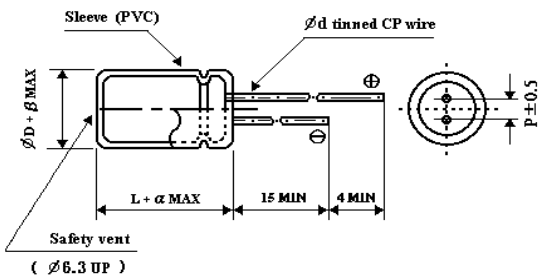


Wide Temperature Range Type for General Purpose

SPECIFICATIONS

Item	Performance Characteristics																									
Operating Temperature Range	-40~+105℃																									
Voltage Range	6.3 ~ 400V																									
Capacitance Range	0.47~15000 μ F																									
Capacitance Tolerance	±20% at 120Hz, 20℃																									
Tan δ	For capacitance of more than 1000 μ F, add 0.02 for every increase of 1000 μ F measurement frequency:120Hz, Temperature : 20℃																									
	<table border="1"> <tr> <td>Rated voltage (V)</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> <td>160~250</td> <td>350</td> <td>400</td> </tr> <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>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.15</td> <td>0.20</td> <td>0.25</td> </tr> </table>	Rated voltage (V)	6.3	10	16	25	35	50	63	100	160~250	350	400	tan δ (MAX.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.20	0.25	
Rated voltage (V)	6.3	10	16	25	35	50	63	100	160~250	350	400															
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Leakage Current	<table border="1"> <tr> <td>Rated voltage (V)</td> <td colspan="4">6.3~100</td> <td colspan="4">160~400</td> </tr> <tr> <td>Leakage Current</td> <td colspan="4">After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (μ A), whichever is greater. After 2 minutes' application of rated voltage, leakage current is not more than 0.01 CV or 3 (μ A), whichever is greater.</td> <td colspan="4">CV ≤ 1000; I=0.1CV+40(uA) MAX. (1 minute's) CV>1000; I=0.04CV+100(uA)MAX. (1 minute's)</td> </tr> </table>	Rated voltage (V)	6.3~100				160~400				Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (μ A), whichever is greater. After 2 minutes' application of rated voltage, leakage current is not more than 0.01 CV or 3 (μ A), whichever is greater.				CV ≤ 1000; I=0.1CV+40(uA) MAX. (1 minute's) CV>1000; I=0.04CV+100(uA)MAX. (1 minute's)										
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Stability at Low Temperature	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25~100</td> <td>160~250</td> <td>350</td> <td>400</td> </tr> <tr> <td rowspan="2">Impedance Ratio (MAX.)</td> <td>Z-25℃ / Z+20℃</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>4</td> <td>4</td> <td>6</td> </tr> <tr> <td>Z-40℃ / Z+20℃</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>6</td> <td>8</td> <td>10</td> </tr> </table>	Rated voltage (V)	6.3	10	16	25~100	160~250	350	400	Impedance Ratio (MAX.)	Z-25℃ / Z+20℃	4	3	2	2	4	4	6	Z-40℃ / Z+20℃	8	6	4	3	6	8	10
	Rated voltage (V)	6.3	10	16	25~100	160~250	350	400																		
Impedance Ratio (MAX.)	Z-25℃ / Z+20℃	4	3	2	2	4	4	6																		
	Z-40℃ / Z+20℃	8	6	4	3	6	8	10																		
Load Life	After 2000 hours' application of rated voltage at 105℃, capacitors meet the characteristic requirements listed at right.																									
	<table border="1"> <tr> <td>Capacitance Change</td> <td>Within±20% of initial value</td> </tr> <tr> <td>Tan δ</td> <td>200% or less of initial specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Initial specified value or less</td> </tr> </table>	Capacitance Change	Within±20% of initial value	Tan δ	200% or less of initial specified value	Leakage Current	Initial specified value or less																			
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Leakage Current	Initial specified value or less																									
Shelf Life	After leaving capacitors under no load at 105℃ for 1000 hours, they meet the specified value for load life characteristics listed above.																									

Radial Lead Type



φ D	5	6.3	8	10	12.5	16	18
β	0.5	0.5	0.5	0.5	0.8	0.5	0.5
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φ d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
α	1.0	1.0	1.5	2.0	2.0	2.0	2.0

Allowable Ripple Current VS. Ambient Temperature

Ambient temp. (℃)	~ +70	+85	+105
Coefficient	1.78	1.4	1.0

Frequency Coefficient of Allowable Ripple Current

V	Cap. (μ F)	Frequency (Hz)				
		50	120	300	1K	10K ~
6.3~100	~ 47	0.75	1.00	1.35	1.57	2.00
	100 ~ 470	0.80	1.00	1.23	1.34	1.50
	1000 ~ 15000	0.85	1.00	1.10	1.13	1.15
160~400	0.47 ~ 220	0.80	1.00	1.25	1.40	1.60

● DIMENSIONS(VT)

D X L (mm)

W.V.(Code)		6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)		63 (1J)		100 (2A)	
S.V. Cap(uF)Code		8		13		20		32		44		63		79		125	
		0.47	R47											5x11	7.0		
1	1R0											5x11	12			5x11	15
2.2	2R2											5x11	18			5x11	22
3.3	3R3											5x11	25			5x11	29
4.7	4R7							5x11	24	5x11	27	5x11	30	5x11	34	5x11	37
10	100					5x11	35	5x11	39	5x11	44	5x11	50	5x11	55	6.3x11	65
22	220	5x11	34	5x11	45	5x11	55	5x11	60	5x11	65	5x11	75	6.3x11	90	8x11.5	115
33	330	5x11	50	5x11	60	5x11	70	5x11	75	5x11	85	6.3x11	105	6.3x11	110	10x12.5	160
47	470	5x11	65	5x11	75	5x11	85	5x11	90	6.3x11	115	6.3x11	125	8x11.5	155	10x16	210
100	101	5x11	100	5x11	110	6.3x11	135	6.3x11	145	8x11.5	190	8x11.5	210	10x12.5	260	12.5x20	385
220	221	6.3x11	165	6.3x11	180	8x11.5	235	8x11.5	250	10x12.5	325	10x16	400	10x20	465	16x25	590
330	331	6.3x11	200	8x11.5	255	8x11.5	285	10x12.5	355	10x16	440	10x20	535	12.5x20	650	16x25	720
470	471	8x11.5	280	8x11.5	305	10x12.5	395	10x16	470	10x20	580	12.5x20	730	12.5x25	800	16x31.5	875
1000	102	10x12.5	470	10x16	570	10x20	700	12.5x20	855	12.x25	995	16x25	1110	16x31.5	1200	18x40	1320
2200	222	12.5x20	930	12.5x20	1010	12.5x25	1150	16x25	1230	16x31.5	1450	18x35.5	1530	18x40	1840		
3300	332	12.5x20	1100	12.5x25	1220	16x25	1350	16x31.5	1450	18x35.5	1660						
4700	472	16x25	1320	16x25	1410	16x31.5	1560	18x35.5	1660	18x40	2030						
6800	682	16x25	1470	16x31.5	1610	18x35.5	1750										
10000	103	16x31.5	1830	18x35.5	1980	18x40	2170										Case size
15000	153	18x35.5	2280	18x40	2470												Allowable ripple

● DIMENSIONS

D X L (mm)

W.V.(Code)		160 (2C)		200 (2D)		250 (2E)		350 (2V)		400 (2G)	
S.V. Cap(u F).Code		200		250		300		400		450	
		0.47	R47	6.3x11	12	6.3x11	12	6.3x11	12	8x11.5	11
1	1R0	6.3x11	17	6.3x11	17	6.3x11	17	10x12.5	17	10x12.5	16
2.2	2R2	6.3x11	25	6.3x11	25	8x11.5	29	10x16	31	10x16	27
3.3	3R3	8x11.5	36	8x11.5	36	10x12.5	42	10x16	38	10x20	36
4.7	4R7	8x11.5	43	10x12.5	50	10x12.5	50	10x20	49	10x20	43
10	100	10x12.5	70	10x16	80	10x20	88	12.5x20	82	12.5x25	72
22	220	10x20	130	10x20	140	12.5x25	155	16x25	130	16x25	110
33	330	12.5x20	180	12.5x25	190	12.5x25	190	16x31.5	160	16x31.5	140
47	470	12.5x25	220	12.5x25	220	16x25	230	18x35.5	200	18x35.5	170
100	101	16x25	330	16x31.5	335	18x35.5	340				Case size
220	221	18x35.5	500	18x40	515						Allowable ripple

Allowable Ripple (mA) at 105°C 120Hz