



CONDUCTIVE POLYMER HYBRID ALUMINUM ELECTROLYTIC CAPACITORS

FPV Series

- Hybrid electrolyte.
- High Ripple Current.
- -55°C ~ +125°C.
- Endurance 125°C, 4,000hrs.
- AEC-Q200 compliant : Please contact us for more details, test data, information.

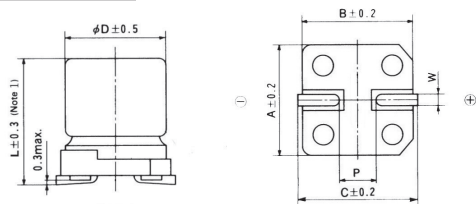


SPECIFICATIONS

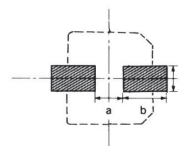
Item	Characteristics						
Category temperature range	-55 to +125℃						
Rated voltage range	16 to 80V _{DC}						
Surge voltage	Rated Voltage(WV)	16	25	35	50	63	80
	Surge Voltage(SV)	18.4	29.0	40.0	57.5	72.5	92.0
Capacitance tolerance	±20%(M) (at 20℃, 120Hz)						
Tangent of loss angle	Shall not exceed the value in Ratings of FPV series. (at 20℃, 120Hz)						
Leakage Current ※ 1	Shall not exceed the value in Ratings of FPV series. (at 20℃, 2 minutes)						
ESR	Shall not exceed the value in Ratings of FPV series. (at 20℃, 100kHz)						
Impedance Ratio (Characteristics at low temp.)	Impedance	Ratio					
	Z(-25℃)/Z(+20℃)	< 1.5					
	Z(-55℃)/Z(+20℃)	< 2.0 (at 100kHz)					
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 4,000 hours at 125℃. Capacitance change ≦ ±30% of the initial value Tan δ ≦ ±200% of the initial specified value ESR ≦ ±200% of the initial specified value Leakage current ≦ The initial specified value						
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 125℃ without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements. Capacitance change ≦ ±30% of the initial value Tan δ ≦ ±200% of the initial specified value ESR ≦ ±200% of the initial specified value Leakage current ≦ The initial specified value						
Bias Humidity	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjecting them to the DC rated voltage at 85℃, 85% RH for 2,000 hours. Capacitance change ≦ ±30% of the initial value Tan δ ≦ ±200% of the initial specified value ESR ≦ ±200% of the initial specified value Leakage current ≦ The initial specified value						

- ※ 1. If any doubt arises, measure the leakage current after following voltage treatment.(Voltage treatment:Applying rated voltage for 120minutes at 125°C)
- ※ 2. Reflow Conditions : Refer to 46page

DIMENSIONS



Recommended solder land on PC board



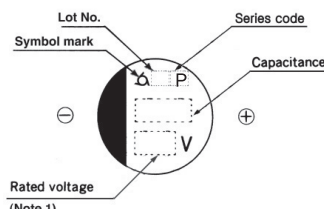
■ : Solder land on PC board

Note 1 : L±0.7 for 10×10(J10)

Unit(mm)

Case code	φD	L	A	B	C	W	P	a	b	c
F61	6.3	5.8	6.6	6.6	7.2	0.5-0.8	1.9	1.9	3.5	1.6
F80	6.3	7.7	6.6	6.6	7.2	0.5-0.8	1.9	1.9	3.5	1.6
H10	8.0	10.0	8.3	8.3	9.0	0.7-1.1	3.1	3.1	4.2	2.2
J10	10.0	10.0	10.3	10.3	11.0	0.7-1.1	4.5	4.5	4.4	2.2

MARKING



RATED RIPPLE CURRENT MULTIPLIERS

Freq.(Hz)	120	1k	5k	10k	20k	30k	100k ~500k
Cap.(μF)							
~ 10	0.03	0.30	0.50	0.60	0.70	0.75	1.00
15 ~ 33	0.07	0.30	0.50	0.60	0.70	0.75	1.00
39 ~ 150	0.10	0.40	0.60	0.70	0.80	0.80	1.00
220 ~ 560	0.13	0.45	0.65	0.75	0.85	0.85	1.00

RATINGS OF FPV Series

Case Code	Rated Voltage (V)	Rated Capacitance(μ F)	ESR(m Ω) (at 100kHz)	Rated Ripple Current(mArms/ 125°C, 100kHz)	Tangent of loss angle	Leakage Current (μ A)
F61	16	82	45	950	0.16	13
	25	47	50	900	0.14	12
	25	56	50	900	0.14	14
	35	27	60	900	0.12	9
	35	47	60	900	0.12	16
	50	10	80	750	0.10	5
	50	22	80	750	0.10	11
	63	6,8	120	700	0.08	4
	63	10	120	700	0.08	6
F80	16	150	27	1,450	0.16	24
	25	68	30	1,400	0.14	17
	25	100	30	1,400	0.14	25
	35	47	35	1,400	0.12	16
	35	68	35	1,400	0.12	24
	50	15	40	1,100	0.10	8
	50	33	40	1,100	0.10	17
	63	10	80	900	0.08	6
	63	22	80	900	0.08	14
H10	16	270	22	1,700	0.16	43
	25	150	27	1,600	0.14	38
	25	220	27	1,600	0.14	55
	35	100	27	1,600	0.12	35
	35	150	27	1,600	0.12	53
	50	33	30	1,250	0.10	17
	50	47	30	1,250	0.10	24
	50	68	30	1,250	0.10	34
	63	22	40	1,100	0.08	14
	63	33	40	1,100	0.08	21
	63	47	40	1,100	0.08	30
	80	22	45	1,100	0.08	18
J10	16	470	18	2,100	0.16	75
	25	270	20	2,000	0.14	68
	25	330	20	2,000	0.14	83
	35	150	20	2,000	0.12	53
	35	270	20	2,000	0.12	95
	50	56	25	1,600	0.10	28
	50	100	25	1,600	0.10	50
	50	120	25	1,600	0.10	60
	63	33	30	1,400	0.08	21
	63	56	30	1,400	0.08	35
	63	82	30	1,400	0.08	52
	80	39	33	1,400	0.08	31
	80	47	33	1,700	0.08	38