

Kingtronics®

GKT-VT

Aluminum Electrolytic Capacitor – SMD

FEATURES

- ◆ Chip type, operating with wide temperature range -40~+105°C.
- ◆ Load Life of 1,000~2,000 hours
- ◆ Emboss carrier tape packing system is available for automatic insertion.
- ◆ Designed for surface mounting on high density circuit board.



Fig 1

Fig 2

Fig 3

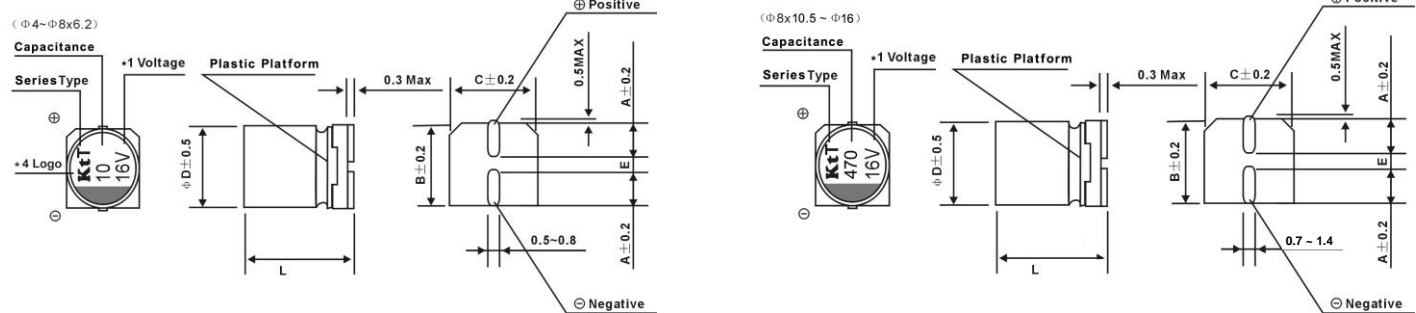
Note: Fig 1 & 2: Diameter 4 ~10mm

Fig 3 : Diameter: ≥12.5mm

SPECIFICATIONS

OPERATING TEMPERATURE	-40°C ~ +105°C									
Voltage Range	4V ~ 100V.DC									
Capacitance Range	0.1 ~ 10000μF									
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)	4	6.3	10	16	25	35	50	63	100
	Tan δ	Φ4~Φ10	0.35	0.30	0.24	0.20	0.16	0.14	0.14	0.12
	(Max.)	Φ12.5~Φ16	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.12
Stability At Low Temp.	Measurement Frequency: 120Hz									
	Rated Voltage (V)	4	6.3	10	16	25	35	50	63	100
	Impedance Ratio ZT/Z20 (Max.)	Φ4~Φ10	Z(-25°C)/ Z(20°C)	7	4	3	2	2	2	3
			Z(-40°C)/ Z(20°C)	15	8	6	4	4	3	3
	Φ12.5~Φ16	Z(-25°C)/ Z(20°C)	7	5	4	3	2	2	2	2
		Z(-40°C)/ Z(20°C)	17	12	10	8	5	4	3	3
Load Life	After 2000 hours (1000hrs. forΦ4~Φ6.3x5.8) application of rated voltage at 105°C, They meet the characteristics listed below.									
	Capacitance Change	within ± 20% of initial value for capacitors of 10V or more (within ± 30% of initial value for capacitors of 4V & 6.3V)								
	Dissipation Factor	200% or less of initial specified value								
	Leakage Current	Initial specified value or less								
Shelf Life	After leaving capacitors under no load at 105°C for 1000 hours, They meet the specified value for load life characteristics listed above.									
Resistance to Soldering Heat	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: KtT, KT, XT

	(mm)											
ΦDxL	4x5.4	5x5.4	6.3x5.4	6.3x7.7	8x6.5	8x10.5	10x10.5	10x13.5	12.5x13.5	12.5x16	16x16.5	16x21.5
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2	3.2	4.7	4.7	5.5	5.5
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0	13.0	17.0	17.0
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0	13.0	17.0	17.0
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	4.4±0.2	6.7±0.2	6.7±0.2
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	16.0±1.0	16.5±1.0	21.5±1.0

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FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

Coefficient	Frequency		50Hz	120Hz	300Hz	1KHz	10KHz~
	Φ4~Φ10	0.1~68μF	0.70	1.00	1.17	1.36	1.50
		100~3300μF	0.85	1.00	1.08	1.20	1.30
Φ12.5~Φ16	~68μF	0.75	1.00	1.35	1.57	2.00	
	100~680μF	0.8	1.00	1.23	1.34	1.50	
	1000~10000μF	0.85	1.00	1.10	1.13	1.15	

STANDARD RATINGS

WV/V		4		6.3		10		16		25	
Cap/μF		0G		0J		1A		1C		1E	
4.7	4R7	--	--	--	--	--	--	4x5.4	13	4x5.4	14
10	100	--	--	--	--	--	--	4x5.4	19	4x5.4 5x5.4	14 14
22	220	4x5.4	23	4x5.4	20	4x5.4 5x5.4	21 27	4x5.4 5x5.4	22 31	5x5.4 6.3x5.4	25 36
33	330	4x5.4 5x5.4	22 27	4x5.4 5x5.4	22 27	4x5.4 5x5.4	23 34	5x5.4 6.3x5.4	28 40	5x5.4 6.3x5.4	29 44
47	470	4x5.4 5x5.4	25 37	4x5.4 5x5.4	25 37	4x5.4 5x5.4 6.3x5.4	30 38 41	5x5.4 6.3x5.4	31 55	6.3x5.4 8x6.5	48 80
56	560	4x5.4	39	5x5.4	46	6.3x5.4	57	6.3x5.4	74	6.3x5.4	82
68	680	5x5.4	45	6.3x5.4	62	6.3x5.4	72	6.3x5.4	80	6.3x5.4	94
100	101	5x5.4 6.3x5.4	39 57	5x5.4 6.3x5.4	39 57	5x5.4 6.3x5.4	41 53	6.3x5.4 8x6.5	75 120	6.3x5.4 6.3x7.7	80 91
150	151	6.3x5.4	61	6.3x5.4	55	6.3x5.4	55	6.3x7.7 8x6.5	80 120	6.3x7.7 8x10.5	92 140
220	221	6.3x5.4	67	6.3x5.4 6.3x7.7	95 69	6.3x5.4 6.3x7.7	95 67	6.3x7.7 8x6.5 8x10.5	89 105 180	8x10.5 10x7.7	200 180
330	331	6.3x7.7	100	6.3x7.7 8x6.5	120 105	6.3x7.7 8x10.5	135 195	8x10.5 10x7.7	195 185	8x10.5 10x10.5	205 220
470	471	6.3x7.7 8x6.5	105 105	6.3x7.7 8x10.5	120 230	6.3x7.7 8x10.5 10x10.5	120 210 295	8x10.5 10x10.5	270 280	10x10.5	280
680	681	8x10.5	210	8x10.5 10x7.7	230 210	8x10.5 10x10.5	230 270	10x10.5	315	10x10.5 10x13.5	245 400
1000	102	8x10.5 10x7.7	230 210	8x10.5 10x10.5	290 315	8x10.5 10x10.5	290 315	10x10.5 10x13.5 12.5x13.5	315 390 500	10x13.5 12.5x13.5	430 580
1500	152	10x10.5	315	10x10.5 10x13.5	410 450	10x10.5 10x13.5	335 460	10x13.5 12.5x13.5	430 550	--	--
2200	222	10x10.5 10x13.5	340 440	10x13.5 12.5x13.5	500 620	12.5x13.5	680	--	--	--	--
3300	332	10x13.5	490	12.5x13.5	660	--	--	--	--	--	--
4700	472	12.5x13.5	600	--	--	--	--	--	--	Case Size	Ripple Current

WV/V		35		50		63		100	
Cap/μF		1V		1H		1J		2A	
0.1	0R1	--	--	4x5.4	2	4x5.4	2	--	--
0.22	R22	--	--	4x5.4	4	4x5.4	4	--	--
0.33	R33	--	--	4x5.4	4	4x5.4	4	--	--
0.47	R47	--	--	4x5.4	5	4x5.4	5	--	--
1	010	--	--	4x5.4	8	4x5.4	8	4x5.4	7
2.2	2R2	--	--	4x5.4	11	4x5.4	11	5x5.4 6.3x5.4	12 13
3.3	3R3	4x5.4	13	4x5.4	13	5x5.4 6.3x5.4	14 30	6.3x5.4 6.3x7.7 8x6.5	18 30 30
4.7	4R7	4x5.4	15	4x5.4 5x5.4	14 18	5x5.4 6.3x5.4	15 18	5x5.4 6.3x5.4 6.3x7.7	15 19 33
10	100	4x5.4 5x5.4	17 24	5x5.4 6.3x5.4	20 28	6.3x5.4 6.3x7.7 8x6.5	24 39 25	6.3x5.4 6.3x7.7 8x10.5	25 34 77
22	220	5x5.4 6.3x5.4	34 40	6.3x5.4 6.3x7.7 8x6.5	42 42 70	6.3x7.7 8x6.5 8x10.5	48 55 98	8x10.5 10x10.5	82 122
33	330	6.3x5.4 8x6.5	50 85	6.3x7.7 8x6.5	60 70	6.3x7.7 8x10.5	49 112	10x10.5	133
47	470	6.3x5.4 6.3x7.7 8x6.5	58 57 120	6.3x7.7 8x6.5 8x10.5	63 85 120	8x10.5 10x10.5	117 160	10x10.5 10x13.5 12.5x13.5	140 160 250
68	680	6.3x7.7 8x6.5	80 90	8x6.5 8x10.5	70 120	10x10.5 10x13.5	140 160	10x13.5 12.5x13.5	180 300
100	101	6.3x7.7 8x10.5 10x7.7	80 150 160	8x10.5 10x10.5 10x7.7	145 180 160	10x10.5 10x13.5 12.5x13.5	196 210 270	12.5x13.5	380
150	151	8x10.5	185	10x10.5	200	10x13.5	225	--	--
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	310 375 356	12.5x13.5	470	--	--	--	--
680	681	12.5x13.5	530	--	--	--	--	Case Size	Ripple Current

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HOW TO ORDER

<u>GKT</u>	<u>VT</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.

Kingtronics® International Company

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