

- SMD TYPE. Reflow Soldering is available.
- Life 2000 hours at 85°C
- Available For High Density Mounting

**Characteristics**

<b>Voltage Range</b>	4 to 450 VDC												
<b>Capacitance Range</b>	0.1 to 6800uF												
<b>Temperature Range</b>	-40 to +85°C												
<b>Capacitance Tolerance</b>	+20% -20% (at 20°C, 120Hz)												
<b>Leakage Current</b>	SIZE A~F: I≤0.01CV or 3uA, whichever is greater 2 minutes after Rated Voltage applied SIZE G~J(6.3V~100V): I≤0.03CV whichever is greater 2 minutes after Rated Voltage applied SIZE G~J (160V~450V): I≤0.04CV +100Ua whichever is greater 5 minutes after Rated Voltage applied												
<b>Dissipation Factor (tan δ)Max</b>  (at 20°C, 120Hz)	Voltage (V)	4	6.3	10	16	25	35	50	63	100	160~250	400~450	
	SIZE A~F	0.4	0.26	0.22	0.18	0.16	0.12	0.10	0.10	0.10	-	-	
	SIZE G~J	-	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.20	0.25	
<b>Stability at Low Temperature (at 120Hz)</b>	When the capacitance exceeds 1,000uF, 0.02 shall be added every 1,000uF increase.												
	Voltage (V)	4	6.3	10	16	25	35	50	63	100	160~250	400~450	
	Z -25°C	SIZE A~F	7	4	4	3	2	2	2	2	2	-	-
	/Z +20°C	SIZE G~J		5	5	4	2	2	2	2	2	3	6
	Z -40°C	SIZE A~F	15	8	5	4	3	3	3	3	3	-	-
/Z +20°C	SIZE G~J		14	12	10	5	4	3	3	3	6	10	
<b>Load Life</b>	After the rated voltage has been applied for 2000 hours at 85°C	Capacitance change	Within ±25% of initial value (4V: ±30%)										
		D.F. tanδ	200% or less of initial specified value (4V: ±30%)										
		Leakage current	Less than Initial specified value										
<b>Shelf Life</b>	After storage for 1000 hours at 85°C, with no voltage applied and being stabilized at +20°C, Capacitor shall meet the limit specified in load life.(Refer to JIS C5101-4 4.1)												

**Diagram of dimensions**

SIZE	Dφ	L	A	C	B	W	P±0.2
A	4	5.5	4.3	5.1	4.3	0.5~0.8	1.0
B	5	5.5	5.3	6.1	5.3	0.5~0.8	1.5
C	6.3	5.7	6.6	7.4	6.6	0.5~0.8	2.0
C8	6.3	7.7	6.6	7.4	6.6	0.5~0.8	2.0
D	8	6.5	8.4	9.2	8.4	0.7~1.1	3.1
E	8	10.5	8.34	9.2	8.34	0.7~1.1	3.1
F	10	10.5	10.4	11.2	10.4	0.7~1.1	4.7
G	12.5	13.5	13.0	15.0	13.0	1.1~1.4	4.4
H	12.5	16.0	13.0	15.0	13.0	1.1~1.4	4.4
I	16	16.5	17.0	19.0	17.0	1.1~1.4	6.4
J	18	16.5	19.0	21.0	19.0	1.1~1.4	6.4

Size A~F refer to Fig. 1

Size G~J refer to Fig. 2

Fig. 1

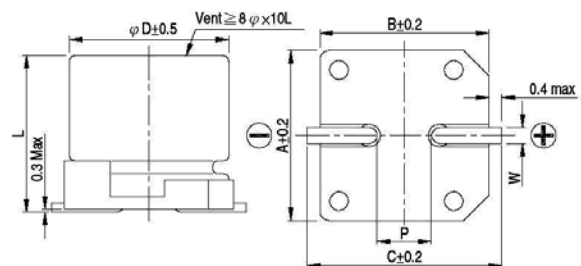
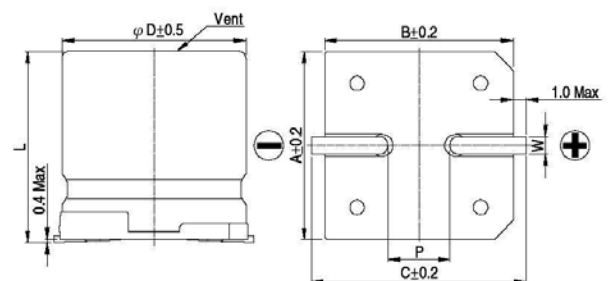


Fig. 2



## Case size & Maximum Ripple Current

**mA rms 85°C 120Hz**

Cap. <sup>WV</sup>	4		6.3		10		16		25		35		50	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.1													A	2
0.22													A	3
0.33													A	4
0.47													A	5
1													A	8
2.2													A	12
3.3													A	15
4.7									A	26	A	26	A, B	18/25
10							A	26	A, B	26/44	A, B	26/44	B, C	30/33
22			A	26	A	26	A, B	30/44	B, C	47/59	B, C	47/59	C, D	50/80
33	A	31	A	30	A	31	B	55	B, C	55/67	C	67	C8, D	75/155
47	A	34	A, B	33/55	B	55	B, C	55/75	C	75	C, D	64/155	C8, D	85/140
100	B	58	B, C	58/89	B, C	60/89	C	89	C8, D	109/160	C8, D	120/175	E, F	190/320
220	C	96	C, D	89/160	C8, D	130/250	C8, D	130/280	E	270	E, F	280/370	F	320
330	C8	124	C8, D	135/190	E	290	E	290	E, F	290/400	F	400	G	600
470	C8, D	200/220	E	290	E	290	E, F	290/400	F	400	G	750	H	740
1000			E, F	400/430	F	430	G	750	G	750	I	1100	J	1350
2200			G	890	G, H	890/960	I	1100	I	1100	J	1450		
3300			H	1000	I	1300	I	1300	J	1450				
4700			I	1400	I	1400	J	1600						
6800			J	1700	J	1700								

Cap. <sup>WV</sup>	63		100		160		200		250		400		450	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.1	A	2												
0.22	A	3												
0.33	A	4												
0.47	A	5												
1	A	8												
2.2	A	12												
3.3	B	22												
4.7	B	25									G	120	G	120
10	C	40	E	90					G	150	G	120	H	130
22	C8	60	E	90			G	240	G	150	I	140	I	140
33	C8	60	F	120	G	290	H	310	H	240	I	140	J	180
47	E, F	130/200	F	120	H	370	I	340	I	340	J	280		
100	F	226	G	440	J	550	J	440						
220	G	500	I	600										
330	H	600	J	780										
470	I	850												