VZ 系 列 SERIES

- 2000h at 105°C
- Low impedance with wide temperature range -55～+105°C
- Switching power supplies
- Smoothing,Buffering,Filtering

Items	Characteristics							
Operating Temperature Range(°C)	-55～+105							
Voltage Range (V)	6.3～50							
Capacitance Range (μF)	1～4700							
Capacitance Tolerance(20°C,120Hz)	±20%							
Leakage Current (μA) appication of rated voltage	Rated Voltage (V)	6.3～50						
	Case size	φ4～φ10				φ12.5～φ16		
	Time	after 2 min				after 1 min		
	Leakage Current	≤0.01CV or 3 whichever is greater				≤0.03CV or 4 whichever is greater		
	I:Max. leakage current (μA),C:Nominal Capacitance (μF) ,V :Rated Voltage (V)							

Dissipation Factor (20°C,120Hz)	Rated Voltage (V)		6.3	10	16	25	35	50
	Tanδ(max)	φ4～φ10	0.22	0.20	0.18	0.16	0.14	0.12
		φ12.5～φ16	0.26	0.22	0.18	0.16	0.14	0.12

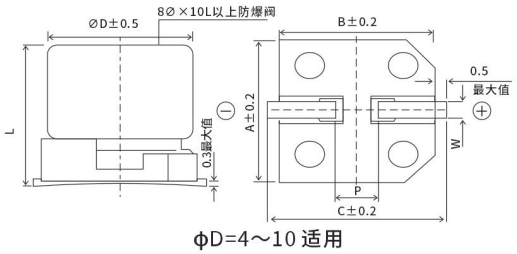
Low Temperature Characteristics (Max. Impedance Ratio at 120Hz)	Rated Voltage (V)		6.3	10	16	25	35	50
	Impedance Ratio ZT/Z20 (max.)	φ4～φ10	Z(-25°C)/Z(20°C)	2	2	2	2	2	2
			Z(-55°C)/Z(20°C)	5	4	4	3	3	3
		φ12.5～φ16	Z(-25°C)/Z(20°C)	3	3	2	2	2	2
			Z(-55°C)/Z(20°C)	10	8	6	4	3	3

Load Life	After 2000 hrs. application of the rated voltage at 105°C, they meet the characteristics listed below	
	Capacitance Change	With in ±30% of initialvalue
	Dissipation Factor	200% or less of initial specified value
	Leakage Current	initial specified value or less

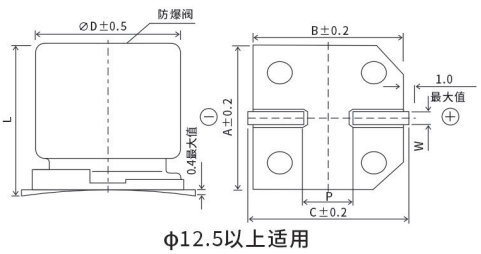
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied .	
	Capacitance change	≤ ± 20% of the initial value
	D.F.(Tanδ)	≤200% of specified value
	Leakage current	≤200% of specified value

Marking	Black print on the case top

◆ Diagramof Dimensions 尺寸图



φD=4～10 适用



φ12.5以上适用

◆ Dimensions(mm) 尺寸表

D×L	4×5.4	5×5.4	6.3×5.4	6.3×7.7	8×10.5	10×10.5	10×13.5	12.5×13.5	12.5×16	16×16.5
A	4.3	5.3	6.6	6.6	8.3	10.3	10.3	13.0	13.0	17.0
B	4.3	5.3	6.6	6.6	8.3	10.3	10.3	13.0	13.0	17.0
C	5.1	5.9	7.2	7.2	9.2	11.2	11.2	13.7	13.7	18.0
P±0.2	1.0	1.5	2.0	2.0	3.1	4.4	4.4	4.4	4.4	6.4
L	5.4±0.3	5.4±0.3	5.4±0.3	7.7±0.3	10.5±0.5	10.5±0.5	13.5±0.5	13.5±0.5	16±0.5	16.5±0.5

◆ Ratings for VZ Series

UR (Surge Voltage) Code	Rated Capacitance	Impedance 20℃ 100KHz	Rated Ripple Current 105℃100KHz	Size φD×L
(V)	(μF)	(Ω)	(mA rms)	(mm)
6.3(7.2)0J	22	3.0	60	4×5.4
	33	3.0	60	4×5.4
		1.8	95	5×5.4
	47	3.0	60	4×5.4
		1.8	95	5×5.4
	68	1.8	95	5×5.4
		1.0	140	6.3×5.4
	100	1.8	95	5×5.4
		1.0	140	6.3×5.4
	150	1.0	140	6.3×5.4
		0.60	230	6.3×7.7
	220	1.0	140	6.3×5.4
		0.6	230	6.3×7.7
	330	0.6	230	6.3×7.7
	470	0.6	230	6.3×7.7
		0.30	450	8×10.5
	680	0.30	450	8×10.5
	1000	0.30	450	8×10.5
		0.15	670	10×10.5
	1500	0.15	670	10×10.5
		0.13	750	10×13.5
	2200	0.13	750	10×13.5
		0.11	820	12.5×13.5
	3300	0.11	820	12.5×13.5
		0.09	950	12.5×16
	4700	0.08	1260	16×16.5
10(13)1A	22	3.0	60	4×5.4
		1.8	95	5×5.4
	33	3.0	60	4×5.4
		1.8	95	5×5.4
	47	1.8	95	5×5.4
	68	1.0	140	6.3×5.4
	100	1.0	140	6.3×5.4
		0.6	230	6.3×7.7
	150	1.0	140	6.3×5.4
		0.6	230	6.3×7.7
	220	0.6	230	6.3×7.7
	330	0.30	450	8×10.5
	470	0.30	450	8×10.5
	680	0.15	670	10×10.5
	1000	0.15	670	10×10.5
	1500	0.13	750	10×13.5
		0.11	820	12.5×13.5
	2200	0.09	950	12.5×16
	3300	0.08	1260	16×16.5
	4700	0.08	1260	16×16.5
16(20)1C	10	3.0	60	4×5.4
	15	3.0	60	4×5.4
		1.8	95	5×5.4
	22	3.0	60	4×5.4
		1.8	95	5×5.4
	33	1.8	95	5×5.4
		1.0	140	6.3×5.4
	47	1.8	95	5×5.4
		1.0	140	6.3×5.4
	68	1.0	140	6.3×5.4
		0.6	230	6.3×7.7
	100	1.0	140	6.3×5.4
		0.6	230	6.3×7.7
	150	0.6	230	6.3×7.7
	220	0.6	230	6.3×7.7
		0.30	450	8×10.5
16(20)1C	330	0.30	450	8×10.5
		0.15	670	10×10.5
	470	0.30	450	8×10.5
		0.15	670	10×10.5
	680	0.15	670	10×10.5

UR (Surge Voltage) Code	Rated Capacitance	Impedance 20℃ 100KHz	Rated Ripple Current 105℃100KHz	Size φD×L
(V)	(μF)	(Ω)	(mA rms)	(mm)
16(20)1C	1000	0.15	670	10×10.5
	1500	0.11	820	12.5×13.5
	2200	0.09	950	12.5×16
		0.08	1260	16×16.5
	3300	0.08	1260	16×16.5
25(32)1E	4.7	3.0	60	4×5.4
	6.8	3.0	60	4×5.4
	10	3.0	60	4×5.4
		1.8	95	5×5.4
	15	1.8	95	6.3×5.4
	22	1.8	95	5×5.4
		1.0	140	6.3×5.4
	33	1.8	95	5×5.4
		1.0	140	6.3×5.4
	47	1.0	140	6.3×5.4
		0.6	230	6.3×7.7
	68	0.6	230	6.3×7.7
	100	0.6	230	6.3×7.7
	150	0.6	230	6.3×7.7
		0.30	450	8×10.5
	220	0.30	450	8×10.5
	330	0.30	450	8×10.5
		0.15	670	10×10.5
	470	0.15	670	10×10.5
	680	0.13	750	10×13.5
	1000	0.11	820	12×13.5
		0.08	1260	16×16.5
	1500	0.09	950	12.5×16
	2200	0.08	1260	16×16.5
35(44)1V	1	3.0	60	4×5.4
	1.5	3.0	60	4×5.4
	2.2	3.0	60	4×5.4
	3.3	3.0	60	4×5.4
	4.7	3.0	60	4×5.4
	6.8	1.8	95	5×5.4
	10	3.0	60	4×5.4
		1.8	95	5×5.4
	15	1.8	95	5×5.4
	22	1.8	95	5×5.4
		1.0	140	6.3×5.4
	33	1.0	140	6.3×5.4
		0.6	230	6.3×7.7
	47	1.0	140	6.3×5.4
		0.6	230	6.3×7.7
	68	0.6	230	6.3×7.7
	100	0.6	230	6.3×7.7
		0.30	450	8×10.5
	150	0.30	450	8×10.5
	220	0.30	450	8×10.5
		0.15	670	10×10.5
	330	0.15	670	10×10.5
	470	0.15	670	10×10.5
		0.13	750	10×13.5
	680	0.13	750	10×13.5
		0.11	820	12.5×13.5
	1000	0.08	1260	16×16.5
		0.09	950	12.5×16
	1500	0.08	1260	16×16.5
50(63)1H	1	5.0	30	4×5.4
	1.5	5.0	30	4×5.4
	2.2	5.0	30	4×5.4
	3.3	5.0	30	4×5.4
	4.7	3.0	50	5×5.4
	6.8	2.0	70	6.3×5.4
	10	2.0	70	6.3×5.4
	15	2.0	70	6.3×5.4
	22	2.0	70	6.3×5.4
		1.0	120	6.3×7.7

◆ Ratings for VZ Series

UR (Surge Voltage) Code	Rated Capaci-tance	Impedance 20℃ 100KHz	Rated Ripple Current 105℃100KHz	SizeφD×L
(V)	(μF)	(Ω)	(mArms)	(mm)
50(63)1H	33	1.0	120	6.3×7.7
	47	1.0	120	6.3×7.7
	68	0.60	300	8×10.5
	100	0.60	300	8×10.5
	150	0.30	500	10×10.5
	220	0.30	500	10×10.5
	330	0.25	580	10×13.5
		0.20	650	12.5×13.5
		0.12	1060	16×16.5
	470	0.15	700	12.5×16
		0.12	1060	16×16.5
	680	0.12	1060	16×16.5

◆Temperature Coefficient

Temperature(℃)	+70	+85	+105
Coefficient	1.96	1.68	1.00

◆ FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

Frequency			50Hz	120Hz	300Hz	1KHz	10KHz～
Coefficient	φ4～φ10	1～68μF	0.35	0.50	0.64	0.83	1.00
		100～2200μF	0.40	0.55	0.70	0.85	1.00
	φ12.5～φ16	～680μF	0.45	0.65	0.80	0.90	1.00
		1000～4700μF	0.65	0.85	0.95	1.00	1.00