



### Characteristics

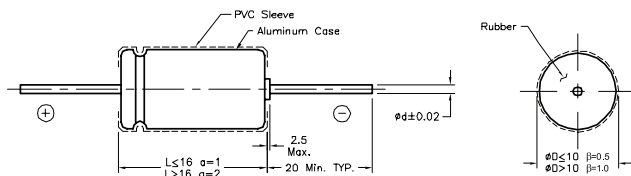
Item	Performance																																											
Operating Temperature Range	-40°C to +105°C	-25°C to +105°C																																										
Rated Working Voltage Range	6.3V DC to 100V DC	160V DC to 450V DC																																										
Nominal Capacitance Range	0.1µF to 15000µF	0.47µF to 330µF																																										
Capacitance Tolerance	±20% (at +20°C, 120Hz)																																											
Leakage Current	$I \leq 0.01CV$ or $3\mu A$ max.	$I \leq 0.03CV + 20\mu A$ max.																																										
	Where: I = Leakage Current in mA C = Rated capacitance in mF V = Working voltage in V Whichever is greater after 3 minutes.																																											
Dissipation Factor (Tan δ) (120Hz \ +20°C )	<table border="1"> <thead> <tr> <th>Working Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Tan δ Max.</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.1</td> <td>0.1</td> <td>0.07</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.2</td> <td>0.24</td> <td>0.24</td> </tr> </tbody> </table>														Working Voltage	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	Tan δ Max.	0.22	0.19	0.16	0.14	0.12	0.1	0.1	0.07	0.15	0.15	0.15	0.2	0.24	0.24
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For capacitors whose capacitance exceeds 1,000µF, the specification of Tan δ is increased by 0.02 for every addition of 1,000µF.																																												
Maximum Permissible Ripple Current	Refer to standard products table (120 Hz, +105°). Correction factor for frequency.																																											
			Freq. (Hz)		60	120	1K	10K	100K																																			
	W.V. (V DC)																																											
	6.3-50	0.1 - 330		0.85	1	1.3	1.4	1.55																																				
		470 - 3300		0.95	1	1.15	1.2	1.25																																				
		≥4700		0.95	1	1.1	1.2	1.2																																				
	63-100	0.47 - 33		0.75	1	1.55	1.65	1.8																																				
47 - 220		0.75	1	1.4	1.6	1.65																																						
≥330		0.8	1	1.3	1.35	1.4																																						
≥ 160		1 - 220	0.7	1	1.3	1.7	1.7																																					
Low Temperature Characteristics (stability at 120Hz)	For capacitance value > 1000µF: Add 0.5 per 1000µF for -25°C/+25°C. Add 1 per 1000µF for -40°C/+20°C.																																											
	Working Voltage	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450																													
	-40°C/+20°C	4	3	2	2	2	2	2	2	3	3	3	6	6	15																													
-25°C/+20°C		8	6	4	3	3	3	3																																				
High Temperature Loading	After 2000 hrs application of DC rated working voltage at +105°C, the capacitor shall meet the following limits: Post test requirements at +20°C.																																											
	Leakage Current		≤ The initial specified value																																									
	Capacitance change		≤ ±20% of initial specified value																																									
	Dissipation Factor (Tan δ)		≤ 200% of initial specified value																																									
Shelf Life	After storage for 500 hours at 105°C with no voltage applied. Post test requirements at +20°C same limits for high temperature loading.																																											

## Permissible Ripple Current

Max ripple current: mA (rms) (at 105°C, 120Hz)

W.V(SV) µF	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)
0.1	-	-	-	-	-	7	-	8	8	8	8	9	9
0.22	-	-	-	-	-	7	-	8	8	8	8	9	9
0.33	-	-	-	-	-	7	-	8	8	8	8	9	9
0.47	-	-	-	-	-	8	-	10	9	9	9	10	9
1.0	-	-	-	-	-	12	-	15	12	12	12	18	18
2.2	-	-	-	-	-	17	-	23	19	19	21	30	30
3.3	-	-	-	-	-	21	-	29	26	26	30	37	40
4.7	-	-	-	26	28	30	32	34	31	36	36	48	52
10	-	-	35	38	41	46	50	56	59	59	64	79	79
22	-	49	54	57	61	68	82	96	95	95	110	130	145
33	54	60	64	69	75	90	100	140	125	140	140	175	185
47	65	70	99	82	100	110	135	180	165	165	180	230	-
100	95	105	125	135	170	180	223	320	270	285	310	-	-
220	160	175	215	230	300	345	400	570	450	-	-	-	-
330	195	245	260	335	400	460	540	700	-	-	-	-	-
470	270	290	370	440	520	610	700	880	-	-	-	-	-
1,000	460	550	640	770	920	1080	1210	-	-	-	-	-	-
2,200	810	860	1000	1170	1340	1530	-	-	-	-	-	-	-
3,300	960	1100	1300	1460	1650	-	-	-	-	-	-	-	-
4,700	1330	1400	1600	1780	-	-	-	-	-	-	-	-	-
6,800	1500	1690	1900	-	-	-	-	-	-	-	-	-	-
10,000	1765	1950	-	-	-	-	-	-	-	-	-	-	-
15,000	2075	-	-	-	-	-	-	-	-	-	-	-	-

## Diagram



ØD (+0.5mm Max.)	6.3	8	10	13	16	18
Ød (±0.02mm)	0.6	0.6	0.6	0.6	0.8	0.8

Dimensions : Millimetres

## Part Number Table

Description	Working Voltage (WV DC)	Capacitance ( $\mu$ F)	Case Size		Part Number
			Body Diameter	Body Length	
Aluminium Electrolytic Capacitor	16	250	8	16	MCAX16V257K8X16

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