

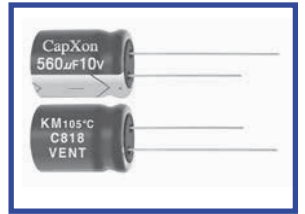
KM Series Standard 105°C

Features

- ◆ Used in communication equipments, switching power supply, etc.
- ◆ Safety vent construction design.
- ◆ ROHS Compliant

Specifications

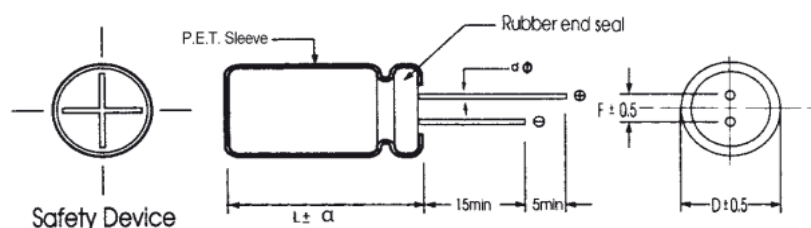
Item	Performance Characteristics																																																						
Operating Temperature Range	-40 to +105℃					-25 to +105℃																																																	
Rated Voltage Range	6.3 to 100 VDC					160 to 500 VDC																																																	
Capacitance Range	0.1 to 22000μF					0.47 to 560μF																																																	
Capacitance Tolerance	±20% (120Hz, +20℃)																																																						
Leakage Current (+20℃,max.)	I ≤ 0.01CV or 3(μA) After 1 minutes whichever is greater measured with rated working voltage applied.					I ≤ 0.03CV(μA) After 1 minutes with rated working voltage applied.																																																	
Dissipation Factor (tanδ, at 20℃, 120Hz)	<table><tr><td>Rated 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>22</td><td>17</td><td>16</td><td>14</td><td>12</td><td>10</td><td>9</td><td>8</td></tr></table> <table><tr><td>Rated Voltage(VDC)</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>420</td><td>450</td><td>500</td></tr><tr><td>D.F. (%)max.</td><td>12</td><td>12</td><td>12</td><td>15</td><td>15</td><td>17</td><td>17</td><td>22</td></tr></table> For capacitance>1000μF,add 2% per another 1000 μ F.										Rated Voltage(VDC)	6.3	10	16	25	35	50	63	100	D.F. (%)max.	22	17	16	14	12	10	9	8	Rated Voltage(VDC)	160	200	250	350	400	420	450	500	D.F. (%)max.	12	12	12	15	15	17	17	22									
Rated Voltage(VDC)	6.3	10	16	25	35	50	63	100																																															
D.F. (%)max.	22	17	16	14	12	10	9	8																																															
Rated Voltage(VDC)	160	200	250	350	400	420	450	500																																															
D.F. (%)max.	12	12	12	15	15	17	17	22																																															
Low Temperature Characteristics (at 120Hz)	Impedance ratio max <table><tr><td>Rated 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>Z-25℃ / Z+20℃</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td></tr><tr><td>Z-40℃ / Z+20℃</td><td>8</td><td>6</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td></tr></table> <table><tr><td>Rated Voltage(VDC)</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>420</td><td>450</td><td>500</td></tr><tr><td>Z-25℃ / Z+20℃</td><td>2</td><td>2</td><td>3</td><td>5</td><td>6</td><td>6</td><td>6</td><td>6</td></tr></table> For capacitance>1000μF, add 0.5 per another 1000μF for -25℃/+20℃ add 1 per another 1000μF for -40℃/+20℃										Rated Voltage(VDC)	6.3	10	16	25	35	50	63	100	Z-25℃ / Z+20℃	4	3	2	2	2	2	2	2	Z-40℃ / Z+20℃	8	6	4	3	3	3	3	3	Rated Voltage(VDC)	160	200	250	350	400	420	450	500	Z-25℃ / Z+20℃	2	2	3	5	6	6	6	6
Rated Voltage(VDC)	6.3	10	16	25	35	50	63	100																																															
Z-25℃ / Z+20℃	4	3	2	2	2	2	2	2																																															
Z-40℃ / Z+20℃	8	6	4	3	3	3	3	3																																															
Rated Voltage(VDC)	160	200	250	350	400	420	450	500																																															
Z-25℃ / Z+20℃	2	2	3	5	6	6	6	6																																															
Endurance	Test conditions Dutation time :2000Hrs Ambient temperature :+105℃ Applied voltage :Rated DC working voltage After test requirement at +20℃ 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℃ Applied voltage :None After test requirement at +20℃: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.

CAP(μF) / Frequency(Hz)	50(60)	120	400	1K	10K	50K-100K
CAP ≤ 10	0.80	1.00	1.30	1.45	1.65	1.7
10 < CAP ≤ 100	0.80	1.00	1.23	1.36	1.48	1.53
100 < CAP ≤ 1000	0.80	1.00	1.16	1.25	1.35	1.38
1000 < CAP	0.80	1.00	1.11	1.17	1.25	1.28

Diagram of Dimensions:(unit:mm)



Dφ	5	6.3	8	10	13	16	18	20	22
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10	10
dφ	0.5		L < 20	L ≥ 20	0.6		0.8		
			0.5	0.6					

α	D < 16	D=16		D=18		D > 18
		L: 25-35.5	L < 25 and L $\geq$ 40	L: 25-31.5	L < 25 and L $\geq$ 35.5	
	1.5	1.5	2.0	1.5	2.0	2.0

Case Size

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mAmps/105°C /120Hz)
6.3	33	5×11	54
6.3	47	5×11	65
6.3	68	5×11	75
6.3	100	5×11	96
6.3	120	5×11	110
6.3	150	5×11	120
6.3	150	6.3×11	130
6.3	180	6.3×11	140
6.3	220	6.3×11	160
6.3	330	6.3×11	195
6.3	470	6.3×11	220
6.3	470	8×11.5	270
6.3	560	8×11.5	310
6.3	680	8×11.5	360
6.3	820	8×11.5	390
6.3	1000	10×12.5	430
6.3	1200	10×12.5	550
6.3	1500	10×16	625
6.3	1800	10×16	710
6.3	2200	10×16	750
6.3	2200	10×20	775
6.3	2700	10×20	850
6.3	3300	13×20	960
6.3	3900	13×20	1000
6.3	4700	13×20	1150
6.3	5600	13×25	1300
6.3	6800	13×25	1480
6.3	8200	16×25	1520
6.3	10000	16×25	1680
6.3	12000	16×31.5	1750
6.3	15000	16×35.5	2075
6.3	18000	18×31.5	2150
6.3	22000	18×40	2300
10	22	5×11	45
10	33	5×11	60
10	47	5×11	70
10	68	5×11	80
10	100	5×11	105
10	120	5×11	110
10	120	6.3×11	120
10	150	5×11	120
10	150	6.3×11	145
10	180	6.3×11	160
10	220	6.3×11	175
10	330	6.3×11	205
10	330	8×11.5	255
10	470	6.3×11	235
10	470	8×11.5	290
10	560	8×11.5	330
10	560	10×12.5	340
10	680	8×11.5	365
10	680	8×16	410
10	820	10×12.5	480
10	1000	10×12.5	520
10	1200	10×16	630
10	1500	8×20	715
10	1500	10×16	770
10	1800	10×20	820
10	2200	10×20	860
10	2700	10×25	880

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mAmps/105°C /120Hz)
10	2700	13×20	920
10	3300	13×20	1100
10	3900	13×20	1280
10	4700	13×25	1350
10	5600	16×25	1490
10	6800	16×25	1670
10	8200	16×31.5	1840
10	10000	16×35.5	1900
10	12000	16×35.5	2050
10	15000	18×35.5	2180
10	18000	18×35.5	2205
16	10	5×11	35
16	22	5×11	54
16	33	5×11	64
16	47	5×11	100
16	68	5×11	105
16	100	5×11	115
16	100	6.3×11	130
16	120	6.3×11	155
16	150	6.3×11	170
16	180	6.3×11	190
16	220	6.3×11	215
16	330	6.3×11	225
16	330	8×11.5	265
16	470	8×11.5	370
16	470	8×16	400
16	560	10×12.5	410
16	680	8×16	470
16	680	10×12.5	480
16	820	10×16	550
16	1000	10×12.5	540
16	1000	10×16	600
16	1200	10×20	700
16	1500	10×20	820
16	1800	13×20	920
16	2200	13×20	1000
16	2700	13×20	1080
16	3300	13×25	1200
16	3900	16×25	1490
16	4700	16×25	1600
16	5600	16×31.5	1720
16	6800	16×31.5	1900
16	8200	16×35.5	2020
16	10000	18×35.5	2060
16	12000	18×35.5	2150
25	4.7	5×11	26
25	6.8	5×11	32
25	10	5×11	38
25	22	5×11	58
25	33	5×11	69
25	47	5×11	105
25	68	6.3×11	120
25	100	6.3×11	145
25	120	6.3×11	175
25	150	6.3×11	180
25	150	8×11.5	200
25	180	8×11.5	210
25	220	8×11.5	235
25	330	8×11.5	310
25	330	10×12.5	335

Case Size

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mAmps/105°C /120Hz)
25	470	8×11.5	410
25	470	10×12.5	440
25	560	10×16	460
25	680	10×16	520
25	820	10×20	640
25	1000	10×20	710
25	1200	13×20	810
25	1500	13×20	900
25	1800	13×25	1050
25	2200	13×25	1200
25	2700	16×25	1320
25	3300	16×25	1460
25	3900	16×31.5	1670
25	4700	16×35.5	1780
25	5600	16×35.5	1890
25	6800	18×35.5	2050
25	8200	18×35.5	2090
35	4.7	5×11	28
35	6.8	5×11	36
35	10	5×11	46
35	22	5×11	61
35	33	5×11	75
35	47	5×11	110
35	68	6.3×11	140
35	100	6.3×11	160
35	100	8×11.5	175
35	120	8×11.5	185
35	150	8×11.5	215
35	180	8×11.5	225
35	180	10×12.5	265
35	220	8×11.5	255
35	220	10×12.5	300
35	330	10×12.5	400
35	470	10×16	520
35	560	10×20	540
35	680	10×20	560
35	680	13×20	650
35	820	13×20	760
35	1000	13×20	830
35	1200	13×20	900
35	1200	13×25	930
35	1500	13×25	960
35	1800	16×25	1150
35	2200	16×25	1290
35	2200	16×31.5	1350
35	2700	16×31.5	1480
35	3300	16×35.5	1650
35	3900	18×31.5	1820
35	4700	18×35.5	1900
35	5600	18×35.5	2000
50	0.1	5×11	1
50	0.22	5×11	3
50	0.33	5×11	4
50	0.47	5×11	7
50	1	5×11	13
50	2.2	5×11	20
50	3.3	5×11	26
50	4.7	5×11	32
50	6.8	5×11	40
50	10	5×11	48

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mAmps/105°C /120Hz)
50	22	5×11	60
50	22	6.3×11	70
50	33	5×11	75
50	33	6.3×11	90
50	47	6.3×11	115
50	68	6.3×11	130
50	68	8×11.5	155
50	100	8×11.5	200
50	120	8×16	220
50	120	10×12.5	225
50	150	10×12.5	245
50	180	10×12.5	260
50	180	10×16	280
50	220	10×12.5	345
50	220	10×16	360
50	330	10×16	450
50	330	10×20	470
50	470	10×20	600
50	470	13×20	650
50	560	13×20	660
50	680	13×20	700
50	680	13×25	770
50	820	13×25	850
50	1000	13×25	890
50	1000	16×25	1000
50	1200	16×25	1150
50	1500	16×31.5	1300
50	1800	16×35.5	1480
50	2200	16×35.5	1530
50	2700	18×35.5	1590
50	3300	18×35.5	1750
63	0.1	5×11	1
63	0.22	5×11	3
63	0.33	5×11	5
63	0.47	5×11	7
63	1	5×11	13
63	2.2	5×11	20
63	3.3	5×11	28
63	4.7	5×11	32
63	6.8	5×11	40
63	10	5×11	42
63	10	6.3×11	48
63	22	6.3×11	82
63	33	6.3×11	100
63	47	6.3×11	125
63	47	8×11.5	140
63	68	8×11.5	155
63	68	10×12.5	185
63	100	10×12.5	230
63	120	10×16	255
63	150	10×16	270
63	180	10×16	310
63	220	10×16	375
63	220	10×20	400
63	330	13×20	580
63	470	13×20	690
63	560	13×25	770
63	680	16×25	880
63	820	16×25	920
63	1000	16×31.5	1185

Case Size

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mAmps/105°C /120Hz)
63	1200	16×35.5	1200
63	1500	18×31.5	1350
100	0.1	5×11	2
100	0.22	5×11	3
100	0.33	5×11	5
100	0.47	5×11	10
100	1	5×11	15
100	2.2	5×11	21
100	3.3	5×11	30
100	4.7	5×11	35
100	6.8	6.3×11	47
100	10	6.3×11	56
100	10	8×11.5	60
100	22	6.3×11	75
100	22	8×11.5	90
100	33	8×11.5	140
100	33	10×12.5	155
100	47	8×16	165
100	47	10×12.5	170
100	68	10×16	240
100	100	10×20	280
100	120	10×20	295
100	150	13×20	340
100	150	13×25	360
100	180	13×20	410
100	180	13×25	480
100	220	13×25	520
100	330	16×25	690
100	470	16×25	820
100	470	16×31.5	860
100	560	16×35.5	900
100	680	16×35.5	920
100	680	18×31.5	950
100	820	18×35.5	1020
100	1000	18×40	1200
160	0.47	5×11	11
160	1	5×11	17
160	1	6.3×11	19
160	2.2	6.3×11	25
160	3.3	6.3×11	32
160	4.7	6.3×11	38
160	4.7	8×11.5	42
160	6.8	8×11.5	56
160	10	8×11.5	63
160	10	10×12.5	75
160	22	10×12.5	95
160	22	10×16	105
160	22	10×20	120
160	33	10×16	155
160	33	10×20	170
160	47	10×20	180
160	47	13×20	210
160	68	13×20	260
160	68	13×25	280
160	100	13×25	310
160	100	16×25	330
160	120	13×25	320
160	120	16×25	350
160	150	16×25	470
160	180	16×25	550

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mAmps/105°C /120Hz)
160	220	16×31.5	560
160	220	16×35.5	580
160	330	18×31.5	660
160	330	18×35.5	700
160	470	18×35.5	810
160	470	18×40	860
200	0.47	5×11	12
200	1	6.3×11	17
200	2.2	6.3×11	25
200	3.3	6.3×11	33
200	3.3	8×11.5	35
200	4.7	6.3×11	42
200	4.7	8×11.5	50
200	6.8	8×11.5	60
200	6.8	10×12.5	63
200	10	8×11.5	78
200	10	10×12.5	85
200	22	10×16	125
200	22	10×20	130
200	33	10×16	160
200	33	10×20	180
200	33	13×20	190
200	47	13×20	220
200	68	13×20	270
200	68	13×25	300
200	100	13×25	320
200	100	16×25	345
200	120	16×25	360
200	120	16×31.5	390
200	150	16×25	440
200	150	16×31.5	480
200	180	16×31.5	550
200	180	16×35.5	560
200	220	16×35.5	670
200	220	18×31.5	690
200	330	18×35.5	750
200	330	18×40	810
200	470	18×40	840
200	470	22×40	925
200	560	18×50	940
250	0.47	5×11	8
250	1	6.3×11	16
250	2.2	6.3×11	20
250	2.2	8×11.5	25
250	3.3	8×11.5	33
250	4.7	8×11.5	46
250	4.7	10×12.5	50
250	6.8	8×11.5	60
250	6.8	10×12.5	70
250	10	8×11.5	68
250	10	10×12.5	80
250	22	10×16	110
250	22	10×20	125
250	22	13×20	150
250	33	13×20	190
250	47	13×20	230
250	47	13×25	240
250	56	13×20	255
250	56	13×25	280
250	68	13×25	310

Case Size

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mAmps/105°C /120Hz)
250	68	16×25	355
250	82	16×25	370
250	100	16×25	375
250	100	16×31.5	395
250	120	16×31.5	420
250	120	16×35.5	430
250	150	16×35.5	460
250	150	18×31.5	460
250	180	18×31.5	465
250	180	18×35.5	470
250	220	18×35.5	650
250	220	18×40	700
250	330	18×45	720
250	330	22×40	780
350	0.47	6.3×11	13
350	1	6.3×11	16
350	2.2	8×11.5	31
350	3.3	8×11.5	34
350	3.3	10×12.5	38
350	4.7	8×11.5	47
350	4.7	10×12.5	52
350	6.8	10×12.5	79
350	10	10×16	87
350	10	10×20	92
350	22	13×20	160
350	22	13×25	170
350	33	13×20	180
350	33	13×25	200
350	47	16×25	245
350	47	16×31.5	260
350	56	16×25	330
350	68	16×31.5	370
350	82	16×35.5	385
350	100	18×31.5	390
350	120	16×40	400
350	120	18×35.5	400
350	150	18×40	420
350	180	18×40	430
350	220	22×40	500
400	0.47	6.3×11	14
400	1	6.3×11	17
400	2.2	6.3×15	34
400	2.2	8×11.5	35
400	2.2	10×12.5	40
400	3.3	6.3×15	35
400	3.3	8×11.5	36
400	3.3	8×16	40
400	3.3	10×12.5	41
400	4.7	8×11.5	48
400	4.7	8×16	54
400	4.7	10×12.5	55
400	4.7	10×16	65
400	6.8	8×14	75
400	6.8	8×15	77
400	6.8	8×16	80
400	6.8	10×12.5	82
400	6.8	10×16	90
400	10	10×14	104
400	10	10×15	107
400	10	10×16	110

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mAmps/105°C /120Hz)
400	10	10×20	125
400	22	10×25	162
400	22	13×20	170
400	22	13×25	190
400	33	13×20	235
400	33	13×25	260
400	33	16×25	290
400	47	16×25	300
400	47	16×31.5	360
400	47	18×25	320
400	56	16×25	360
400	56	16×31.5	400
400	68	16×25	410
400	68	16×31.5	450
400	68	16×35.5	480
400	68	18×25	440
400	68	18×31.5	500
400	82	16×31.5	480
400	82	18×25	470
400	82	18×31.5	520
400	100	16×35.5	520
400	100	18×31.5	530
400	100	18×35.5	550
400	120	18×31.5	550
400	120	18×35.5	580
400	150	18×35.5	610
400	150	18×40	650
400	150	22×30	640
400	180	18×45	700
420	0.47	6.3×11	14
420	1	8×11.5	20
420	2.2	8×11.5	35
420	3.3	10×12.5	42
420	4.7	10×12.5	58
420	4.7	10×16	61
420	6.8	10×16	84
420	10	10×20	112
420	22	13×25	185
420	33	16×25	230
420	47	16×25	280
420	47	16×31.5	310
420	56	16×35.5	390
420	68	18×31.5	470
420	82	18×31.5	475
420	82	18×35.5	500
420	100	16×35.5	525
420	100	18×31.5	535
420	100	18×35.5	555
420	120	18×31.5	560
420	120	18×35.5	590
420	120	18×40	630
420	150	18×35.5	615
420	150	18×40	660
420	180	18×45	680
420	180	20×40	685
450	0.47	6.3×11	14
450	1	8×11.5	20
450	2.2	8×11.5	30
450	2.2	10×12.5	35
450	3.3	8×11.5	32

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mA rms/105°C /120Hz)
450	3.3	10×12.5	38
450	3.3	10×16	42
450	4.7	8×16	44
450	4.7	10×16	50
450	4.7	10×12.5	45
450	4.7	10×16	50
450	6.8	10×12.5	58
450	6.8	10×16	65
450	6.8	10×20	72
450	10	10×16	80
450	10	10×20	92
450	10	13×20	98
450	22	13×20	165
450	22	16×25	200
450	22	13×25	180
450	33	13×25	185
450	33	16×25	210
450	33	16×31.5	230
450	47	16×25	305
450	47	16×31.5	340
450	47	16×35.5	380
450	47	18×25	350
450	47	18×31.5	360
450	56	16×31.5	370
450	56	16×35.5	400
450	56	18×25	370
450	68	16×31.5	425
450	68	16×35.5	450
450	68	18×25	410
450	68	18×31.5	460
450	68	18×35.5	470
450	82	18×31.5	465
450	82	18×35.5	480
450	100	18×31.5	500
450	100	18×35.5	525
450	100	18×40	560
450	120	18×40	580
450	120	20×35	580
450	120	22×40	650
450	150	18×45	690
450	150	20×40	695
450	150	22×35	695
450	150	22×40	720
500	1	8×11.5	20
500	1	8×16	23
500	1	10×12.5	24
500	2.2	8×16	32
500	2.2	10×12.5	33
500	2.2	10×16	36
500	3.3	10×12.5	38
500	3.3	10×16	42
500	3.3	10×20	49
500	4.7	10×16	50
500	4.7	10×20	58
500	6.8	10×16	63
500	6.8	10×20	70
500	6.8	13×20	80
500	10	10×20	90
500	10	13×20	98
500	10	13×25	115

[illegible]