

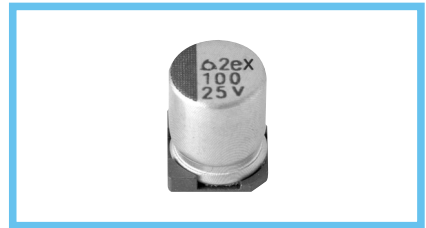
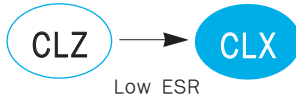
CLX Series

• 125°C 2,000~4000Hrs assured.

- Vertical SMD type.
- Wide Temp., Low ESR.
- Suitable to fit for automotive equipment.
- RoHS compliant.
- Halogen-free capacitors are also available.

• AEC-Q200 compliant : Please contact us for more details, test data, information.

Solvent-proof

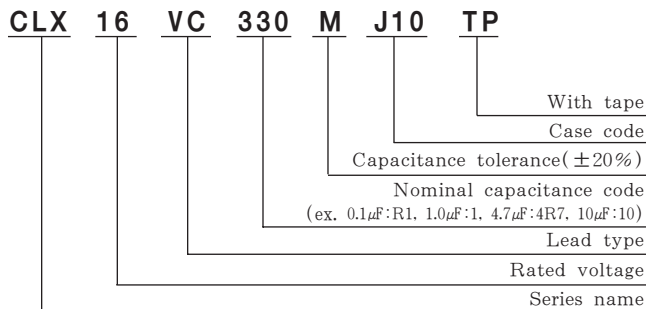


SPECIFICATIONS

Item	Characteristics															
Rated Voltage Range	10 ~ 50 V _{DC}															
Operating Temperature Range	-40 ~ +125 °C															
Capacitance Tolerance	±20%(M)															
Leakage Current	I = 0.01CV(μA) or 3μA, whichever is greater. Where, I:Max. Leakage current(μA), C:Nominal capacitance(μF), V:Rated voltage(V _{DC}) (at 20°C, 2 minutes)															
Dissipation Factor(Tan δ)	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="text-align: left;">Rated voltage(V_{DC})</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td style="text-align: left;">Tan δ(Max.)</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.16</td> </tr> </table> <p style="text-align: right;">(at 20°C, 120Hz)</p>	Rated voltage(V _{DC})	10	16	25	35	50	Tan δ(Max.)	0.24	0.20	0.16	0.14	0.16			
Rated voltage(V _{DC})	10	16	25	35	50											
Tan δ(Max.)	0.24	0.20	0.16	0.14	0.16											
Temperature Characteristics (Max. Impedance ratio)	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="text-align: left;">Rated voltage(V_{DC})</td> <td>10</td> <td>16</td> <td>25</td> <td>35, 50</td> </tr> <tr> <td style="text-align: left;">Z(-25°C)/Z(+20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> </tr> <tr> <td style="text-align: left;">Z(-40°C)/Z(+20°C)</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> </tr> </table> <p style="text-align: right;">(at 120Hz)</p>	Rated voltage(V _{DC})	10	16	25	35, 50	Z(-25°C)/Z(+20°C)	4	3	2	2	Z(-40°C)/Z(+20°C)	10	8	6	4
Rated voltage(V _{DC})	10	16	25	35, 50												
Z(-25°C)/Z(+20°C)	4	3	2	2												
Z(-40°C)/Z(+20°C)	10	8	6	4												
Load Life	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied with the following conditions. H10:2,000hours, J10:3,000hours, K14:4,000hours at 125°C.</p> <p>Capacitance change ≤ ±30% of the initial value Tan δ ≤ 300% of the initial specified value Leakage current ≤ The initial specified value</p>															
Shelf Life	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 125°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements.</p> <p>Capacitance change ≤ ±30% of the initial value Tan δ ≤ 300% of the initial specified value Leakage current ≤ The initial specified value</p>															
Others	Satisfied characteristics KS C IEC 60384-4															

CLX Series

PART NUMBERING SYSTEM



RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Size code	Freq.(Hz)			
	120	1K	10K	100K
H10 ~ J10	0.93	0.97	1.00	1.00
K14	0.50	0.85	0.94	1.00

DIMENSIONS OF CLX Series

Unit(mm)

DIMENSIONS

● Vibration Resistance

<Size code: H10~K14> <Size code: H10~K14>

■ : Dummy terminals

Recommended solder land on PC board

■ : Solder land on PC board

MARKING

Case code	φ D	L	A	B	C	W	P	a	b	c	a	b	c
H10	8	10	8.3	8.3	9.0	0.7~1.1	3.1	3.1	4.2	2.2	3.1	4.2	3.5
J10	10	10	10.3	10.3	11.0	0.7~1.1	4.5	4.5	4.4	2.2	4.5	4.4	3.5
K14	12.5	13.5	13.0	13.0	13.7	1.0~1.3	4.2	4.0	5.7	2.5	3.4	6.3	9.3

● Vibration Resistance →

RATINGS OF CLX Series

V _{dc} μF	10				16				25				35				50							
	Case code	ESR (20°C)	ESR (-40°C)	Rated Ripple Current	Case code	ESR (20°C)	ESR (-40°C)	Rated Ripple Current	Case code	ESR (20°C)	ESR (-40°C)	Rated Ripple Current	Case code	ESR (20°C)	ESR (-40°C)	Rated Ripple Current	Case code	ESR (20°C)	ESR (-40°C)	Rated Ripple Current				
33																								
47													H10	0.30	4.5	264	H10	0.30	4.5	264	J10	0.38	5.7	296
100													H10	0.30	4.5	264	H10	0.30	4.5	264	J10	0.38	5.7	296
220	H10	0.30	4.5	264	H10	0.30	4.5	264	J10	0.23	3.5	355	J10	0.23	3.5	355	K14	0.18	2.7	650				
330	J10	0.23	3.5	355	J10	0.23	3.5	355	K14	0.11	1.7	950	K14	0.11	1.7	950								
470	J10	0.23	3.5	355	K14	0.11	1.7	950																
1,000	K14	0.11	1.7	950																				

↑ Rated Ripple Current (mA rms/ 125°C, 100kHz)
 ↑ ESR (Ω max./-40°C, 100kHz)
 ↑ ESR (Ω max./20°C, 100kHz)
 ↑ Case code