

ZV Series

Features
 Lifetime: 105 , 1000hrs
 Wide temperature range
 Low profile vertical chip
 Low impedance

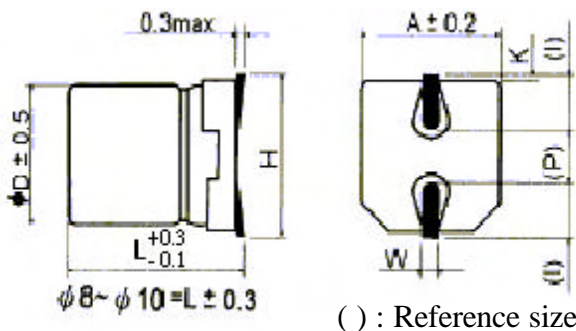
Recommended Applications
 Monitor/Computer
 Battery charger
 DC/DC converter
 SMPS
 Noise filter



Specifications

Items	Characteristics								
Capacitance Tolerance	± 20% (M) (120Hz, 20)								
Rated Voltage Range (WV)	6.3~50 VDC								
Operating Temperature Range	-40 ~ +105								
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 3 μ A whichever is greater (After rated voltage applied for 2 minutes)								
	I = Leakage Current (μ A) C = Nominal Capacitance (μ F) V = Rated Voltage (V)								
Dissipation Factor (Max) (tan) (120Hz , 20)	WV	4	6.3	10	16	25	35	50	
	tan	0.35	0.26	0.19	0.16	0.14	0.12	0.12	
Low Temperature Stability Impedance Ratio (Max)	WV		4	6.3	10	16	25	35	50
	Z(120Hz)		4	6.3	10	16	25	35	50
	Z(-25) / Z(20)		4	2	2	2	2	2	2
Load Life	Z(-40) / Z(20)		8	4	4	3	3	3	3
	After applying rated voltage for 1000 hours at 105 , the capacitor shall meet the following requirement.								
	Capacitance Change	Within ± 20% of the initial value							
Dissipation Factor	Not more than 200% of the specified value								
Leakage Current	Not more than the specified value								
Shelf Life	After placed at 105 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)



D	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)	120	1K	10K	100K
Coefficient	0.70	0.80	0.90	1.00

Temperature coefficient

Ambient Temperature ()	50	70	85	105
Coefficient	1.90	1.75	1.40	1.00

Case Size / Max Ripple Current / Impedance

CASE SIZE (DxL(mm)) / MAX PERMISSIBLE RIPPLE CURRENT (RC(mArms) / 100KHz,105)
/ MAX IMPEDANCE (Z() / 100KHz,20)

WV	4			6.3			10			16		
μ F \ SPEC	DxL	RC	Z	DxL	RC	Z	DxL	RC	Z	DxL	RC	Z
4.7	4x5.4	60	4.0							4x5.4	60	4.0
6.8	4x5.4	60	4.0							4x5.4	60	4.0
10	4x5.4	60	4.0				4x5.4	60	4.0	4x5.4	60	4.0
22	4x5.4	60	4.0	4x5.4	60	4.0	5x5.4	95	2.6	5x5.4	95	2.6
33	4x5.4	60	4.0	5x5.4	95	2.6	5x5.4	95	2.6	5x5.4	95	2.6
47	4x5.4	60	4.0	5x5.4	95	2.6	6.3x5.4	95	1.3	6.3x5.4	140	1.3
68	4x5.4	60	4.0	6.3x5.4	140	1.3	6.3x5.4	140	1.3	8x6.2	230	0.8
100	5x5.4	95	3.0	6.3x5.4	140	1.3	6.3x5.4	140	1.3	8x6.2	230	0.8
150	6.3x5.4	140	2.6	8x6.2	230	0.8	8x6.2	230	0.8	10x10.2	450	0.5
220	6.3x5.4	140	2.6	8x6.2	230	0.8	8x6.2	230	0.8	10x10.2	450	0.5
330				8x10.2	450	0.5	8x10.2	450	0.5	10x10.2	670	0.3
470				10x10.2	670	0.3	10x10.2	670	0.3	10x10.2	670	0.3
1000				10x10.2	670	0.3	10x10.2	670	0.3			

WV	25			35			50		
μ F \ SPEC	DxL	RC	Z	DxL	RC	Z	DxL	RC	Z
0.1							4x5.4	60	5.0
0.22							4x5.4	60	5.0
0.33							4x5.4	60	5.0
0.47							4x5.4	60	5.0
1				4x5.4	60	4.0	4x5.4	60	5.0
2.2				4x5.4	60	4.0	4x5.4	60	5.0
3.3				4x5.4	60	4.0	4x5.4	60	5.0
4.7	4x5.4	60	4.0	4x5.4	60	4.0	5x5.4	95	4.0
6.8	4x5.4	60	4.0	5x5.4	95	2.6	6.3x5.4	140	2.6
10	5x5.4	95	2.6	5x5.4	95	2.6	6.3x5.4	140	2.6
22	6.3x5.4	140	1.3	6.3x5.4	140	1.3	8x6.2	230	1.3
33	6.3x5.4	140	1.3	8x6.2	230	0.8	8x10.2	300	1.1
47	6.3x5.4	140	1.3	8x6.2	230	0.8	10x10.2	670	0.8
68	8x10.2	450	0.5	8x10.2	450	0.5	10x10.2	670	0.8
100	8x10.2	450	0.5	10x10.2	670	0.3	10x10.2	670	0.8
150	10x10.2	670	0.3	10x10.2	670	0.3			
220	10x10.2	670	0.3	10x10.2	670	0.3			