

Kingtronics®

GKT-VH

Aluminum Electrolytic Capacitor— SMD

FEATURES

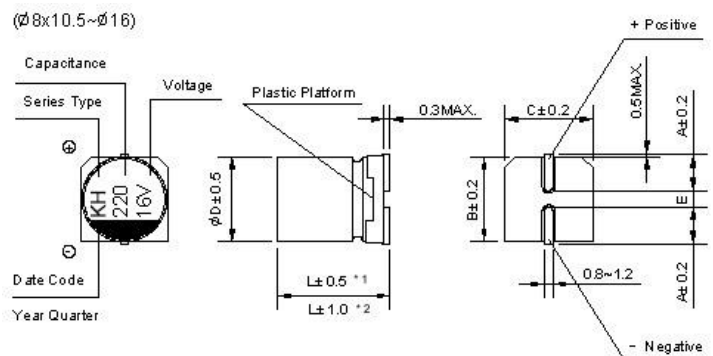
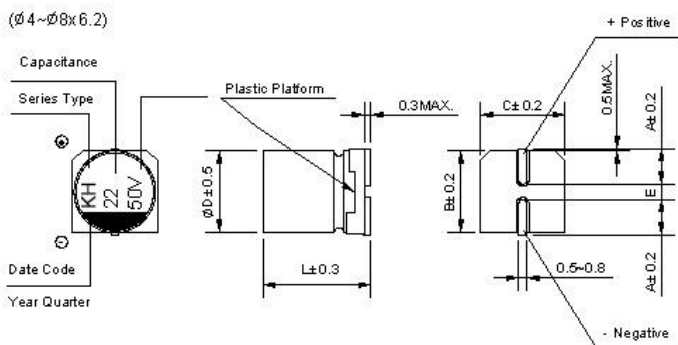
- ◆ High temperature up to +125°C.
- ◆ Load life from 1000 hours to 5000 hours
- ◆ Comply with the RoHS directive..



SPECIFICATIONS

OPERATING TEMPERATURE	-40°C ~+125°C											
Voltage Range	10V~450V.DC											
Capacitance Range	3.3 ~ 2200µF											
Capacitance Tolerance	±20% at 120Hz, 20°C											
Leakage Current	Leakage current (10V~100V) is not more than 0.03CV or 4µA, whichever is greater (After 2 minutes application of rated voltage) Leakage current (160V~450V) is not more than 0.04CV or 100µA, whichever is greater (After 1 minutes application of rated voltage)											
Dissipation Factor (Tan δ)	Measurement Frequency: 120Hz, Temperature: 20°C											
		Rated Voltage (V)		10	16	25	35	50	63	100	160~250	400, 450
Tan δ (Max.)	Φ6.3~Φ10	Φ6.3~Φ10		0.24	0.20	0.16	0.14	0.14	0.18	0.18	--	--
		Φ12.5~Φ16		0.22	0.18	0.16	0.14	0.12	0.14	0.10	0.20	0.24
Stability At Low Temp.	Measurement Frequency: 120Hz											
	Impedance Ratio	Rated Voltage (V)		10	16	25	35	50	63	100	160~250	400, 450
		ZT/Z20 (Max.)	Φ6.3~Φ10	Z(-25°C)/ Z(20°C)	4	3	2	2	2	2	2	--
	Z(-40°C)/ Z(20°C)			10	8	6	4	4	4	4	--	--
ZT/Z20 (Max.)	Φ12.5~Φ16	Z(-25°C)/ Z(20°C)	4	3	2	2	2	2	2	2	3	6
		Z(-40°C)/ Z(20°C)	8	6	4	3	3	3	3	3	6	10
Load Life	After 5000 hours' application of rated voltage for Ø12.5~16(10~100V),and 2000 hours for Ø8*10.5~ Ø10(10~100V), and 1000 hours for Ø8*6.2~ Ø6.3,as well 2000 hours application of rated voltage for Ø12.5~ Ø16(160~450V) at 125°C capacitors meet the characteristics requirements listed below.											
	Capacitance Change	Within ±30% of initial value										
	Dissipation Factor	300% 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 according and restored at room temperature, they meet the characteristics requirements 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 [L±0.5] is applicable to Ø8x10.5~Φ10;

*2 [L±1.0] is applicable to Φ12.5~Φ16.

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DIMENSIONS(Unit: mm)

D×L	Φ6.3×5.8/7.7	Φ8×6.2	Φ8×10.5	Φ10×10.5	Φ10×13.5	Φ12.5×13.5/16	Φ16×16.5/21.5
A	2.4	3.3	2.9	3.2	3.2	4.7	5.5
B	6.6	8.3	8.3	10.3	10.3	13.0	17.0
C	6.6	8.3	8.3	10.3	10.3	13.0	17.0
E±0.2	2.2	2.2	3.1	4.4	4.4	4.4	6.7
L	5.8/7.7	6.2	10.5	10.5	13.5	13.5/16	16.5/21.5

DIMENSIONS&MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV Cap. (μF)		10				16				25			
		1 A				1C				1E			
33	330									6.3×5.8	3.3	66	45
47	470					6.3×5.8	3.3	66	43	6.3×7.7 (8×6.2)	2.3 (2.3)	46 (46)	68 (68)
100	101	6.3×7.7 (8×6.2)	2.3 (2.3)	46 (46)	72 (72)	8×10.5	1.0	20	115	8×10.5	1.0	20	126
220	221	8×10.5	1.0	20	136	10×10.5	0.7	13.4	175	10×10.5	0.7	13.4	211
330	331	10×10.5	0.7	13.4	188	10×13.5	0.5	9.5	280	12.5×13.5 (10.5×13.5)	0.14 (0.5)	2.1 (9.5)	750 (270)
470	471	10×13.5	0.5	9.5	300	12.5×13.5	0.14	2.1	750	12.5×13.5	0.14	2.1	750
680	681					16×16.5 (12.5×13.5)	0.10 (0.14)	1.5 (2.1)	1000 (750)	16×16.5	0.10	1.5	1000
1000	102	12.5×16 (12.5×13.5)	0.11 (0.14)	1.5 (2.1)	900 (750)	16×21.5	0.10	1.5	1200	Case Size	ESR(Ω) 20°C	ESR(Ω) -40°C	Ripple Current
2200	222	16×16.5 16×21.5	0.10 0.10	1.5 1.5	1000 1200	16×21.5	0.10	1.5	1200				

WV Cap. (μF)		35				50			
		1 V				1H			
10	100	6.3×5.8	3.3	66	38	6.3×7.7 (6.3×5.8)	2.3 (3.3)	46 (66)	50 (38)
22	220	6.3×5.8	3.3	66	39	6.3×7.7 (8×6.2)	2.3 (2.3)	46 (46)	50 (50)
33	330	6.3×7.7 (8×6.2)	2.3 (2.3)	46 (46)	62 (62)	8×10.5	1.0	20	83
47	470	8×10.5	1.0	20	92	10×10.5	0.7	13.4	111
100	101	10×10.5	0.7	13.4	151	12.5×13.5	0.23	3.5	550
220	221	12.5×13.5 (10×13.5)	0.14 (0.5)	2.1 (9.5)	750 (260)	16×16.5 (12.5×13.5)	0.15 (0.23)	2.3 (3.5)	850 (550)
330	331	12.5×13.5	0.14	2.1	750	16×16.5 (12.5×16)	0.15 (0.18)	2.3 (2.7)	850 (700)
470	471	16×16.5 (12.5×16)	0.10 (0.11)	1.5 (1.5)	1000 (900)	16×21.5	0.15	2.3	920
680	681	16×21.5	0.10	1.5	1200	Case Size	ESR(Ω) 20°C	ESR(Ω) -40°C	Ripple Current

Ripple Current (mA rms) at 125°C 100kHz

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DIMENSIONS&MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV Cap. (μF)		63				100			
		1 J				2A			
10	100	6.3x7.7 (8x6.2)	2.3 (2.3)	115 (115)	42 (42)	8x10.5	1.00	50	53
22	220	8x10.5	1.0	50	56	10x10.5	0.70	35	63
33	330	10x10.5	0.7	35	77	10x13.5	0.45	22.5	130
47	470	10x13.5	0.45	22.5	150	12.5x13.5	0.33	16.5	450
68	680					12.5x16	0.26	13	550
100	101	12.5x13.5	0.25	12.5	500	16x16.5	0.24	12	650
220	221	12.5x16	0.20	10	600	Case Size	ESR(Ω) 20°C	ESR(Ω) -40°C	Ripple Current
330	331	16x16.5	0.18	9	820				
470	471	16x21.5	0.11	5.5	1100				

WV Cap. (μF)		160		200		250		400		450	
		2C		2D		2E		2G		2W	
3.3	3R3									12.5x16	65
4.7	4R7							12.5x13.5	70	16x16.5	85
6.8	6R8							16x16.5	100		
10	100	12.5x13.5	100	12.5x13.5	100	12.5x16	110				
22	220	16x16.5	180	16x16.5	180						
										Case Size	Ripple Current

Ripple Current (mA rms) at 125°C 120Hz

Frequency coefficient of allowable ripple current(10~100V)

Frequency Capacitance (μF)	Frequency				
	50Hz	120Hz	1kHz	10kHz	100kHz~
10~100	0.35	0.40	0.75	0.90	1.00
220~470	0.35	0.50	0.85	0.94	1.00
680~2200	0.40	0.60	0.85	0.95	1.00

Frequency Correction Factor of Rated Ripple Current(160~450V)

Frequency	Frequency					
Coefficient	50Hz	120Hz	300Hz	1kHz	10kHz	100kHz~
	0.75	1.00	1.25	1.50	1.75	1.80

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HOW TO ORDER

<u>GKT</u>	<u>VH</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.

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