Kingtronics® GKT-GL

Aluminum Electrolytic Capacitor – Radial

FEATURES

- At 55℃(Φ5~Φ6: 2000hours Φ8~Φ10: 3000hours) Ultra lower impedance
- Load life of 5000 hours at 105℃
- Low Impedance, Long Life
- High Frequency
- Switch power supply
- Excellent ripple current capability

SPECIFICATIONS

OPERATING TEMPERATURE RANGE (℃)	-55℃ ~ +105℃
Capacitance Range (μF)	0.47 ~ 15000
Rated Voltage Range (V)	6.3 ~ 100
CAPACITANCE TOLERANCE (25℃, 120Hz)	±20%
LEAKAGE CURRENT (μA)	1≤0.02CV or 3uA, whichever is greater (after 2 minutes at 25℃) Where, C: Nominal Capacitance (μF) V: Rated Voltage (V)

DISSIPATION FACTOR (25℃, 120Hz)

Wv (V)	6.3	10	16	25	35	50	63	100
Tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08

0.02 is added to each 1000μF increase over 1000μF

Temperature Stability (120Hz)

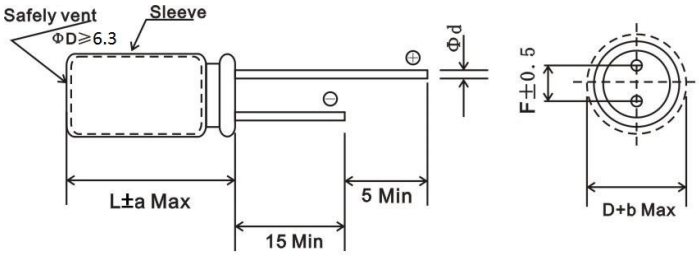
Rated Voltage	6.3	10	16	25	35	50	63	100
Z-55℃/Z+20℃	3	3	3	3	3	3	3	3

LOAD LIFE (+105℃)

Time	5000hous (Φ5~6: 2000hours Φ8~10: 3000hours)
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 (+105℃)	After leaving capacitors under no load at 105℃ for 1000 hours, they meet the specified value for load life Characteristics listed above. *after test: U_R to be applied for 30 minutes, 24 to 48 hours before measurement.

DIMENSIONS (mm)



ΦD	5	6.3	8	10	13	16	18
F	2.0	2.5	3.5	5.0		7.5	
Φd±0.05	0.5	0.5	0.6			0.8	

a Max	D<18	D=18	
		L<35.5	L≥35.5
	+1.5 -1.0	+1.5 -1.0	+2.0 -1.0

b Max	D<18	0.5
	D≥18	1.0

MULTIPLIER FOR RIPPLE CURRENT

Frequency Coefficient

Freq(Hz) / Cap(μF)	120	1K	10K	100K
0.47~4.7	0.40	0.68	0.78	1.0
5.6~47	0.50	0.76	0.87	1.0
56~270	0.70	0.85	0.90	1.0
330~1000	0.80	0.93	0.98	1.0
1200~15000	0.90	0.95	1.0	1.0

Dia	Life Time
5~6.3	2000h
8~10	3000h
≥13	5000h

Temperature Coefficient

Temperature(℃)	+70	+85	+105
Factor	1.96	1.68	1.0

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STANDARD RATINGS

V / μF	6.3V	10V	16V	25V	35V	50V	63V	100V
1	--	--	--	--	--	5x11	--	
2.2	--	--	--	--	--	5x11	--	
3.3	--	--	--	--	--	5x11	--	
4.7	--	--	--	--	5x11	5x11	--	
6.8	--	--	--	--	5x11	5x11	--	
10	--	--	--	--	5x11	5x12	5x11	6.3x11
15	--	--	--	--	5x11	5x12	--	
18	--	--	--	--	5x11	5x12	--	
22	--	--	--	5x11	5x11	6.3x11	6.3x11	8x12
27	--	--	--	--	5x11	6.3x11	--	
33	--	--	--	--	6.3x11	6.3x11	6.3x11	10x13
39	--	--	--	--	6.3x11	6.3x11	--	
47	--	--	5x11	5x11	6.3x11	6.3x12	8x12	10x17
56	--	--	5x11	5x11	6.3x11	6.3x12	--	
68	--	--	5x12	5x12	6.3x11	8x12	10x13	10x21
82	--	--	--	6.3x11	6.3x11	8x12	--	
100	--	5x11	6.3x11	6.3x11	8x12	8x12	10x17	13x20
120	--	5x11	6.3x11	6.3x11	8x12	8x20	--	
150	5x11	5x11	6.3x11	8x12	8x12	8x20	--	
180	5x11	6.3x11	6.3x11	8x12	8x14	8x20	--	
220	6.3x11	6.3x11	6.3x11	8x12	10x17	10x17	10x21	16x26
270	6.3x11	6.3x11	8x12	8x14	10x17	10x21	--	
330	6.3x11	8x12	8x12	8x14	10x17	10x21	13x20	16x26
390	6.3x12	8x12	--	8x20	10x17	13x20	--	
470	8x12	8x12	8x12	10x17	10x17	13x20 13x21	13x20	16x31
560	8x12	8x12	8x16	8x20	10x25	13x21	--	
680	8x12	8x12	8x16	10x17	13x20	13x30	16x26	
820	8x14	8x16	8x20	10x25	13x20	13x35	--	
1000	8x16	8x16	10x17	13x20	13x25	16x25	16x26	
1200	8x16	10x17	10x21	13x20	16x25	13x30	16x30	
1500	8x16	10x21	13x20	13x20	13x35	16x26	--	
1800	10x17	10x25	13x20	13x26	16x26	16x32	--	
2200	10x20	13x20	13x20	13x26	16x26	16x35	18x40	
2700	10x21	13x21	16x26	13x26	16x35	18x40	--	
3300	13x20	13x20	13x30	16x26	16x35	18x40	--	
3900	13x25	--	16x26	16x26	18x40	--	--	
4700	13x25	13x26	16x26	16x26	--	--	--	
5600	16x26	16x30	16x35	--	--	--	--	
6800	16x26	16x30	18x25	--	--	--	--	
8200	16x32	16x35	--	--	--	--	--	
10000	16x35	--	--	--	--	--	--	

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TYPICAL CURVES

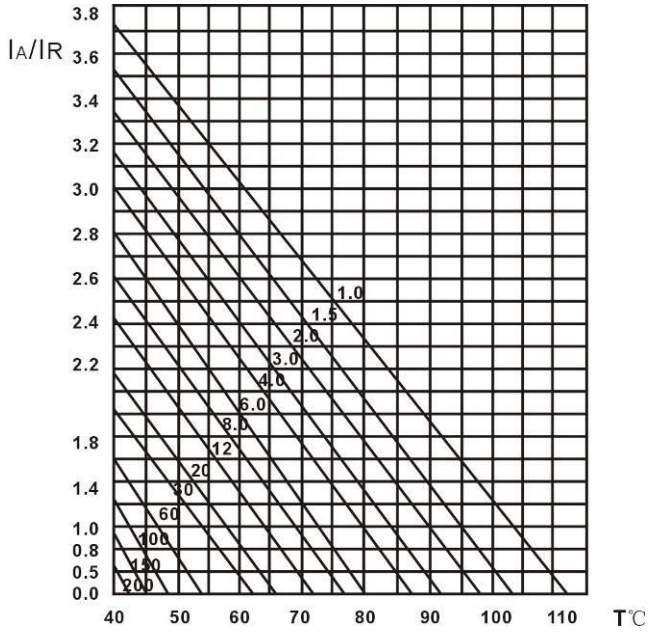

Fig.4 Multiplier of useful life as a function of ambient Temperature and ripple current load

I_A=actual ripple current 120KHz

I_R=rated ripple current at 100KHz, 105℃

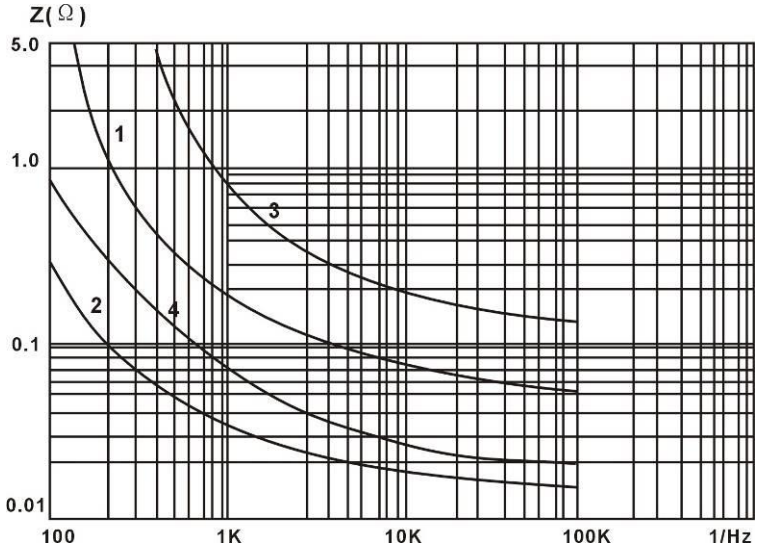

Fig.3 Typical impedance as a function of frequency

1.	10V1000μF	10x20
2.	10V10000μF	18x35.5
3.	63V100μF	10x20
4.	63V1000μF	18x35.5

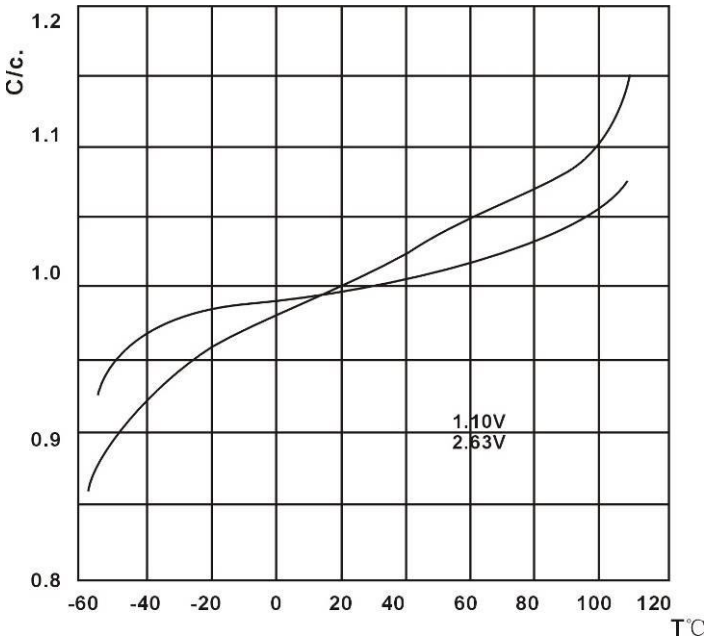

Fig. 1 Typical multiplier of capacitance as a function of ambient temperature

C_o =capacitance at 25℃, 120Hz

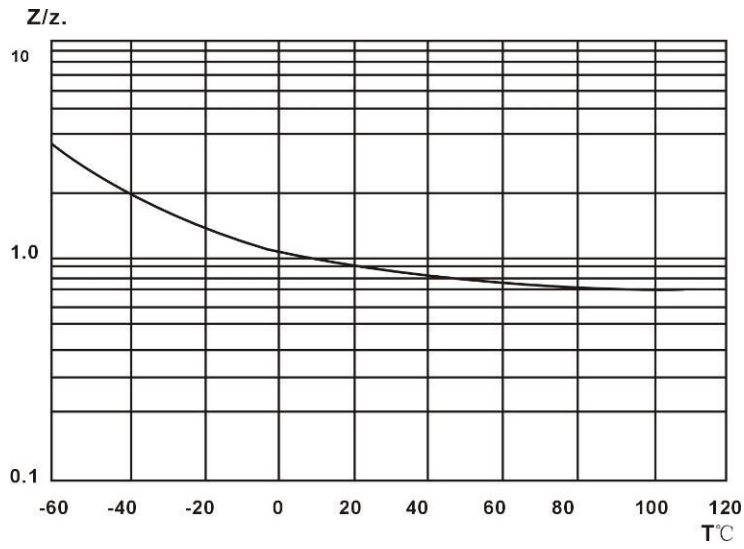

Fig. 2 Typical multiplier of impedance as a function of ambient temperature

Z_o –typical impedance to 25℃, 100KHz

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HOW TO ORDER

GKT	GL	0J	0R1	M	00500110	020	000	B	R
Series	Sub Series	Rated Voltage 1.	Capacitance 2.	Capacitance Tolerance 3.	Dimension 4.	Pitch/ Pins 5.	Lead Length 6.	Packing 7.	Pb 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	01300200	01600300	03500450
Dimension (mm)	5x11	6.3x12	13x20	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.