

VZ2 Series

- Reflow soldering is available
- Available for high density surface mounting
- High stability and reliability with low impedance
- Lifetime: +105°C ,2000 Hrs.Compliance
- **AEC-Q200 Compliant**

◆ SPECIFICATIONS

Items	Characteristics										
Category	-55°C to +105°C(6.3 to 100Vdc)										
Temperature Range											
Rated Voltage Range	6.3 to 100Vdc										
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)										
Leakage Current	6.3 to 100Vdc :I=0.01CV(μA) or 3μA, which is greater. Where, I: Max. leakage current (μA), C: Nominal capacitance (μF), V: Rated voltage(V) (at 20°C after 1 minutes)										
Dissipation Factor (tan δ)	Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	80	100	(at 20°C, 120Hz)
	tanδ(Max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.08	0.08	
Low Temperature Characteristics (Max. Impedance Ratio)	Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	80	100	(at 120Hz)
	Z(-40°C)/Z(+20°C)	6	4	3	3	3	3	3	3	3	
	Z(-55°C)/Z(+20°C)	8	5	4	3	3	3	3	3	3	
Endurance	After applying rated voltage for 2000 hours at +105°C and then resumed 16 hours. The capacitor shall meet the following limits.										
	Capacitance change	≤±20% of the initial value.									
	D.F. (tan δ)	≤200% of the initial specified value.									
	Leakage current	≤ The initial specified value.									
Shelf Life	The following specifications shall be satisfied when the capacitors performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C after exposing them for 1000hours at 105°C without voltage applied.										
	Capacitance change	≤±20% of the initial value.									
	D.F. (tan δ)	≤200% of the initial specified value.									
	Leakage current	≤The initial specified value.									
Coefficient of Frequency for Rated Ripple Current	Frequency	50Hz			120Hz		1KHz		100KHz		
	Capacitance										
	Correction factor	0.60			0.70		0.85		1.00		

■ Size Code: A to L

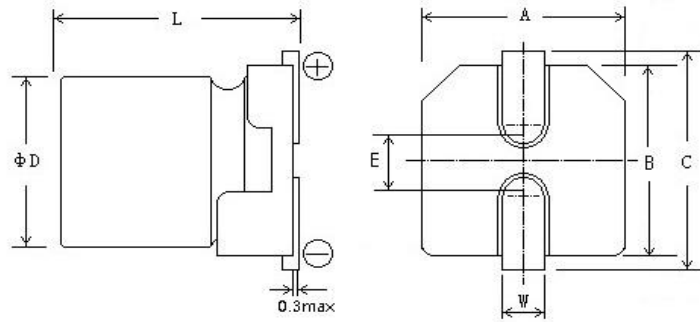
Code	A	B	B1	C	C1	D	E
Size(mm)	Φ4×5.4	Φ5×5.4	Φ5×6	Φ6.3×5.4	Φ6.3×6	Φ6.3×7.7	Φ8×6.3
Code	E1	F	G	G1	H	H1	I
Size(mm)	Φ8×8	Φ8×10.2	Φ10×10.2	Φ10×12.5	Φ12.5×13.5	Φ12.5×16.5	Φ16×16.5
Code	J	K	M	L			
Size(mm)	Φ16×20	Φ18×16.5	Φ18×21.5	Φ16×21.5			

■ Part number system for SMD type:

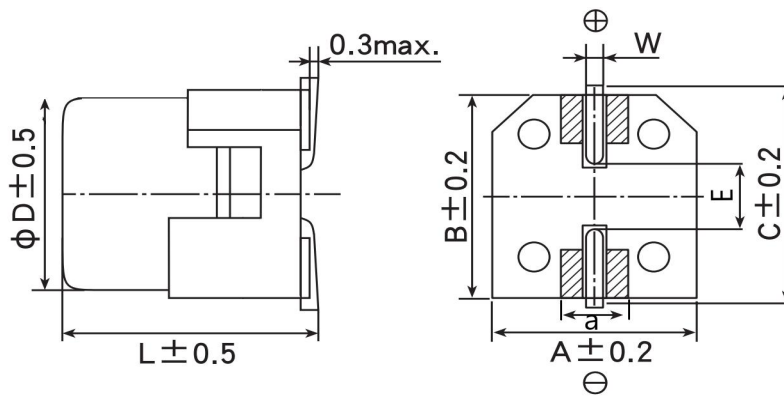
1	2	3	4	5	6	7	8	9	10	11
V	Z	2	1	V	1	0	1	M	D	*
Series		Voltage code(V)		Capacitance code(μF)			Capacitance tolerance	Case Code	Special Suffix	

■ Outline Drawing

Unit : mm

Normal Surface-Mounted type


Size	4×5.4	5×5.4	6.3×5.4	6.3×7.7	8×6.2	8×8	8×10.2	10×10.2	10×12.5	12.5×13.5
A/B±0.2	4.3	5.3	6.6	6.6	8.3	8.3	8.3	10.3	10.3	13.0
D±0.5	4.0	5.0	6.3	6.3	8.0	8.0	8.0	10	10	12.5
E±0.2	1.0	1.3	2.2	2.2	3.1	3.1	3.1	4.5	4.5	5.2
L	5.4±0.3	5.4±0.3	5.4±0.3	7.7±0.3	6.2±0.3	8.0±0.3	10.2±0.5	10.2±0.5	12.5±0.5	13.5±0.5
C±0.2	5.0	6.0	7.2	7.2	9.0	9.0	9.0	11.0	11.0	13.8
W	0.5~0.9				0.8~1.1					1.1~1.4

Anti-Vibrating Surface-Mounted type (V for suffix)


Size	8×10.5	10×10.5	10×12.5	12.5×13.5	12.5×16	16×16.5	16×21.5	18×16.5	18×21.5
A	8.3	10.3	10.3	13.0	13.0	17	17	19	19
B	8.3	10.3	10.3	13.45	13.45	17	17	19	19
D	8.0	10	10	12.5	12.5	16	16	18	18
E±0.2	3.1	4.5	4.5	5.2	5.2	6.5	6.5	6.5	6.5
L	10.5	10.5	12.5	13.5	16	16.5	21.5	16.5	21.5
C	9.0	11.0	11.0	14.3	14.3	18	18	20	20
a	4.2	4.2	4.2	4.4	4.4	6.0	6.0	6.0	6.0
W	0.8~1.1				1.1~1.4				

Standard Rating of VZ2 Series

WV (Vdc)	Cap (μ F)	Size Φ D×L(mm)	Rated ripple current (mA _{rms} /105°C, 100KHz)	Z Impedance: (Ω , 20°C, 100KHz)	Part Number	
6.3	22	4×5.4	80	2.2	VZ20J220MA	
	33	5×5.4	150	1.5	VZ20J330MB	
	47	5×5.4	175	1.5	VZ20J470MB	
	100	6.3×5.4	230	0.58	VZ20J101MC	
	150	6.3×5.4	230	0.58	VZ20J151MC	
	220	6.3×5.4	6.3×5.4	280	0.58	VZ20J221MC
			6.3×7.7	280	0.34	VZ20J221MD
	330	6.3×7.7	515	0.34	VZ20J331MD	
	470	6.3×7.7	6.3×7.7	800	0.34	VZ20J471MD
			8×10.2	800	0.17	VZ20J471MF
	1000	8×10.2	8×10.2	1060	0.17	VZ20J102MF
			10×10.2	1060	0.1	VZ20J102MG
	1500	10×10.2	1200	0.1	VZ20J152MG	
	2200	12.5×13.5	1600	0.07	VZ20J222MH	
2700	12.5×13.5	1720	0.07	VZ20J272MH		
10	22	4×5.4	80	2.2	VZ21A220MA	
	33	5×5.4	150	1.5	VZ21A330MB	
	47	6.3×5.4	230	0.58	VZ21A470MC	
	100	6.3×7.7	280	0.34	VZ21A101MD	
	150	6.3×7.7	280	0.34	VZ21A151MD	
	220	6.3×7.7	515	0.34	VZ21A221MD	
	330	8×10.2	700	0.17	VZ21A331MF	
	470	8×10.2	760	0.17	VZ21A471MF	
	1000	10×10.2	1360	0.1	VZ21A102MG	
	1500	12.5×13.5	1530	0.07	VZ21A152MH	
	2200	12.5×13.5	1750	0.07	VZ21A222MH	
16	10	4×5.4	80	2.2	VZ21C100MA	
	22	5×5.4	150	1.5	VZ21C220MB	
	33	6.3×5.4	230	0.58	VZ21C330MC	
	47	5×5.4	5×5.4	245	1.5	VZ21C470MB
			6.3×5.4	245	0.58	VZ21C470MC
	100	6.3×5.4	6.3×5.4	280	0.58	VZ21C101MC
			6.3×7.7	280	0.34	VZ21C101MD
	150	6.3×7.7	420	0.34	VZ21C151MD	
	220	6.3×7.7	6.3×7.7	545	0.34	VZ21C221MD
			8×10.2	545	0.17	VZ21C221MF
	330	8×10.2	730	0.17	VZ21C331MF	
	470	8×10.2	8×10.2	830	0.17	VZ21C471MF
			10×10.2	830	0.1	VZ21C471MG

16	1000	10×10.2	1420	0.1	VZ21C102MG
		10×12.5	1420	0.1	VZ21C102MG1
	1500	12.5×13.5	1650	0.07	VZ21C152MH
25	4.7	4×5.4	80	2.2	VZ21E4R7MA
	10	4×5.4	92	2.2	VZ21E100MA
	22	5×5.4	150	1.5	VZ21E220MB
		6.3×5.4	150	0.58	VZ21E220MC
	33	6.3×5.4	230	0.58	VZ21E330MC
	47	6.3×5.4	280	0.58	VZ21E470MC
		6.3×7.7	280	0.34	VZ21E470MD
	100	6.3×7.7	420	0.34	VZ21E101MD
		8×6.2	420	0.34	VZ21E101ME
	150	8×10.2	600	0.17	VZ21E151MF
	220	8×10.2	720	0.17	VZ21E221MF
	330	10×10.2	760	0.1	VZ21E331MG
	470	10×10.2	1000	0.1	VZ21E471MG
	1000	12.5×13.5	1520	0.07	VZ21E102M
	2200	16*16.5	1670	0.054	VZ21E222MI
35	4.7	4×5.4	80	2.2	VZ21V4R7MA
	10	5×5.4	150	1.5	VZ21V100MB
	22	6.3×5.4	230	0.58	VZ21V220MC
	33	6.3×5.4	245	0.58	VZ21V330MC
	47	6.3×5.4	280	0.58	VZ21V470MC
		6.3×7.7	280	0.34	VZ21V470MD
	100	6.3×7.7	450	0.34	VZ21V101MD
		8×10.2	450	0.17	VZ21V101MF
	150	8×10.2	600	0.17	VZ21V151MF
	220	8×10.2	670	0.17	VZ21V221MF
		10×10.2	670	0.1	VZ21V221MG
	330	10×10.2	1000	0.10	VZ21V331MG
	470	10×12.5	1450	0.09	VZ21V471MG1
		12.5×13.5	1450	0.07	VZ21V471MH
2200	18*16.5	1820	0.045	VZ21V222MK	
50	1	4×5.4	60	3.0	VZ21H010MA
	2.2	4×5.4	60	3.0	VZ21H2R2MA
	3.3	4×5.4	60	3.0	VZ21H3R3MA
	4.7	5×5.4	85	2.5	VZ21H4R7MB
	10	6.3×5.4	165	1.5	VZ21H100MC
	22	6.3×5.4	185	1.20	VZ21H220MC
		6.3×7.7	185	0.68	VZ21H220MD
	33	6.3×7.7	230	0.68	VZ21H330MD
	47	6.3×7.7	300	0.68	VZ21H470MD
		8×10.2	300	0.34	VZ21H470MF
8×6.2		300	0.68	VZ21H470ME	

	68	8×10.2	430	0.34	VZ21H680MF
	100	8×10.2	500	0.34	VZ21H101MF
		10×10.2	500	0.20	VZ21H101MG
	220	10×10.2	670	0.20	VZ21H221MG
	330	12.5×13.5	1050	0.12	VZ21H331MH
63	4.7	5×5.4	70	2.50	VZ21J4R7MB
	10	6.3×5.4	120	1.50	VZ21J100MC
		6.3×7.7	120	1.20	VZ21J100MD
	22	6.3×7.7	145	1.20	VZ21J220MD
		8×6.2	145	1.20	VZ21J220ME
	33	8×10.2	250	0.65	VZ21J330MF
	47	8×10.2	280	0.65	VZ21J470MF
	68	8×10.2	460	0.65	VZ21J680MF
	100	10×10.2	500	0.35	VZ21J101MG
		10×12.5	500	0.35	VZ21J101MG1
220	12.5×13.5	1120	0.16	VZ21J221MH	
80	3.3	5×5.4	80	5.0	VZ21K3R3MB
	4.7	6.3×5.4	95	3.0	VZ21K4R7MC
	10	6.3×7.7	120	2.4	VZ21K100MD
	22	8×10.2	130	1.3	VZ21K220MF
	33	8×10.2	180	1.3	VZ21K330MF
	47	10×10.2	290	0.70	VZ21K470MG
	100	12.5×13.5	580	0.18	VZ21K101MH
100	10	6.3×7.7	115	2.4	VZ22A100MD
	22	8×10.2	185	1.0	VZ22A220MF
	33	10×10.2	260	0.7	VZ22A330MG
	47	10×10.2	420	0.7	VZ22A470MG
		10×12.5	420	0.7	VZ22A470MG1
	100	12.5×13.5	600	0.20	VZ22A101MH
	220	16×16.5	1250	0.18	VZ22A221MI
	330	18×16.5	1480	0.15	VZ22A330MK
470	18×21.5	1750	0.14	VZ22A470MM	

*: Enter the appropriate Surface-Mounted type