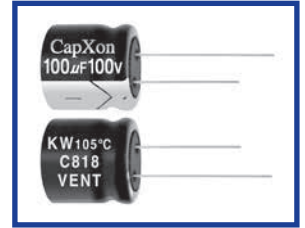


KW Series 9-21mm Low Profile 105°C

Features

- ◆ Used space-saving equipment, low profile.
- ◆ Endurance 2000 hrs at 105°C.
- ◆ Safety vent construction design.
- ◆ RoHS Compliant



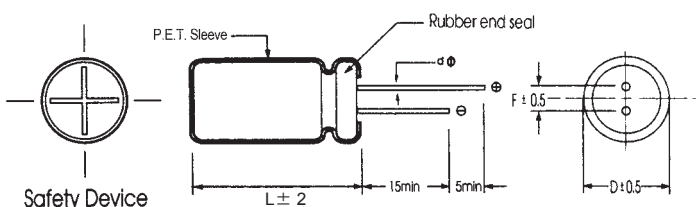
Specifications

Item	Performance Characteristics																																			
Operating Temperature Range	-40 to +105°C	-25 to +105°C																																		
Rated Voltage Range	6.3 to 100 VDC	160 to 450 VDC																																		
Capacitance Range	2.2 to 10000 μF	1.5 to 220 μF																																		
Capacitance Tolerance	±20% (120Hz, +20°C)																																			
Leakage Current (+20°C, max.)	I ≤ 0.01 CV or 3 (μA) After 2 minutes whichever is greater measures with rated working voltage applied.	I ≤ 0.04 CV + 100 (μA) After 2 minutes with rated working voltage applied.																																		
Dissipation Factor (tan δ, at 20°C, 120Hz)	<table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>D.F. (%)max.</td> <td>24</td> <td>22</td> <td>20</td> <td>16</td> <td>14</td> <td>12</td> <td>10</td> <td>10</td> </tr> </table>								Working Voltage(VDC)	6.3	10	16	25	35	50	63	100	D.F. (%)max.	24	22	20	16	14	12	10	10										
	Working Voltage(VDC)	6.3	10	16	25	35	50	63	100																											
D.F. (%)max.	24	22	20	16	14	12	10	10																												
		<table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>160</td> <td>200</td> <td>250</td> <td>350</td> <td>400</td> <td>450</td> </tr> <tr> <td>D.F. (%)max.</td> <td>15</td> <td>15</td> <td>15</td> <td>15</td> <td>20</td> <td>20</td> </tr> </table>						Working Voltage(VDC)	160	200	250	350	400	450	D.F. (%)max.	15	15	15	15	20	20	For capacitance > 1000, add 2% per another 1000 μF.														
Working Voltage(VDC)	160	200	250	350	400	450																														
D.F. (%)max.	15	15	15	15	20	20																														
Low Temperature Characteristics (at 120Hz)	Impedance ratio max																																			
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	Working Voltage(VDC)	6.3	10	16	25	35	50	63	100																											
	Z-25°C / Z+20°C	4	3	2	2	2	2	2	2																											
Z-40°C / Z+20°C	8	6	4	4	3	3	3	3																												
<table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>160</td> <td>200</td> <td>250</td> <td>350</td> <td>400</td> <td>450</td> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>3</td> <td>3</td> <td>3</td> <td>6</td> <td>6</td> <td>6</td> </tr> </table>									Working Voltage(VDC)	160	200	250	350	400	450	Z-25°C / Z+20°C	3	3	3	6	6	6	For Capacitance > 1000 μF, add 0.5 per another 1000 μF for -25°C / +20°C add 1 per another 1000 μF for -40°C / +20°C													
Working Voltage(VDC)	160	200	250	350	400	450																														
Z-25°C / Z+20°C	3	3	3	6	6	6																														
Endurance	Test conditions Duration time :2000Hrs Ambient temperature :+105°C Applied voltage :Rated DC working voltage After test requirement at +20°C Capacitance change :≤ ±20% of the initial measured value Dissipation factor :≤ 200% of the initial specified value Leakage current :≤ The initial specified value																																			
Shelf Life	Test conditions Duration time :1000Hrs Ambient temperature :+105°C Applied voltage :None After test requirement at +20°C:Same limits as Endurance. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.																																			

Multiplier for Ripple Current vs. Frequency

CAP (μF) \ Frequency(Hz)	50(60)	120	400	1K	≥10K
0.47 < CAP ≤ 68	0.8	1	1.20	1.30	1.50
100 < CAP ≤ 1000	0.8	1	1.10	1.15	1.20
2200 < CAP ≤ 10000	0.8	1	1.05	1.10	1.15

Diagram of Dimensions:(unit:mm)



D φ	5	6.3	8	10	13	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d φ		0.5		0.6		0.8	

Case Size

WV Cap(μF)		6.3		10		16		25		35		50		63		φ DxL(mm)
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	
2.2												5x9	19	5x9	20	
3.3												5x9	25	5x9	26	
4.7												5x9	40	5x9	41	
6.8												5x9	48	5x9	49	
10												5x9	54	5x9	55	
22												5x9	75	6.3x9	107	
33												5x9	90	6.3x9	115	6.3x9
47						5x9	105	5x9	110	6.3x9	120	6.3x9	130	8x9	136	
68			5x9	115	6.3x9	125	6.3x9	130	8x9	145	8x9	169	10x9	10x9	170	
100	5x9	120	5x9	135	6.3x9	150	6.3x9	160	8x9	180	10x9	200	10x9	10x9	173	
150	5x9	135	6.3x9	150	6.3x9	160	8x9	185	8x9	210	10x9	250	10x16	245		
220	6.3x9	165	6.3x9	165	8x9	200	8x9	230	10x9	255	10x12.5	290	13x13	317		
330	6.3x9	185	8x9	205	8x9	250	10x9	310	10x12.5	360	13x13	375	13x16	382		
											13x16	400				
470	8x9	260	8x9	275	10x9	310	10x12.5	370	13x13	410	16x16	550	16x16	490		
			10x9	280					13x16	430						
680	10x9	310	10x9	360	13x13	390	13x16	520	13x16	580	16x16	700	16x21	730		
1000	10x9	370	10x9	450	13x13	520	13x16	600	16x16	750	16x21	850	16x25	1050		
2200	13x16	620	13x16	690	16x16	850	16x21	950	18x21	1200	18x25	1300				
							18x16	940								
3300	16x16	860	16x16	950	16x21	1180	18x21	1250	18x25	1450						
4700	16x16	1010	16x21	1150	18x21	1480	18x25	1470								
6800	16x16	1210	18x21	1350	18x25	1600										
10000	18x21	1450	18x25	1700												

WV Cap(μF)		100		160		200		250		350		400		450	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
1.5														8x9	18
2.2	5x9	20										8x9	35	10x9	25
3.3	5x9	27								8x9	35	10x9	40	10x9	30
4.7	5x9	42	8x9	50	8x9	50	8x9	50	10x9	50	13x16	50	13x16	48	
6.8	6.3x9	56	8x9	55	8x9	58	10x9	65	13x16	80	13x16	80	13x16	68	
10	8x9	72	10x9	80	10x9	78	13x16	82	13x16	95	13x16	100	16x16	100	
										16x16	105				
22	8x9	114	13x16	120	13x16	145	13x16	165	16x16	180	16x21	185	16x21	170	
								16x16	180						
33	10x9	141	13x16	175	16x16	200	16x16	225	16x21	225	16x21	230			
47	10x16	197	16x16	225	16x16	240	18x16	350	18x21	300	18x21	309			
68	10x16	200	16x21	305	16x21	360	18x21	390							
100	13x13	247	16x21	380	18x21	410									
	13x16	295	18x21	530											
150	16x16	346													
220	16x16	373													
330	16x21	500													
470															

Ripple Current (mA, rms) at 105°C 120Hz