x10.5	270 280	10x10.5	280
680	681	8x10.5	210	8x10.5	230	8x10.5 10x10.5	230 270	10x10.5	315	10x13.5	400
1000	102	8x10.5	230	8x10.5 10x10.5	290 315	10x10.5	315	10x10.5 10x13.5 12.5x13.5	310 390 500	12.5x13.5	580
1500	152	10x10.5	315	10x10.5	410	12.5x13.5	458	12.5x13.5	550	--	--
2200	222	--	--	12.5x13.5	620	12.5x13.5	680	--	--	Case Size	Ripple Current

WV Cap.(uF)		35 1V		50 1H		63 1J		100 2A	
1	010	--	--	4x5.4	8	4x5.4	8	4x5.4	8
1.5	1R5	--	--	4x5.4	9	4x5.4	9	6.3x5.4	12
2.2	2R2	--	--	4x5.4	11	4x5.4	11	6.3x5.4	14
3.3	3R3	--	--	4x5.4	12	5x5.4 6.3x5.4	12 30	6.3x5.4 6.3x7.7	23 41
4.7	4R7	4x5.4	15	4x5.4 5x5.4	14 19	5x5.4 6.3x5.4	18 23	5x5.4 6.3x5.4 6.3x7.7	15 21 35
10	100	4x5.4 5x5.4	18 25	5x5.4 6.3x5.4	20 28	6.3x5.4 6.3x7.7 8x6.5	24 39 25	6.3x5.4 6.3x7.7 8x6.5 8x10.5	25 35 50 90
22	220	5x5.4 6.3x5.4	34 29	6.3x5.4 6.3x7.7 8x6.5	42 51 70	6.3x7.7 8x6.5 8x10.5	48 55 98	8x10.5 10x10.5	84 120
33	330	6.3x5.4 8x6.5	46 85	6.3x5.4 6.3x7.7 8x6.5	60 60 70	6.3x7.7 8x10.5	49 112	10x10.5	120
47	470	6.3x5.4 6.3x7.7 8x6.5	55 78 85	6.3x7.7 8x6.5 8x10.5 10x10.5	63 85 119 170	8x10.5 10x10.5	119 160	10x10.5 10x13.5 12.5x13.5	120 160 250
56	560	6.3x7.7	65	6.3x7.7	90	10x10.5	210	--	--
68	680	6.3x7.7	69	8x6.5 8x10.5	70 110	10x10.5	140	10x13.5 12.5x13.5	180 300
100	101	6.3x7.7 8x10.5 10x7.7	80 80 160	8x10.5 10x10.5	145 175	10x10.5 10x13.5 12.5x13.5	196 210 270	12.5x13.5	380
150	151	8x10.5	175	10x10.5	200	--	--	--	--
220	221	8x10.5 10x10.5	185 250	10x10.5 10x13.5	220 280	12.5x13.5	470	--	--
330	331	10x10.5 10x13.5	300 330	10x13.5 12.5x13.5	295 420	--	--	--	--
470	471	10x10.5 10x13.5 12.5x13.5	324 375 520	--	--	--	--	--	--
680	681	12.5x13.5	530	--	--	--	--	Case size	Allowable ripple

Allowable Ripple (mA ms) at 85°C 120Hz

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### HOW TO ORDER

<u>GKT</u>	<u>VA</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
Case Size (mm)	4x5.4	5x5.4	6.3x5.4	8x10.5	10x10.5	12.5x13.5

#### 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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