

VSS SERIES CHIP TYPE +85°C(標準品)

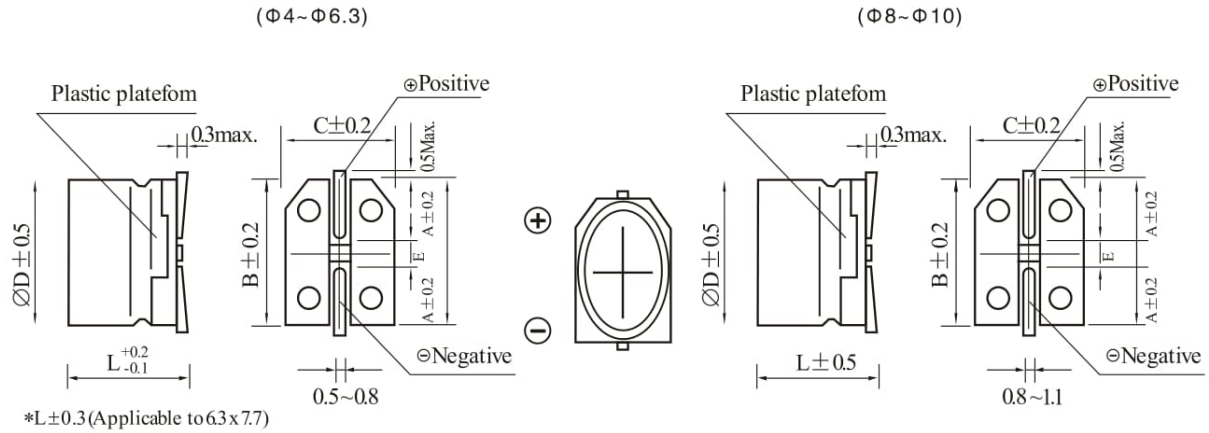
- For general purpose, -40°C to +85°C.
- Case diameter: Φ4mm ~ Φ10mm
- Reflow soldering is available
- Available for high density surface mounting

◆ SPECIFICATIONS

Item	Performance Characteristics																																																						
Operating temperature range	-40 to +85°C																																																						
Rated Working Voltage Range	4V to 100V																																																						
Nominal Capacitance Range	0.1 to 1500μF																																																						
Capacitance Tolerance	±20(120Hz, +20°C)																																																						
Leakage Current	$I \leq 0.01CV$ or $3(\mu A)$ after 2 minutes whichever is greater measured with rated working voltage applied at +20 °C																																																						
Dissipation Factor	<table border="1"> <thead> <tr> <th>Working Voltage(V)</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>tan δ(max)</td> <td>0.35</td> <td>0.28</td> <td>0.24</td> <td>0.18</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.12</td> <td>0.1</td> </tr> </tbody> </table>		Working Voltage(V)	4	6.3	10	16	25	35	50	63	100	tan δ(max)	0.35	0.28	0.24	0.18	0.16	0.14	0.12	0.12	0.1																																	
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Low Temperature Characteristics	Impedance ratio max at 120Hz <table border="1"> <thead> <tr> <th colspan="2">Working Voltage(V)</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Z-25°C/Z+20°C</td> <td>< Φ8</td> <td>7</td> <td>4</td> <td>3</td> <td>2</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>3</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>4</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>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>		Working Voltage(V)		4	6.3	10	16	25	35	50	63	100	Z-25°C/Z+20°C	< Φ8	7	4	3	2	2	2	2	2	2	≥ Φ8	7	5	4	3	2	2	2	2	2	Z-40°C/Z+20°C	< Φ8	15	8	8	4	4	3	3	3	3	≥ Φ8	15	10	8	6	4	3	3	3	3
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Z-25°C/Z+20°C	< Φ8	7	4	3	2	2	2	2	2	2																																													
	≥ Φ8	7	5	4	3	2	2	2	2	2																																													
Z-40°C/Z+20°C	< Φ8	15	8	8	4	4	3	3	3	3																																													
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High Temperature Loading	Test conditions Duration : 2000 hours Ambient temp : +85°C Applied voltage: Rated DC working voltage with max. ripple current.	Post test requirements at +20°C Leakage current : ≤ Initial specified value Cap . Change : ≤ ±20% of Initial measured value tan δ : ≤ 200% of Initial specified value																																																					
Shelf Life	Test conditions Duration : 1000 hours Ambient temp : +85°C Applied voltage: (None)	Post test requirements at +20°C Leakage current : ≤ 200% of Initial specified value Cap . Change : ≤ ±30% of Initial measured value tan δ : ≤ 300% of Initial specified value																																																					

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◆Dimensions



ØD×L	4×5.4	5×5.4	6.3×5.4	6.3×7.7	8×10.5	10×10.5
A	1.8	2.1	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1	1.3	2.1	2.1	3.1	4.2
L	5.4	5.4	5.4	7.7	10.5	10.5

Nominal capacitance, rated voltage, rated ripple current and case size table

Voltage	4V		6.3V		10V		16V	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
10							4*5.4	23
22			4*5.4	28	4*5.4	30	4*5.4	30
					5*5.4	33	5*5.4	37
33	4*5.4	28	4*5.4	34	4*5.4	34	5*5.4	44
			5*5.4	37	5*5.4	41	6.3*5.4	49
47	4*5.4	33	4*5.4	40	5*5.4	47	5*5.4	52
			5*5.4	45	6.3*5.4	52	6.3*5.4	58
56	5*5.4	42	5*5.4	46	5*5.4	50	5*5.4	57
			6.3*5.4	52	6.3*5.4	57	6.3*5.4	63
100	5*5.4	56	5*5.4	47	5*5.4	54	6.3*5.4	86
			6.3*5.4	70	6.3*5.4	76		
150	6.3*5.4	79	6.3*5.4	74	6.3*7.7	85	6.3*7.7	135
220	6.3*5.4	96	6.3*5.4	75	6.3*7.7	150	6.3*7.7	150
			6.3*7.7	95			8*10.2	210
330	6.3*7.7	152	6.3*7.7	150	8*10.2	240	8*10.2	270
			8*10.2	195				
470	6.3*7.7	200	8*10.2	265	8*10.2	290	8*10.2	307
							10*10.2	330
680	8*10.2	284	10*10.2	374	10*10.2	374	10*10.2	390
1000	8*10.2	344	10*10.2	450	10*10.2	450		
1500	10*10.2	347						

Maximum Allowable Ripple Current (mA rms) at 85°C 120Hz

Case Size ØD X L (mm)

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Nominal capacitance, rated voltage, rated ripple current and case size table

Voltage Cap(μF)	25V		35V		50V		63V	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.1					4*5.4	1	4*5.4	1
0.22					4*5.4	2	4*5.4	2
0.33					4*5.4	3	4*5.4	3
0.47					4*5.4	5	4*5.4	5
1					4*5.4	7	4*5.4	8
2.2					4*5.4	13	4*5.4	12
3.3			4*5.4	16	4*5.4	15	4*5.4	15
4.7	4*5.4	16	4*5.4	18	4*5.4	18	5*5.4	20
					5*5.4	20		
10	4*5.4	24	4*5.4	24	5*5.4	30	6.3*5.4	32
	5*5.4	27	5*5.4	29	6.3*5.4	33		
22	5*5.4	38	5*5.4	39	6.3*5.4	45	6.3*7.7	60
	6.3*5.4	42	6.3*5.4	46				
33	5*5.4	46	6.3*5.4	53	6.3*7.7	75	8*10.2	100
	6.3*5.4	52						
47	6.3*5.4	60	6.3*5.4	65	6*7.7	85	6*7.7	100
			6.3*7.7	70	8*10.2	120	8*10.2	130
56	6.3*7.7	65	6.3*7.7	80	8*10.2	150	8*10.2	180
100	6.3*7.7	120	6.3*7.7	120	8*10.2	180	10*10.2	275
			8*10.2	175	10*10.2	195		
150	8*10.2	192	8*10.2	214	10*10.2	238		
220	8*10.2	230	8*10.2	240	10*10.2	289		
	10*10.2	250	10*10.2	265				
330	8*10.2	305	10*10.2	350	10*10.2	390		
	10*10.2	250						
470	10*10.2	390						

Maximum Allowable Ripple Current (mA rms) at 85°C 120Hz

Case Size ΦD X L (mm)

Voltage Cap(μF)	100V	
	Size	Ripple
3.3	6.3*7.7	25
4.7	6.3*7.7	32
10	6.3*7.7	50
22	8*10.2	120
33	10*10.2	190

Maximum Allowable Ripple Current (mA rms) at 85°C 120Hz

Case Size ΦD X L (mm)