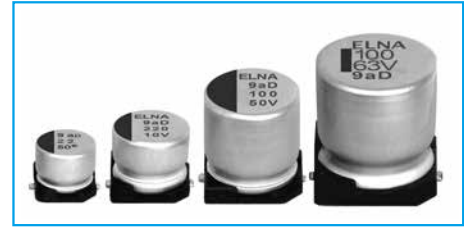
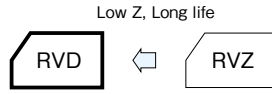


## Chip Type, 105°C Use, Low Impedance, Long Life Capacitors

GREEN CAP SMD Low Z 105°C 2000hours Anti-cleaning solvent

- Compatible with surface mounting.
- Supplied with carrier taping.
- Guarantees 2000 hours at 105°C.  
(6.3 to 50V 10.0L,10.5L:5000 hours)  
(φ12.5x13.5L: 5000 hours)



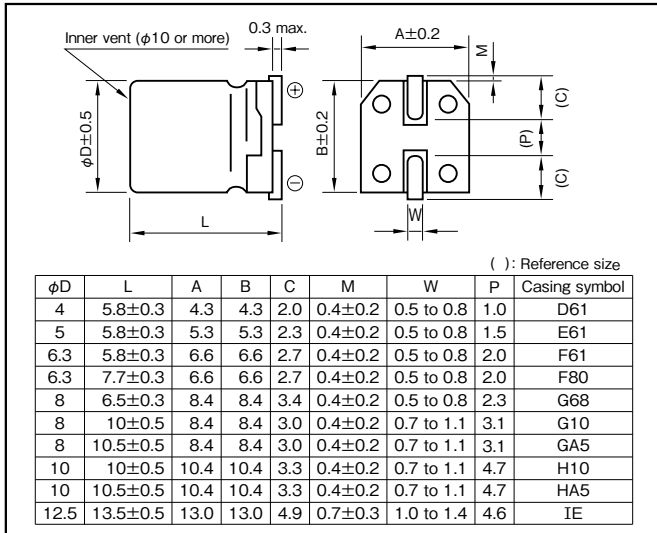
Marking color : Black print

### Specifications

Item	Performance																																						
Category temperature range (°C)	-55 to +105																																						
Tolerance at rated capacitance (%)	±20 (20°C,120Hz)																																						
Leakage current (μA) (max.)	0.01CV or 3 whichever is larger (after 2 minutes) C : Rated capacitance (μF) , V : Rated voltage (V) (20°C)																																						
Tangent of loss angle (tanδ)	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>tanδ (max.)</td> <td>0.26</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.08</td> <td>0.08</td> <td>0.07</td> </tr> </tbody> </table> <p>0.02 is added to every 1000μF increase over 1000μF. (20°C,120Hz)</p>	Rated voltage (V)	6.3	10	16	25	35	50	63	80	100	tanδ (max.)	0.26	0.19	0.16	0.14	0.12	0.10	0.08	0.08	0.07																		
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Characteristics at high and low temperature	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Impedance ratio (max.)</td> <td>Z-25°C/Z+20°C</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C/Z+20°C</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> <tr> <td>Z-55°C/Z+20°C</td> <td>8</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table> <p>(120Hz)</p>	Rated voltage (V)	6.3	10	16	25	35	50	63	80	100	Impedance ratio (max.)	Z-25°C/Z+20°C	2	2	2	2	2	2	2	2	Z-40°C/Z+20°C	3	3	3	3	3	3	3	3	Z-55°C/Z+20°C	8	4	4	3	3	3	3	3
Rated voltage (V)	6.3	10	16	25	35	50	63	80	100																														
Impedance ratio (max.)	Z-25°C/Z+20°C	2	2	2	2	2	2	2	2																														
	Z-40°C/Z+20°C	3	3	3	3	3	3	3	3																														
	Z-55°C/Z+20°C	8	4	4	3	3	3	3	3																														
Endurance (105°C) (Applied ripple current)	<table border="1"> <tbody> <tr> <td>Test time</td> <td>2000 hours (6.3 to 50V 10.0L,10.5L,φ12.5x13.5L : 5000 hours)</td> </tr> <tr> <td>Leakage current</td> <td>The initial specified value or less</td> </tr> <tr> <td>Percentage of capacitance change</td> <td>Within ±30% of initial value</td> </tr> <tr> <td>Tangent of the loss angle</td> <td>200% or less of the initial specified value (6.3 to 50V 10.0L,10.5L,φ12.5x13.5L : 300% or less)</td> </tr> </tbody> </table>	Test time	2000 hours (6.3 to 50V 10.0L,10.5L,φ12.5x13.5L : 5000 hours)	Leakage current	The initial specified value or less	Percentage of capacitance change	Within ±30% of initial value	Tangent of the loss angle	200% or less of the initial specified value (6.3 to 50V 10.0L,10.5L,φ12.5x13.5L : 300% or less)																														
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Shelf life (105°C)	Test time : 1000hours ; other items are same as the endurance. Voltage application treatment : According to JIS C5101-4 4.1																																						
Applicable standards	JIS C5101-1, -18 (IEC 60384-1, -18)																																						

### Outline Drawing

Unit : mm



- Soldering conditions are described on page 15.
- Land pattern size are described on page 13.
- The taping specifications are described on page 16.

### Coefficient of Frequency for Rated Ripple Current

Frequency (Hz)	50 · 60	120	1k	10k · 100k
Rated voltage (V)				
6.3 to 100	0.50	0.50	0.75	1

### Part numbering system

φ10X10.5L or less (example : 16V100μF)

RVD	—	16	V	101	M	F61	U	□
Series code		Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol		Taping symbol

In the case of "for High Temperature Reflow" type, a series name is "RZB".

φ12.5X13.5 (example : 16V1000μF)

RVD	—	16	V	102	M	IE	T	—	R5
Series code		Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol			Taping symbol

If "For Vibration Resistance" type is required, please see the series RTD of page 94.

Standard Ratings

Rated voltage (V) Item Rated capacitance (μF)	6.3				10				16			
	Case φD×L (mm)	Casing symbol	Impedance (Ω max.)	Rated ripple current (mA <sub>rms</sub> )	Case φD×L (mm)	Casing symbol	Impedance (Ω max.)	Rated ripple current (mA <sub>rms</sub> )	Case φD×L (mm)	Casing symbol	Impedance (Ω max.)	Rated ripple current (mA <sub>rms</sub> )
10	—	—	—	—	—	—	—	—	4×5.8	D61	1.35	90
22	4×5.8	D61	1.35	90	4×5.8	D61	1.35	90	4×5.8	D61	1.35	90
33	—	—	—	—	4×5.8	D61	1.35	90	—	—	—	—
					5×5.8	E61	0.70	170				
47	4×5.8	D61	1.35	90	—	—	—	—	5×5.8	E61	0.70	170
	5×5.8	E61	0.70	170					6.3×5.8	F61	0.36	250
100	5×5.8	E61	0.70	170	—	—	—	—	6.3×5.8	F61	0.36	250
	6.3×5.8	F61	0.36	250								
220	6.3×5.8	F61	0.36	250	6.3×7.7	F80	0.30	300	6.3×7.7	F80	0.30	300
					8×6.5	G68	0.30	300	8×6.5	G68	0.30	300
330	6.3×7.7	F80	0.30	300	8×10	G10	0.16	600	8×10	G10	0.16	600
	8×6.5	G68	0.30	300								
470	8×10	G10	0.16	600	8×10	G10	0.16	600	8×10	G10	0.16	600
680	—	—	—	—	8×10	G10	0.16	600	10×10	H10	0.090	850
									10×10.5	HA5	0.080	850
1000	8×10	G10	0.16	600	10×10	H10	0.090	850	12.5×13.5	IE	0.054	1160
					10×10.5	HA5	0.080	850				
1500	10×10	H10	0.090	850	12.5×13.5	IE	0.054	1160	12.5×13.5	IE	0.054	1160
2200	10×10.5	HA5	0.080	850	12.5×13.5	IE	0.054	1160	—	—	—	—

ALUMINUM

CHIP ALUMINUM

105°C

Rated voltage (V) Item Rated capacitance (μF)	25				35				50			
	Case φD×L (mm)	Casing symbol	Impedance (Ω max.)	Rated ripple current (mA <sub>rms</sub> )	Case φD×L (mm)	Casing symbol	Impedance (Ω max.)	Rated ripple current (mA <sub>rms</sub> )	Case φD×L (mm)	Casing symbol	Impedance (Ω max.)	Rated ripple current (mA <sub>rms</sub> )
4.7	—	—	—	—	4×5.8	D61	1.35	90	4×5.8	D61	2.7	60
10	4×5.8	D61	1.35	90	4×5.8	D61	1.35	90	5×5.8	E61	1.5	90
					5×5.8	E61	0.70	170	6.3×5.8	F61	0.86	170
22	5×5.8	E61	0.70	170	5×5.8	E61	0.70	170	6.3×5.8	F61	0.86	170
33	5×5.8	E61	0.70	170	6.3×5.8	F61	0.36	250	6.3×7.7	F80	0.66	195
	6.3×5.8	F61	0.36	250					8×6.5	G68	0.63	200
47	6.3×5.8	F61	0.36	250	6.3×5.8	F61	0.36	250	6.3×7.7	F80	0.66	195
									8×6.5	G68	0.63	200
100	6.3×7.7	F80	0.30	300	6.3×7.7	F80	0.30	300	8×10	G10	0.34	350
	8×6.5	G68	0.30	300	8×10	G10	0.16	600	8×10.5	GA5	0.32	350
220	8×10	G10	0.16	600	8×10	G10	0.16	600	10×10	H10	0.20	700
									10×10.5	HA5	0.18	700
330	8×10	G10	0.16	600	10×10	H10	0.090	850	12.5×13.5	IE	0.12	900
					10×10.5	HA5	0.080	850				
470	10×10	H10	0.090	850	12.5×13.5	IE	0.054	1160	—	—	—	—
680	10×10.5	HA5	0.080	850	—	—	—	—	—	—	—	—
850	12.5×13.5	IE	0.054	1160	12.5×13.5	IE	0.054	1160	—	—	—	—
1000	12.5×13.5	IE	0.054	1160	—	—	—	—	—	—	—	—

Rated voltage (V) Item Rated capacitance (μF)	63				80				100			
	Case φD×L (mm)	Casing symbol	Impedance (Ω max.)	Rated ripple current (mA <sub>rms</sub> )	Case φD×L (mm)	Casing symbol	Impedance (Ω max.)	Rated ripple current (mA <sub>rms</sub> )	Case φD×L (mm)	Casing symbol	Impedance (Ω max.)	Rated ripple current (mA <sub>rms</sub> )
4.7	5×5.8	E61	3.0	50	—	—	—	—	—	—	—	—
10	6.3×5.8	F61	1.5	80	6.3×7.7	F80	2.4	60	—	—	—	—
22	6.3×7.7	F80	1.2	120	8×10	G10	0.90	130	8×10	G10	1.30	130
33	8×10	G10	0.65	250	8×10	G10	0.90	130	10×10	H10	0.70	200
47	8×10	G10	0.65	250	10×10	H10	0.50	200	—	—	—	—
68	8×10	G10	0.65	250	—	—	—	—	—	—	—	—
100	10×10	H10	0.35	400	12.5×13.5	IE	0.18	550	—	—	—	—
	12.5×13.5	IE	0.16	600								
220	12.5×13.5	IE	0.16	600	—	—	—	—	—	—	—	—

(Note) Rated ripple current : 105°C, 100kHz  
Impedance : 20°C, 100kHz

NOTE : Design, Specifications are subject to change without notice.  
It is recommended that you shall obtain technical specifications from ELNA to ensure that the component is suitable for your use.