

FEATURES

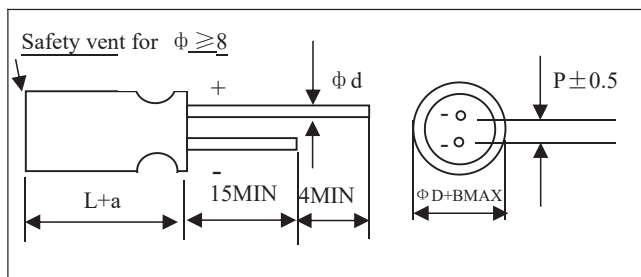
- 1、 wide operating temperature range ,it as long load life product at 125℃
- 2、 Suit for use in DC or pulse circuits in various electronic and industrial

SPECIFICATIONS

Item	Performance Characteristics																																												
Operating Temperature Range	-40 to +125℃				-25 to +125℃																																								
Rated Working voltage Range	10 to 100V DC				160 to 450V DC																																								
Nominal Capacitance Range	0.47 to 1000(uF)				1 to 100(uF)																																								
Capacitance Tolerance	±20% (120Hz, +20℃)																																												
Leakage Current	I≤0.01CV or 3(uA)Whichever is greater				I≤0.03CV+40(uA)																																								
	after 2 minutes application of rated working voltage at +20℃																																												
Dissipation Factor tan δ (120Hz+20℃)	<table><tr><td>Working voltage(V)</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>tan δ (max.)</td><td>0.24</td><td>0.20</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.08</td></tr></table>								Working voltage(V)	10	16	25	35	50	63	100	tan δ (max.)	0.24	0.20	0.16	0.14	0.12	0.10	0.08																					
	Working voltage(V)	10	16	25	35	50	63	100																																					
	tan δ (max.)	0.24	0.20	0.16	0.14	0.12	0.10	0.08																																					
	<table><tr><td>Working voltage(V)</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td></tr><tr><td>tan δ (max.)</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td></tr></table>								Working voltage(V)	160	200	250	350	400	450	tan δ (max.)	0.15	0.15	0.15	0.15	0.15	0.15																							
	Working voltage(V)	160	200	250	350	400	450																																						
tan δ (max.)	0.15	0.15	0.15	0.15	0.15	0.15																																							
For capacitance value >1000uF add 0.02per another 1000uF																																													
Low Temperature Characteristics	Impedance ratio max.at 120Hz																																												
	<table><tr><td>Working voltage(V)</td><td>10</td><td>16~100</td><td>160~250</td><td>350~450</td></tr><tr><td>Z-25℃/Z+20℃</td><td>3</td><td>2</td><td>3</td><td>6</td></tr><tr><td>Z-40℃/Z+20℃</td><td>6</td><td>4</td><td></td><td></td></tr></table>								Working voltage(V)	10	16~100	160~250	350~450	Z-25℃/Z+20℃	3	2	3	6	Z-40℃/Z+20℃	6	4																								
	Working voltage(V)	10	16~100	160~250	350~450																																								
	Z-25℃/Z+20℃	3	2	3	6																																								
Z-40℃/Z+20℃	6	4																																											
Multiplier for Ripple Current vs. Frequency	<table><tr><td colspan="2">CAP(uF)\Hz</td><td>60(50)</td><td>120</td><td>400</td><td>1K</td><td>10K</td><td>50K-100K</td></tr><tr><td rowspan="4">Multiplier</td><td>CAP≤10</td><td>0.8</td><td>1</td><td>1.30</td><td>1.45</td><td>1.65</td><td>1.70</td></tr><tr><td>10<CAP≤100</td><td>0.8</td><td>1</td><td>1.23</td><td>1.36</td><td>1.48</td><td>1.53</td></tr><tr><td>100<CAP≤1000</td><td>0.8</td><td>1</td><td>1.16</td><td>1.25</td><td>1.35</td><td>1.38</td></tr><tr><td>1000<CAP</td><td>0.8</td><td>1</td><td>1.11</td><td>1.17</td><td>1.25</td><td>1.28</td></tr></table>								CAP(uF)\Hz		60(50)	120	400	1K	10K	50K-100K	Multiplier	CAP≤10	0.8	1	1.30	1.45	1.65	1.70	10<CAP≤100	0.8	1	1.23	1.36	1.48	1.53	100<CAP≤1000	0.8	1	1.16	1.25	1.35	1.38	1000<CAP	0.8	1	1.11	1.17	1.25	1.28
	CAP(uF)\Hz		60(50)	120	400	1K	10K	50K-100K																																					
	Multiplier	CAP≤10	0.8	1	1.30	1.45	1.65	1.70																																					
		10<CAP≤100	0.8	1	1.23	1.36	1.48	1.53																																					
		100<CAP≤1000	0.8	1	1.16	1.25	1.35	1.38																																					
1000<CAP		0.8	1	1.11	1.17	1.25	1.28																																						
Multiplier for Ripple Current vs. Temperature	<table><tr><td>Temperature℃</td><td>45</td><td>60</td><td>70</td><td>85</td><td>95</td><td>105</td><td>125</td></tr><tr><td>Multiplier</td><td>1.8</td><td>1.55</td><td>1.50</td><td>1.45</td><td>1.30</td><td>1.15</td><td>1.00</td></tr></table>								Temperature℃	45	60	70	85	95	105	125	Multiplier	1.8	1.55	1.50	1.45	1.30	1.15	1.00																					
	Temperature℃	45	60	70	85	95	105	125																																					
Multiplier	1.8	1.55	1.50	1.45	1.30	1.15	1.00																																						
High Temperature Loading	Test conditions Duration : ≤8 φ 1000 hours , ≥10 φ 2000 hours Ambient temperature :+125℃ Applied voltage :Rated DC working voltage Post test requirements at +20℃ Leakage current : ≤ Initial specified value Capacitance change : ≤±20% of initial measured value tan δ : ≤300% of initial specified value																																												
Shelf life	Test conditions Duration :1000 hours Ambient temperature :+125℃ Applied voltage : (None) Post test requirements at +20℃ Leakage current : ≤ Initial specified value Capacitance change : ≤ ±20% of initial measured value tan δ : ≤300% of initial specified value																																												
Others	JIS C-5141 JIS C-5102																																												

CASE SIZE TABLE

Unit:mm



D ϕ	5	6.3	8	10	13	16
P	2.0	2.5	3.5	5.0	5.0	7.5
d $\phi \pm 0.05$	0.5			0.6		0.8

aMAX	(L<20)1.5
	(L $\geq$ 20)2.0

BMAX	(D<20)0.5
	(D $\geq$ 20)1.0

DIMENSIONS

 $\phi D \times L(\text{mm})$

WV(SV)		10V(13)		16V(20)		25V(32)		35V(44)		50V(63)	
Cap.(uF)	Code	1A		1C		1E		1V		1H	
4.7	475										
10	106									6.3×11	46
22	226					6.3×11	72	6.3×11	80	8×12	86
33	336			6.3×11	90	6.3×11	98	8×12	105	8×12	120
47	476	6.3×11	91	6.3×11	112	8×12	132	10×12.5	155	10×12.5	160
100	107	6.3×11	146	8×12	205	10×12.5	248	10×17	260	10×20	275
220	227	8×12	328	10×12.5	402	10×17	472	10×20	538	13×21	585
330	337	10×12.5	412	10×17	526	10×20	630	13×21	715	13×25	902
470	477	10×17	523	10×20	718	13×21	812	13×25	898	16×26	995
1000	108	10×20	962	13×21	998	16×26	1095	16×30	1205	Case size	Allowable ripple

Allowable Ripple (mA rms) at 125℃ 120HZ

 $\phi D \times L(\text{mm})$

WV(SV)		63V(79)		100V(125)		160V(200)		200V(250)		250V(300)	
Cap.(uF)	Code	1J		2A		2C		2D		2E	
0.47	474			6.3×11	15						
1	105			6.3×11	25	6.3×11	31	6.3×11	38	6.3×11	42
2.2	225			6.3×11	30	6.3×11	38	6.3×11	40	8×12	50
3.3	335			6.3×11	35	8×12	40	8×12	46	10×12.5	55
4.7	475	6.3×11	36	8×12	45	8×12	52	10×12.5	62	10×17	70
10	106	8×12	55	10×12.5	72	10×12.5	80	10×17	90	10×20	95
22	226	8×12	92	10×17	98	10×20	125	13×21	132	13×25	160
33	336	10×12.5	130	10×20	155	13×21	165	13×25	170	16×26	186
47	476	10×17	170	13×21	185	13×25	200	16×26	212	16×30	232
100	107	10×20	292	16×26	312	16×26	360	16×30	400		
220	227	13×25	595								
330	337	16×26	998							Case size	Allowable ripple

Allowable Ripple (mA rms) at 125℃ 120HZ

DIMENSIONS

 ϕ D×L(mm)

Cap.(uF)	Code	350V(400)		400V(450)		450V(500)	
		2V		2G		2W	
1	105	8×12	46	8×12	48	8×12	52
2.2	225	10×12.5	55	10×12.5	58	10×17	65
3.3	335	10×17	62	10×17	65	10×20	70
4.7	475	10×20	76	10×20	80	10×25	85
10	106	13×21	112	13×21	116	13×21	120
22	226	16×26	182	16×26	185	16×26	190
33	336	16×30	200	16×30	205	16×30	210
47	476	16×35	246	16×35	250	Case size	Allowable ripple

Allowable Ripple (mA rms) at 125℃ 120HZ