

# VS 系列 SERIES

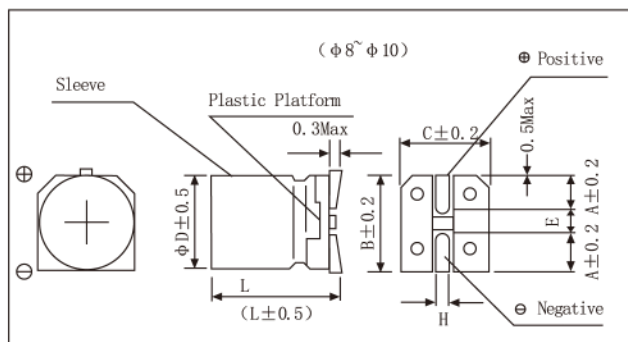
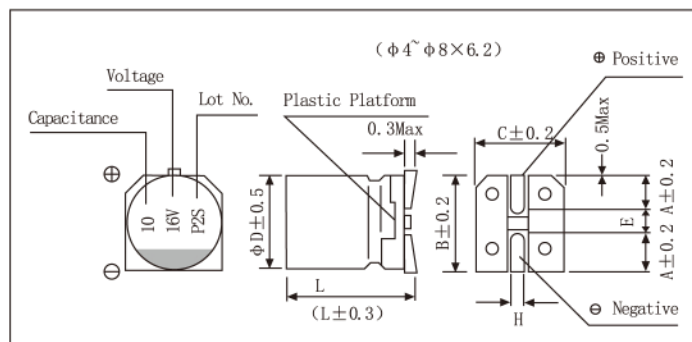
- V-chip Type
- Load life :85°C2000 hours
- Complied to the RoHS directive



## ◆ SPECIFICATION

Items	Characteristics																																																					
Operating Temperature Range(°C)	-40~+85°C																																																					
Voltage range (V)	4~100V																																																					
Capacitance Range (μF)	0.1~1500 μF																																																					
Capacitance Tolerance	±20% (at 20°C, 120Hz)																																																					
Dissipation Factor(Tan δ)	<table border="1"> <tr> <td>U<sub>R</sub> (V)</td> <td>4~100</td> </tr> <tr> <td>t<sub>g</sub> δ</td> <td>具体见表格</td> </tr> </table>	U <sub>R</sub> (V)	4~100	t <sub>g</sub> δ	具体见表格																																																	
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Low Temperature Characteristics	<table border="1"> <tr> <td colspan="2">U<sub>R</sub> (V)</td> <td>4</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td rowspan="2">Z-25°C/Z+20°C</td> <td>≦ φ8</td> <td>7</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>≧ φ8</td> <td>7</td> <td>5</td> <td>4</td> <td>4</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td rowspan="2">Z-40°C/Z+20°C</td> <td>≦ φ8</td> <td>15</td> <td>8</td> <td>8</td> <td>8</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> <tr> <td>≧ φ8</td> <td>15</td> <td>10</td> <td>8</td> <td>8</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	U <sub>R</sub> (V)		4	6.3	10	16	25	35	50	63	100	Z-25°C/Z+20°C	≦ φ8	7	4	3	3	2	2	2	2	2	≧ φ8	7	5	4	4	2	2	2	2	2	Z-40°C/Z+20°C	≦ φ8	15	8	8	8	4	3	3	3	3	≧ φ8	15	10	8	8	4	3	3	3	3
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(at 120Hz)																																																						
leakage current (μA)	I=0.01C <sub>R</sub> U <sub>R</sub> or 3μA whichever is greater. (at20°C, After 2 minutes application of rated voltage) I=Leakage Current    U <sub>R</sub> =Rated Voltage    C <sub>R</sub> =Rated Capacitance																																																					
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated rippled current is applied for 2000 hours at 85°C																																																					
	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±20%initial value 4V: Within ±25%initial value</td> </tr> <tr> <td>D. F. (Tan δ)</td> <td>Not more than200% of specified value</td> </tr> <tr> <td>leakage current</td> <td>Not more than specified value</td> </tr> </table>	Capacitance change	Within ±20%initial value 4V: Within ±25%initial value	D. F. (Tan δ)	Not more than200% of specified value	leakage current	Not more than specified value																																															
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Shelf Life	After storage for 1000 hours at +85°C, the capacitors shall meet the requirement of load life above.																																																					
Resistance to Soldering Heat	The capacitors shall be kept on the hot plate maintained at 25°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the following requirement.																																																					
	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±10%initial value</td> </tr> <tr> <td>D. F. (Tan δ)</td> <td>Not more than initial specified value</td> </tr> <tr> <td>leakage current</td> <td>Not more than initial specified value</td> </tr> </table>	Capacitance change	Within ±10%initial value	D. F. (Tan δ)	Not more than initial specified value	leakage current	Not more than initial specified value																																															
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Frequency coefficient	<table border="1"> <tr> <td rowspan="2">Frequency (Hz)</td> <td>50</td> <td>120</td> <td>300</td> <td>1k</td> <td>≥10k</td> </tr> <tr> <td>Rated voltage (v)</td> <td>0.70</td> <td>1.00</td> <td>1.17</td> <td>1.36</td> <td>1.50</td> </tr> <tr> <td colspan="2">4~100WV</td> <td>0.70</td> <td>1.00</td> <td>1.17</td> <td>1.36</td> <td>1.50</td> </tr> </table>	Frequency (Hz)	50	120	300	1k	≥10k	Rated voltage (v)	0.70	1.00	1.17	1.36	1.50	4~100WV		0.70	1.00	1.17	1.36	1.50																																		
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## ◆ DIMENSIONS



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Apply to  $\phi 6.3 \times 7.7$   $\phi 8 \times 6.2$

(mm)

	4×5.4	5×5.4	6.3×5.4	6.3×7.7	8×6.2	8×10	10×10
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2
B	4.3	4.3	6.6	6.6	8.3	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3
E	1.0	1.3	2.2	2.2	2.3	3.1	4.5
L	5.4	5.4	5.4	7.7	6.2	10.0	10.0
H	0.5~0.8				0.8~1.1		

◆ STANDARD RATINGS

UR (Surge Voltage) Code	Rated Capacitance	Dissipa Facor 20°C 120Hz	Rated Ripple Current 85°C120Hz	Size $\phi D \times L$
(V)	( $\mu F$ )	$\tan \delta$	(mA rms)	(mm)
4 (5) 0G	33	0.35	28	4×5.4
	47	0.35	33	4×5.4
	56	0.35	42	5×5.4
	100	0.35	56	5×5.4
	150	0.35	79	6.3×5.4
	220	0.35	96	6.3×5.4
	330	0.50	98	6.3×5.4
			140	6.3×7.7
	470	0.35	200	6.3×7.7
	680	0.35	284	8×10
	1000	0.35	344	8×10
1500	0.35	347	10×10	
6.3 (8) 0J	22	0.26	28	4×5.4
	33	0.35	34	4×5.4
		0.26	37	5×5.4
	47	0.35	40	4×5.4
		0.26	45	5×5.4
	56	0.35	46	5×5.4
		0.26	52	6.3×5.4
	100	0.35	47	5×5.4
		0.26	70	6.3×5.4
	150	0.35	71	6.3×5.4
	220	0.35	86	6.3×5.4
		0.35	103	8×6.2
	330	0.35	125	6.3×7.7
		0.35	127	8×6.2
	470	0.35	265	8×10
680	0.35	318	8×10	
1000	0.35	372	8×10	
	0.35	400	10×10	
1500	0.35	489	10×10	
10 (13) 1A	22	0.30	30	4×5.4
		0.20	33	5×5.4
	33	0.30	34	4×5.4
		0.20	41	5×5.4
	47	0.30	47	5×5.4
		0.26	52	6.3×5.4
	56	0.30	50	5×5.4
		0.26	57	6.3×5.4
	100	0.30	54	5×5.4
		0.26	76	6.3×5.4
	150	0.26	76	6.3×7.7

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UR (Surge Voltage) Code	Rated Capacitance	Dissipation Factor 20°C 120Hz	Rated Ripple Current 85°C 120Hz	Size ΦD×L
(V)	(μF)	tan δ	(mA rms)	(mm)
10 (13) 1A	220	0.26	119	6.3×7.7
		0.26	121	8×6.2
	330	0.26	240	8×10
	470	0.26	290	8×10
	680	0.26	327	10×10
	1000	0.26	393	10×10
16 (20) 1C	10	0.16	23	4×5.4
	22	0.26	30	4×5.4
		0.16	37	5×5.4
	33	0.26	44	5×5.4
		0.16	49	6.3×5.4
	47	0.26	52	5×5.4
		0.16	58	6.3×5.4
	56	0.26	57	5×5.4
		0.20	63	6.3×5.4
	100	0.26	86	6.3×5.4
		0.20	125	8×6.2
	150	0.26	135	6.3×7.7
	220	0.26	162	6.3×7.7
		0.20	215	8×10
25 (32) 1E	330	0.20	270	8×10
		0.20	380	10×10
	470	0.20	307	8×10
		0.20	330	10×10
	680	0.20	396	10×10
	4.7	0.14	16	4×5.4
	10	0.14	24	4×5.4
		0.12	27	5×5.4
	22	0.20	38	5×5.4
		0.14	42	6.3×5.4
	33	0.20	46	5×5.4
		0.14	52	6.3×5.4
	47	0.20	60	6.3×5.4
	56	0.20	65	6.3×7.7
35 (44) 1V	100	0.20	143	6.3×7.7
		0.20	145	8×6.2
		0.16	180	8×10
	150	0.16	192	8×10
	220	0.16	232	8×10
		0.16	250	10×10
	330	0.16	284	8×10
		0.16	305	10×10
	470	0.16	393	10×10
	4.7	0.12	18	4×5.4
	10	0.16	24	4×5.4
		0.12	29	5×5.4
	22	0.16	39	5×5.4
		0.12	46	6.3×5.4
33	0.16	53	6.3×5.4	
	0.14	67	8×6.2	
47	0.16	69	6.3×5.4	
	0.16	70	6.3×7.7	
	0.14	76	8×6.2	
56	0.16	80	6.3×7.7	
100		0.16	132	6.3×7.7
		0.14	175	8×10
		0.14	210	10×10



◆ STANDARD RATINGS

UR (Surge Voltage) Code	Rated Capacitance	Dissipation Factor 20°C 120Hz	Rated Ripple Current 85°C 120Hz	Size ΦD×L
(V)	(μF)	tan δ	(mA rms)	(mm)
35 (44) 1V	150	0.14	214	8×10
	220	0.14	246	8×10
		0.14	265	10×10
	330	0.14	324	10×10
50 (63) 1H	0.1	0.12	1	4×5.4
	0.22	0.12	2	4×5.4
	0.33	0.12	2.8	4×5.4
	0.47	0.12	4	4×5.4
	1.0	0.12	8.4	4×5.4
	2.2	0.12	13	4×5.4
	3.3	0.12	17	4×5.4
	4.7	0.14	18	4×5.4
		0.12	20	5×5.4
	10	0.14	30	5×5.4
		0.12	33	6.3×5.4
	22	0.14	43	6.3×5.4
		0.12	56	8×6.2
	33	0.14	94	6.3×7.7
		0.12	95	8×6.2
		0.12	110	8×10
	47	0.14	105	6.3×7.7
		0.12	132	8×10
		0.12	146	10×10
		0.12	150	8×10
100	0.12	181	8×10	
	0.12	195	10×10	
150	0.12	238	10×10	
220	0.12	289	10×10	
63 (79) 1J	0.1	0.18	1.0	4×5.4
	0.22	0.18	2.3	4×5.4
	0.33	0.18	3.5	4×5.4
	0.47	0.18	5	4×5.4
	1.0	0.18	10	4×5.4
	2.2	0.18	15	4×5.4
	3.3	0.18	20	4×5.4
	4.7	0.18	23	4×5.4
	10	0.18	34	6.3×5.4
	22	0.18	70	6.3×7.7
		0.18	78	8×10
	33	0.18	160	8×10
	47	0.18	170	8×10
	56	0.18	230	8×10
100	0.18	280	10×10	
100 (125) 2A	3.3	0.18	28	6.3×7.7
		0.18	31	8×6.2
	4.7	0.18	35	6.3×7.7
		0.18	51	8×10
	10	0.18	50	6.3×7.7
		0.18	85	8×10
	22	0.18	90	8×10
		0.18	120	10×10
33	0.18	190	10×10	

Customer products are available on request