

## KM 系列

## 特点 Features

- 使用在通讯器材,电源、工业量测仪器上 Used in communication equipments,switching power supply, industrial measuring instruments,etc
- 105℃下负荷寿命可达 2000-3000 小时 Load life 2000-3000 hrs at 105℃
- 符合环保要求 RoHS Compliant

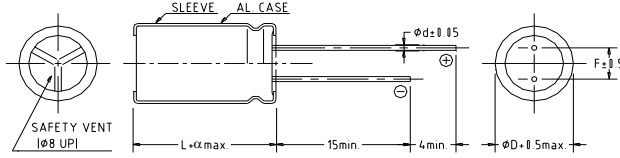
## 特性点 Specifications

项 目 Item	特性参数 Performance Characteristics																																												
使用温度范围 Operating Temp. Range	-40~+105℃	-25~+105℃																																											
额定工作电压 Rated Voltage Range	6.3 to 100 VDC	160 to 450 VDC																																											
静电容量范围 Capacitance Range	0.47 to 22000 μF	0.47 to 470 μF																																											
静电容量误差 Capacitance Tolerance	±20% (120Hz, 20℃)																																												
漏电流 Leakage Current	LC ≤ 0.01CV or 3.0 (μA) 施加额定电压 2 分钟后取最大值 After 2 minutes whichever is greater measured with rated working voltage applied	LC ≤ 0.03CV + 40 (μA) 施加额定电压 2 分钟后取最大值 After 2 minutes with rated working voltage applied																																											
损耗角正切值(Tanδ) Dissipation Factor(Tanδ) (max, 120Hz, 20℃)	静电容量每大于 1000μF 时, 每增加 1000μF 损失角增加 0.02 For capacitance > 1000μF, add 0.02 per another 1000μF <table border="1" style="width: 100%; text-align: center;"> <tr> <td>W.V(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> </tr> <tr> <td>D.F(%)</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> </tr> </table> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>W.V(VDC)</td> <td>100</td> <td>160</td> <td>200</td> <td>250</td> <td>350</td> <td>400</td> <td>450</td> </tr> <tr> <td>D.F(%)</td> <td>0.08</td> <td>0.12</td> <td>0.12</td> <td>0.12</td> <td>0.15</td> <td>0.15</td> <td>0.17</td> </tr> </table>		W.V(VDC)	6.3	10	16	25	35	50	63	D.F(%)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	W.V(VDC)	100	160	200	250	350	400	450	D.F(%)	0.08	0.12	0.12	0.12	0.15	0.15	0.17											
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低温特性 Low Temp. Characteristic (最大阻抗比 Max Impedance Ratio) (120Hz)	静电容量大于 1000UF 时, 每增加 1000UF, 阻抗比在 Z(-25)/Z(+20℃)增加 0.5 Z(-40℃)/Z(+20℃)增加 1 For capacitance > 1000μF, add 0.5 per another 1000μF for Z(-25)/Z(+20℃)add 1 per another 1000μF for Z(-40℃)/Z(+20℃) <table border="1" style="width: 100%; text-align: center;"> <tr> <td>W.V(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 border="1" style="width: 100%; text-align: center;"> <tr> <td>W.V(VDC)</td> <td>160</td> <td>200</td> <td>250</td> <td>350</td> <td>400</td> <td>420</td> <td>450</td> </tr> <tr> <td>Z(-25)/Z(+20℃)</td> <td>3</td> <td>3</td> <td>4</td> <td>4</td> <td>6</td> <td>6</td> <td>15</td> </tr> </table>		W.V(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	W.V(VDC)	160	200	250	350	400	420	450	Z(-25)/Z(+20℃)	3	3	4	4	6	6	15
W.V(VDC)	6.3	10	16	25	35	50	63	100																																					
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Z(-25)/Z(+20℃)	3	3	4	4	6	6	15																																						
高温负荷 Load Life	试验条件 Test conditions 试验时间 Duration time: 5~6.3Φ : 2000hrs, ≥10Φ : 3000hrs 工作温度 Ambient temperature: +105℃ 工作电压 Applied voltage: 规定的直流电压 Rated DC working voltage 测试条件 After test requirements at +20℃ 静电容量变化率 Capacitance change: 初始值的±20% 以内 within±20% of the initial measured value 损耗角正切 Dissipation factor: 小于规定值的 200% ≤200% of the initial specified value 漏电流 Leakage current: 规定值 ≤ the initial specified value																																												
高温储存 Shelf Life	试验条件 Test conditions 放置时间 Duration time: 1000hrs 放置温度: Ambient temperature: +105℃ 工作电压 Applied voltage: None 放置完成后在+25℃条件下进行特性测试,并在测量前使用额定直流工作电压充电 30 分钟. After test requirements at +20℃ : Same limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30minutes																																												
其它 Others	JIS C-5141 and JIS C-5102																																												

ALUMINUM ELECTROLYTIC CAPACITORS

产品尺寸图 Diagram of Dimensions ( unit: mm )

ΦD	5	6.3	8 (L<20)	8(L≥20)	10	(12.5)13	16	18	22
Φd	0.50			0.60	0.60		0.80		
F	2.0	2.5	3.5		5.0		7.5		10.0
a	(L<20) 1.5				(L≥20) 2.0				



频率修正系数 Multiplier for ripple current vs frequency

Fre.(Hz)	50(60)	120	400	1K	10K	100K
Cap(μF)						
Cap ≤ 10	0.80	1.00	1.30	1.45	1.65	1.70
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

温度修正系数 Multiplier for ripple current vs temperature

Temperature (°C)	45	60	70	85	105
Multiplier	2.10	1.90	1.40	1.25	1.00

尺寸表 Case Size

WV(V)	6.3 (8)		10 (13)		16 (20)		25 (32)		35 (44)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
4.7							5x11	26	5x11	28
10					5x11	35	5x11	38	5x11	41
22			5x11	48	5x11	54	5x11	57	5x11	67
33	5x11	54	5x11	60	5x11	64	5x11	75	5x11	80
47	5x11	65	5x11	70	5x11	80	5x11	84	6.3x11	99
68	5x11	75	5x11	83	5x11	90	5x11	92	6.3x11	140
100	5x11	96	5x11	105	5x11	115	5x11	140	6.3x11	168
					6.3x11	142	6.3x11	159		
220	5x11	153	5x11	170	6.3x11	215	8x12	285	8x12	300
			6.3x11	193						
330	6.3x11	215	6.3x11	239	8x12	310	8x12	340	10x13	419
470	6.3x11	260	6.3x11	285	8x12	366	8x12	405	10x16	545
							10x13	471		
680	8x12	365	8x12	410	8x16	480	10x16	620	10x20	682
1000	8x12	440	8x12	450	8x16	550	10x17	680	10x20	880
			10x13	570	10x16	680	10x20	821	13x20	1020
2200	10x16	740	10x20	885	13x20	1105	13x20	1175	16x25	1495
							13x25	1296		
3300	10x20	1030	13x20	1205	13x25	1380	16x25	1645	16x30	1800
4700	13x20	1280	13x25	1490	16x25	1740	16x30	2010	18x36	2330
6800	13x25	1550	16x25	1820	16x30	2080	16x36	2300	18x40	2400
10000	16x25	1890	16x30	1980	18x30	2379	18x36	2500		
22000	18x35	2400								

## ALUMINUM ELECTROLYTIC CAPACITORS

WV(V) Cap(μF)	50 (63)		63 (79)		100 (125)		160 (200)		200 (250)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.47	5x11	8								
1	5x11	13			5x11	16				
2.2	5x11	20			5x11	23				
3.3	5x11	30			5x11	34				
4.7	5x11	37	5x11	40	5x11	40	6.3x11	40	6.3x12	40
10	5x11	54	5x11	59	6.3x11	61	8x12	60	10x13	72
22	5x11	79	6.3x11	82	6.3x12	92	10x16	105	10x16	113
33	5x11	101	6.3x11	122	8x12	144	10x20	156	10x20	165
47	6.3x11	133	6.3x12	146	10x13	190	10x20	195	10x20	200
68	6.3x12	160	8x12	155	10x16	240	13x20	250	13x25	280
100	8x12	229	10x13	251	10x20	349	13x25	360	16x25	385
150	10x13	245	10x16	270	13x20	360	13x30	380	16x25	520
220	10x16	480	10x20	550	13x25	662	16x30	680	18x25	635
330	10x16	585	13x20	688	13x25	760	18x36	830	18x36	864
470	10x20	705	13x20	810	16x25	980	18x40	880	18x45	1016
680	13x20	920	13x25	1150	16x30	1280				
1000	13x25	1250	16x25	1448	18x35	1900				
	16x25	1470			18x40	2020				
2200	16x30	1759	18x36	1780						
	16x35	1884								
3300	18x35	2100								
4700	18x40	2200								

## ALUMINUM ELECTROLYTIC CAPACITORS

WV(V) Cap(μF)	250 (300)		350 (400)		400 (450)		450 (500)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
1	6.3x11	17	6.3x11	18	6.3x12	19	6.3x12	20
2.2	6.3x12	25	6.3x12	25	6.3x12	25	8x12	25
					8x12	30		
3.3	6.3x12	35	8x12	38	8x12	35	8x12	30
4.7	8x12	46	8x12	52	8x12	40	10x13	44
					10x13	46	10x16	50
6.8	8x12	56	8x12	60	8x16	65	8x16	65
					10x13	70	10x13	68
10	8x12	66	10x16	75	10x13	80	10x17	95
	10x13	75			10x16	110	10x20	115
12					10x16	110	10x20	118
15					10x17	120	10x20	125
22	10x17	115	13x20	160	13x17	165	13x20	180
	10x20	140			13x20	188	13x25	208
33	13x20	190	13x25	200	13x20	210	16x20	230
					13x25	250	16x25	250
47	13x25	240	16x25	265	13x25	245	16x25	280
					16x20	256	16x30	350
					16x25	280	18x25	365
56	13x25	256	16x25	280	16x25	320	16x30	352
					18x25	340	18x25	370
68	16x20	260	16x30	288	16x30	395	16x30	420
					18x25	420	18x30	450
82	16x25	355	18x30	375	16X30	450	18x30	490
					18X25	470		
					18x30	520		
100	16X25	440	18x25	460	16X30	530	18x36	560
	16x30	456			18x30	560		
120	16X30	460	18X30	520	18X30	550	18X40	610
					18x36	600		
150	18X30	480	18X36	500	18X36	610	18X40	690
					18x40	680	18X45	700
180	18x36	480	18x40	510	22X36	720		
220	18x36	500	22x36	680	22X40	760		
330	22x40	630						

纹波电流 Ripple Current (mA,rms,at 105℃, 120Hz) case size Φ DXL (mm)