

# Kingtronics®

## GKT-GU

### Aluminum Electrolytic Capacitor – Radial

## FEATURES

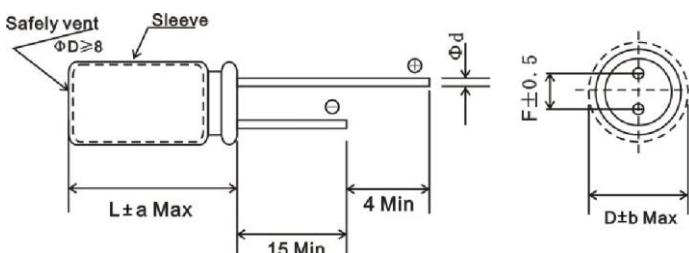
- ◆ Wide temperature range, 105°C, long life: 3000 hours, Miniature.
- ◆ Used in DVD, Color-TV, Air conditioning electron gas meter circuits, etc.



## SPECIFICATIONS

OPERATING TEMPERATURE RANGE (°C)	-40°C ~ +105°C												-25°C ~ +105°C						
Rated Voltage Range (V)	6.3V ~ 100V												160V ~ 450V						
Capacitance Range (μF)	0.1μF ~ 22000μF																		
CAPACITANCE TOLERANCE (+20°C, 120Hz)	±20%																		
LEAKAGE CURRENT (μA) (+20°C, max)	I ≤ 0.01CV or 3μA (after 2 minutes, whichever is greater)												I ≤ 0.03CV(μA) + 40μA (2 minutes)						
DISSIPATION FACTOR (+20°C, 120Hz)	U <sub>R</sub> (V)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450				
	tgδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.15	0.15	0.20	0.20	0.20				
	When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase.																		
Temperature Characteristics (Impedance ratio at 120Hz)	U <sub>R</sub> (V)	6.3	10	16	25	35	50	63	100	160 ~ 250	350 ~ 400				450				
	Z-25°C/+20°C	5	4				3			3	6								
	Z-40°C/+20°C	12	10	8	5	4		3		--	--								
LOAD LIFE	After applying rated voltage with specified ripple current for 3000 hours at 105°C and then resumed 24 hours: Capacitance Change: ±20% of the initial measured value Leakage current: ≤the initial specified value Dissipation factory: ≤200% of the initial specified value																		
SHELF LIFE	After storage for 1000 hours at +105°C, U <sub>R</sub> to be applied for 30 minutes and then resumed 24 hours: Capacitance Change: ±20% of the initial measured value Leakage current: the initial specified value Dissipation factory: ≤200% of the initial specified value																		

## DIMENSIONS (mm)



ΦD	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5		5.0		7.5
Φd ± 0.05		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	Frequency (Hz)						
	Cap (μF)	50(60)	120	300	1K	10K	100K
CAP ≤ 10		0.65	1.0	1.35	1.75	2.30	2.50
10 < CAP ≤ 100		0.75	1.0	1.25	1.50	1.75	1.80
100 < CAP ≤ 1000		0.8	1.0	1.15	1.30	1.40	1.50
1000 < CAP		0.85	1.0	1.03	1.05	1.08	1.08

Temperature Coefficient	Temperature (°C)		
	Rated Voltage (V)	+70	+85
6.3 ~ 100		2.0	1.7
160 ~ 450		1.8	1.4

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## STANDARD RATINGS

Cap(µF) \ V	6.3V	10V	16V	25V	35V	50V
0.10	--	--	--	--	--	5x11 1.3
0.22	--	--	--	--	--	5x11 2.9
0.33	--	--	--	--	--	5x11 4.3
0.47	--	--	--	--	--	5x11 6.2
1	--	--	--	--	--	5x11 13
2.2	--	--	--	--	--	5x11 20
3.3	--	--	--	--	--	5x11 25
4.7	--	--	--	5x11 25	5x11 28	5x11 30
10	--	--	5x11 34	5x11 36	5x11 41	5x11 40
22	--	5x11 46	5x11 51	5x11 54	5x11 61	5x11 65
33	5x11 54	5x11 57	5x11 63	5x11 67	5x11 75	6.3x11 90
47	5x11 64	5x11 68	5x11 75	5x11 80	5x11 90	6.3x11 110
100	5x11 94	5x11 100	5x11 110	6.3x11 130	6.3x11 150	8x12 180
220	5x11 140	6.3x11 170	6.3x11 180	8x12 230	8x12 270	10x12 300
330	6.3x11 190	6.3x11 200	8x12 260	8x12 310	10x12 350	10x16 410
470	6.3x11 230	8x12 250	8x12 310	10x12 380	10x16 460	10x20 530
1000	8x12 380	10x12 460	10x16 560	10x20 680	12.5x20 810	12.5x25 950
2200	10x20 710	10x20 760	12.5x20 920	12.5x25 1090	16x25 1260	16x35 1470
3300	10x20 840	12.5x20 1000	12.5x25 1170	16x25 1400	16x35 1610	18x35 1770
4700	12.5x20 1090	12.5x25 1260	16x25 1480	16x30 1710	18x35 1910	--
6800	12.5x25 1350	16x25 1570	16x30 1780	18x35 2040	--	--
10000	16x25 1650	16x35 1890	18x35 2060	--	--	--
15000	16x35 2010	18x35 2180	--	--	--	--
22000	18x40 2350	--	--	--	--	--

Cap(µF) \ V	63V		100V		160V		200V		250V		350V		400V		450V			
0.10	--	--	5x11 1.5	--	--	--	--	--	--	--	--	--	--	--	--	--		
0.22	--	--	5x11 3.4	--	--	--	--	--	--	--	--	--	--	--	--	--		
0.33	--	--	5x11 5.0	--	--	--	--	--	--	--	--	--	--	--	--	--		
0.47	--	--	5x11 7.1	--	--	--	--	--	--	6.3x11 11	--	--	8x12 11	--	--	--		
1	--	--	5x11 15	--	--	6.3x11 16	--	--	6.3x11 16	6.3x11 16	6.3x11 16	6.3x11 16	8x12 16	8x12 18	--	--		
2.2	--	--	5x11 21	--	--	6.3x11 22	6.3x11 22	6.3x11 22	8x12 26	6.3x11 30	8x12 30	8x12 30	8x12 30	8x12 25	8x12 34	10x12 32	--	
	--	--		--	--		6.3x11 32	6.3x11 32	8x12 34	10x12 38	10x12 38	10x12 38	10x12 38	10x12 36	10x12 38	10x16 40	--	
3.3	--	--	5x11 29	6.3x11 32	8x12 34	8x12 34	8x12 34	8x12 34	8x12 35	8x12 35	10x12 36	10x12 38	10x16 40					
	--	--		6.3x11 32	8x12 34	10x12 38	10x16 40											
4.7	--	--	5x11 62	6.3x11 38	8x12 48	8x12 48	8x12 48	10x12 52	10x20 52	10x20 55	10x20 55	10x20 55	--					
	--	--		6.3x11 38	8x12 48	8x12 48	8x12 48	8x12 48	10x12 52	10x20 52	10x20 55	10x20 55	--					
10	5x11 46	6.3x11 54	8x12 65	8x12 78	10x12 75	10x20 88	--	--	--	--								
			10x12 76	10x12 82	10x20 115	12.5x20 100	12.5x20 100	12.5x20 100	90									
			--	10x16 86	--	--	--	--	--	--	--	--	--	--	--	--	--	
22	5x11 71	8x12 93	10x12 98	10x16 128	10x20 128	10x20 128	10x20 128	12.5x20 145	12.5x20 154	12.5x25 168	12.5x25 168	16x20 185	--					
			10x16 108	10x20 132	12.5x20 145	12.5x25 168	12.5x25 168	16x20 185	--									
			10x20 120	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
33	6.3x11 100	8x12 130	10x16 158	10x20 185	10x20 185	10x20 185	10x20 185	12.5x20 184	16x20 198	16x20 258	16x25 215	16x25 215	--					
47	6.3x11 120	10x12 165	10x20 182	12.5x20 225	16x25 250	16x25 305	16x30 344	16x30 344	--									
68	--	--	12.5x20 265	12.5x25 308	--	--	--	16x25 336	16x30 465	18x25 445	18x30 455	18x30 455	--					
82	--	--	--	12.5x25 318	16x30 398	16x40 544	18x30 532	18x30 532	18x35 530	--								
100	10x12 215	10x20 265	12.5x25 335	16x25 345	18x30 398	18x40 532	18x40 530	--										
120	--	--	--	--	--	--	--	--	--	--	--	--	--	18x35 588	18x40 582	--	--	
150	--	--	--	--	16x25 446	16x35 468	16x35 468	--	--	--	--	--	--	18x40 668	18x50 700	--	--	
180	--	--	--	--	16x30 560	--	--	--	--	--	--	--	--	--	--	--	--	
220	10x16 335	12.5x25 440	16x30 568	16x35 678	18x35 678	18x35 678	18x35 678	18x35 678	--	--	--	--	--	--	--	--	--	
330	10x20 510	16x25 540	18x35 710	18x35 755	18x40 730	18x40 730	18x40 730	18x40 730	--	--	--	--	--	--	--	--	--	
470	12.5x20 640	16x30 715	18x40 870	18x45 938	--	--	--	--	--	--	--	--	--	--	--	--	--	
1000	16x25 930	18x40 985	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Ripple Current (mA, +105°C, 120Hz)  
Customer products are available on request.

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## HOW TO ORDER

GKT	GU	0J	0R1	M	00500110	020	000	B	R
Series	Sub Series	Rated Voltage	Capacitance	Capacitance Tolerance	Dimension	Pitch/ Pins	Lead Length	Packing	Pb
		1.	2.	3.	4.	5.	6.	7.	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
Voltage	100V	120V	160V	180V	200V	250V	315V	330V	350V	400V

#### 2. Capacitance

Code	0R1	R22	R33	R47	010	2R2	3R3	4R7	100	220	330	470	101
Capacitance ( $\mu\text{F}$ )	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 ( $\mu\text{F}$ )	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	$\pm 10\%$	$\pm 15\%$	$\pm 20\%$	+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.

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