FV Series

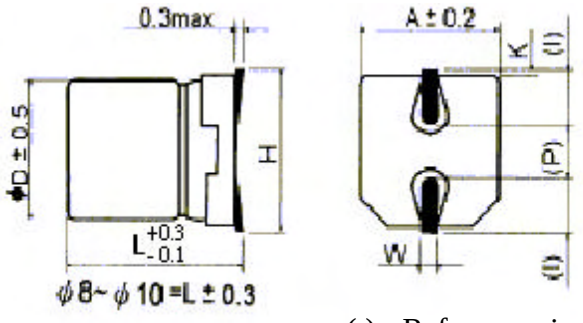
■ Features
- Lifetime:85℃,3000~5000hrs
- Long life for GV
- Low profile vertical chip

■ Recommended Applications
- AV(TV, Video, Audio)
- Monitor/Computer
- OA/HA/Communication

Specifications

Items	Characteristics							
Capacitance Tolerance	±20% (M) (120Hz,20℃)							
Rated Voltage Range (WV)	4~50 VDC							
Operating Temperature Range	-40 ~ +85℃							
Surge Voltage (V) (20℃)	WV	4	6.3	10	16	25	35	50
	SV	5	8	13	20	32	44	63
Leakage Current (Max) (20℃)	I≦0.01CV or 3μA whichever is greater (After rated voltage applied for 2 minutes)							
	I= Leakage Current (μA) C= Nominal Capacitance (μF) V= Rated Voltage (V)							
Dissipation Factor (Max) (tan δ) (120Hz ,20℃)	Shown in the table of standard rating							
Low Temperature Stability Impedance Ratio (Max)	WV	4	6.3	10	16	25	35	50
	Z(120Hz)							
	Z(-25℃) / Z(20℃)	7	4	3	2	2	2	2
	Z(-40℃) / Z(20℃)	15	8	6	4	4	3	3
Load Life	After applying rated voltage for 3000 ~ 5000 hours at 85℃, the capacitor shall meet the following requirement.							
	Capacitance Change: Within ±20% of the initial value							
	Dissipation Factor: Not move than 200% of the specified value							
	Leakage Current: Not more than the specified value							
	Case (ψ): ψD≦6.3 — Life time (hrs): 3000							
	Case (ψ): ψD≧8 — Life time (hrs): 5000							
Shelf Life	After placed at 85℃without voltage applied for 1000 hours, the capacitor shall meet the same requirement as load life.							
Applicable standards	Refer to JIS C 5101							

Dimensions (mm)



( ) : Reference size

ψD	L	A	H	I	W	P	K
4.0	5.4	4.3	5.5 Max	1.8	0.65±0.1	1.0±0.2	0.35 +0.15 -0.20
5.0	5.4	5.3	6.5 Max	2.2	0.65±0.1	1.5±0.2	0.35 +0.15 -0.20
6.3	5.4	6.6	7.8 Max	2.6	0.65±0.1	1.8±0.2	0.35 +0.15 -0.20
8.0	6.2	8.3	9.5 Max	3.4	0.65±0.1	2.2±0.2	0.35 +0.15 -0.20
8.0	10.2	8.3	10.0 Max	3.4	0.90±0.2	3.1±0.2	0.70±0.2
10.0	10.2	10.3	12.0 Max	3.5	0.90±0.2	4.6±0.2	0.70±0.2

Multiplier for Ripple Current

Frequency coefficient

Frequency (Hz)	60	120	1K	10K~100K
Coefficient	0.80	1.00	1.15	1.25

Temperature coefficient

Ambient Temperature (℃)	≦50	70	85
Coefficient	1.36	1.25	1.00

Case Size / tan δ / Max Ripple Current / ESR

CASE SIZE (ψDxL(mm)) / MAX DISSIPATION FACTOR (tanä / 120Hz,20℃) / MAX PERMISSIBLE RIPPLE CURRENT (RC(mArms) / 120Hz,85℃) / MAX EQUIVALENT SERIES RESISTANCE (ESR(Ω) / 120Hz,20℃)

WV	4				6.3				10				16			
SPEC / μF	ψDxL	tanä	RC	ESR	ψDxL	tanä	RC	ESR	ψDxL	tanä	RC	ESR	ψDxL	tanä	RC	ESR
4.7													4x5.4	0.16	20	45.1
10													4x5.4	0.16	28	21.1
22	4x5.4	0.35	19	21.1	4x5.4	0.26	20	15.6	4x5.4	0.30	28	18.0	4x5.4	0.26	27	15.6
													5x5.4	0.16	39	
33	4x5.4	0.35	26	14.0	5x5.4	0.26	22	10.4	4x5.4	0.30	29	12.0	5x5.4	0.26	45	10.4
									5x5.4	0.20	43	8.03	6.3x5.4	0.16	66	6.43
47	4x5.4	0.35	34	9.87	5x5.4	0.26	46	7.33	5x5.4	0.30	43	8.46	6.3x5.4	0.16	70	4.51
100	5x5.4	0.35	61	4.64	6.3x5.4	0.26	71	3.44	6.3x5.4	0.26	70	3.44	6.3x5.4	0.20	70	2.65
220	6.3x5.4	0.35	82	2.11	8x6.2	0.35	250	2.11	8x6.2	0.26	250	1.56	8x10.2	0.20	280	1.20
330					8x6.2	0.35	300	1.40	8x10.2	0.26	330	1.04	10x10.2	0.20	380	0.803
470					8x10.2	0.35	380	0.987	10x10.2	0.26	400	0.733	10x10.2	0.20	420	0.564
1000					10x10.2	0.35	700	0.464	10x10.2	0.26	580	0.344				

WV	25				35				50			
SPEC / μF	ψDxL	tanä	RC	ESR	ψDxL	tanä	RC	ESR	ψDxL	tanä	RC	ESR
0.1									4x5.4	0.12	1	1593
0.22									4x5.4	0.12	2	723
0.33									4x5.4	0.12	3	482
0.47									4x5.4	0.12	5	338
1									4x5.4	0.12	10	159
2.2					4x5.4	0.12	8	72.3	4x5.4	0.12	16	72.3
3.3					4x5.4	0.12	10	48.2	4x5.4	0.12	16	48.2
4.7	4x5.4	0.14	22	39.5	4x5.4	0.12	22	33.8	5x5.4	0.12	23	33.8
10	4x5.4	0.20	24	26.5	4x5.4	0.16	24	21.2	6.3x5.4	0.12	35	15.9
	5x5.4	0.14	28	18.5	5x5.4	0.12	30	15.9				
22	6.3x5.4	0.14	55	8.44	6.3x5.4	0.12	60	7.23	8x6.2	0.12	110	7.23
33	6.3x5.4	0.14	65	5.62	8x6.2	0.14	130	5.62	8x10.2	0.12	120	4.82
47	6.3x5.4	0.20	70	5.64	8x6.2	0.14	165	3.95	10x10.2	0.12	130	3.38
	8x6.2	0.16	96	4.51								
100	8x10.2	0.16	180	2.12	10x10.2	0.14	210	1.85	10x10.2	0.12	190	1.59
220	10x10.2	0.16	310	0.964	10x10.2	0.14	310	0.844	10x10.2	0.12	300	0.723