

Kingtronics®**GKT-AT**

Aluminum Electrolytic Capacitor– Axial

FEATURES

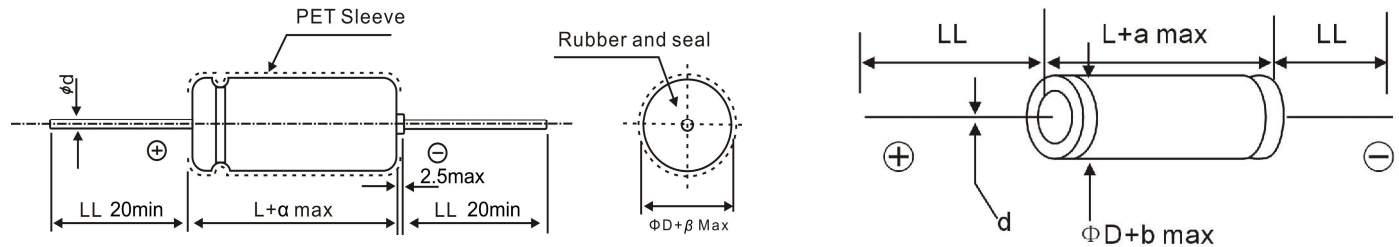
- ◆ 105°C, 1000 hours assured.
- ◆ Voltage range of 6.3 ~ 450V.
- ◆ Wide operating temperature range, from -40°C ~ +105°C

**SPECIFICATIONS**

OPERATING TEMPERATURE RANGE	-40°C~ 105°C																
CAPACITANCE TOLERANCE	± 10%(K), ± 20%(M) (at 20°C, 120Hz)																
VOLTAGE RANGE	6.3 ~ 100VDC								160 ~ 450VDC								
LEAKAGE CURRENT ((20°C)	I ≤ 0.02CV or 3 (uA) Whichever is greater (after 2 minutes applying the rated DC working Voltage at 20 °C)								I ≤ 0.03CV+15 (uA) for CV ≤ 1000, I ≤ 0.02CV+25 (uA) for CV > 1000 (after 5 minutes applying the rated DC working Voltage at 20 °C)								
Where: I=Leakage Current (uA) , C=rated Capacitance (µF) , V= working Voltage (V)																	
(at 20°C, 120Hz) DISSIPATION FACTOR (tan δ)	Add 0.02 per 1000µF for more than 1000µF																
	W.V	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450		
	tan δ	0.23	0.20	0.17	0.15	0.12	0.10	0.09	0.08	0.15	0.15	0.20	0.20	0.24	0.24		
(20°C) SURGE VOLTAGE	W.V	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450		
	S.V	8	13	20	32	44	63	79	125	200	250	300	400	450	500		
LOW TEMPERATURE STABILITY	Impedance ratio at 120HZ																
	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450		
	Z(-25°C) / +20°C	φ D<16	6	4	3	3	2	2	2	2	3	6	8	12	14	16	
		φ D≥16	8	6	4	4	3	3	3	3							
	Z(-40°C) / +20°C	φ D<16	10	8	6	6	4	3	3	3	4	8	10	-	-	-	
		φ D≥16	18	16	12	10	8	8	6	6							
LOAD LIFE TEST	After 1,000 hours application of rated voltage at 105°C, capacitors meet the characteristics requirements listed as below .																
	Capacitance Change	Within ±20% of initial value															
	Dissipation Factor	Less than 200% of specified value															
	Leakage Current	Within specified value															
SHELF LIFE TEST	After leaving capacitors under no load at 105°C for 1,000 hours and applying Voltage they meet the specified value for load life characteristics listed above.																
FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT	Freq.(Hz)	60				120				500				1K		10K up	
	Cap.(µF)	Under 100				1.00				1.30				1.40		1.50	
		100 to 1000				1.00				1.20				1.30		1.35	
		1000 up above				1.00				1.10				1.12		1.15	
ALLOWABLE RIPPLE CURRENT VS AMBIENT TEMPERATURE	Temperature(°C)	Under 50				70				85				105			
	Multiplier	1.95				1.78				1.40				1.00			

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DIMENSIONS (mm)



LEAD DIAMETER

φ D	5	6.3	8	10	13	16	18	22	25
φ d	0.6	0.6	0.6	0.6	0.6	0.8	0.8	0.8	0.8
α	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
β	0.5	0.5	0.5	1.0	1.0	1.0	1.0	1.0	1.0

DIMENSIONS: Diameter (DØ) x Length (L) mm

RIPPLE CURRENT. mA at 85°C, 120Hz

V.DC	6.3V		10V		16V		25V		35V	
	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA
10	--	--	--	--	--	--	5x12	39	5x12	44
22	--	--	--	--	5x12	55	6.3x13	63	6.3x13	65
33	--	--	--	--	5x12	73	6.3x13	75	6.3x13	96
47	--	--	5x12	77	6.3x13	85	6.3x13	90	6.3x13	114
100	6.3x13	102	6.3x13	110	6.3x13	145	8x13	166	8x16	180
220	6.3x13	167	8x13	180	8x13	231	8x16	246	10x17	305
330	8x16	236	8x16	253	8x16	323	10x17	345	10x21	391
470	8x16	281	8x16	302	10x17	359	10x21	432	13x22	490
1000	10x17	453	10x17	486	10x21	569	13x22	662	13x27	721
2200	13x22	740	13x22	793	13x27	926	16x28	1024	16x33	1177
3300	13x27	906	13x27	1015	16x28	1173	16x33	1300	18x40	1449
4700	13x27	1168	16x28	1252	16x33	1443	18x40	1638	22x40	1878

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RIPPLE CURRENT. mA at 85°C, 120Hz

V.DC	50V		63V		100V		160V		200V	
μF	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA
1	5x12	10	5x12	15	5x12	15	6.3x13	7	6.3x13	9
2.2	5x12	20	5x12	30	5x12	30	6.3x13	15	8x13	16
3.3	5x12	30	5x12	32	5x12	32	8x16	21	8x16	26
4.7	5x12	34	5x12	36	6.3x13	37	8x16	31	10x17	33
10	5x12	50	6.3x13	55	6.3x13	64	10x17	60	10x21	66
22	6.3x13	75	6.3x13	90	8x16	106	10x21	121	13x22	121
33	6.3x13	105	8x13	123	10x17	150	13x22	154	13x27	167
47	8x13	140	8x16	162	10x21	180	13x27	198	16x33	214
100	10x17	225	10x17	248	13x22	287	16x33	345	16x33	368
220	10x21	349	13x22	420	16x28	458	18x40	586	22x40	609
330	13x22	450	13x27	495	16x33	582	22x40	632	--	--
470	13x22	561	13x27	632	16x36	713	--	--	--	--
1000	16x33	875	16x40	984	22x40	1148	--	--	--	--
2200	18x40	1408	22x40	1540	25x43	2310	--	--	--	--
3300	22x40	1724	25x43	1950	--	--	--	--	--	--
4700	25x41	1950	25x43	2290	--	--	--	--	--	--

V.DC	250V		350V		400V		450V	
μF	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA
1	6.3x13	12	8x16	13	8x16	15	8x16	15
2.2	8x16	17	10x17	19	10x17	23	10x21	23
3.3	10x17	31	10x17	33	10x17	36	10x21	36
4.7	10x17	38	10x21	44	10x21	46	13x22	46
10	10x21	72	13x22	72	13x22	79	13x27	82
22	13x27	126	13x27	132	16x33	143	16x36	154
33	16x28	178	16x33	186	16x40	201	16x40	201
47	16x33	241	16x40	253	18x40	253	18x40	304
100	16x40	391	22x40	402	22x43	439	22x43	448
220	22x40	632	--	--	--	--	--	--

Kingtronics® International CompanyWebsite: www.kingtronics.com Email: info@kingtronics.com Tel: (852) 8106 7033 Fax: (852) 8106 7099

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HOW TO ORDER

GKT	AT	0J	0R1	M	00500110	000	B	R
Series	Sub Series	Rated Voltage	Capacitance	Capacitance Tolerance	Dimension	Lead Length	Packing	Pb
		1.	2.	3.	4.	5.	6.	7.

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	M
Tolerance	±10%	±20%

4. Dimension

Code	00500110	00630120	01300200	01600300
Dimension (mm)	5x11	6.3x12	13x20	16x30

5. Lead Length

Code	000
Lead Length	Standard

6. Packing

Code	B	T
Packing	Bulk	Tape & Reel

7. Pb

Code	L	R
Pb	Leaded	RoHS

Note: Specifications are subject to change without notice.

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