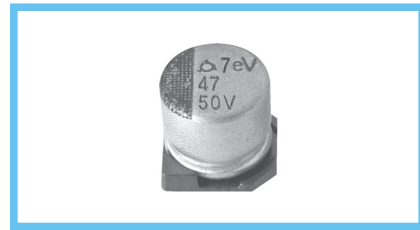
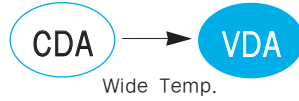


VDA Series

• 150°C 1,000Hrs assured.

- Vertical SMD type.
- Wide Temperature range.
- Suitable to fit for automotive equipment.
- Ecological capacitors are also available.
- Halogen-free capacitors are also available.

Solvent-proof

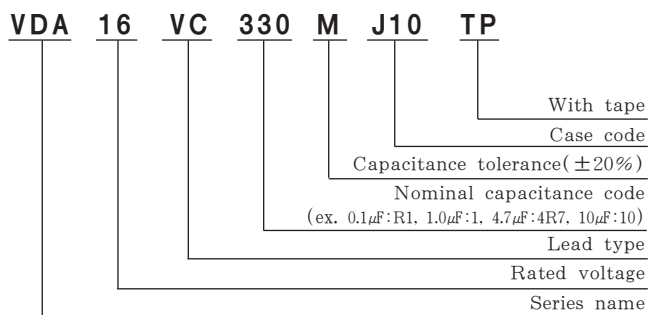


SPECIFICATIONS

Item	Characteristics																		
Rated Voltage Range	10 ~ 50 V _{DC}																		
Operating Temperature Range	-40 ~ +150 °C																		
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)																		
Leakage Current	$I = 0.01CV(\mu A)$ or $3\mu A$, 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="font-size: small;">Rated voltage(V_{DC})</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td style="font-size: small;">Tanδ(Max.)</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.14</td> </tr> </table> (at 20°C, 120Hz)	Rated voltage(V _{DC})	10	16	25	35	50	Tan δ (Max.)	0.24	0.20	0.16	0.14	0.14						
Rated voltage(V _{DC})	10	16	25	35	50														
Tan δ (Max.)	0.24	0.20	0.16	0.14	0.14														
Temperature Characteristics (Max. Impedance ratio)	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="font-size: small;">Rated voltage(V_{DC})</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td style="font-size: small;">Z(-25°C)/Z(+20°C)</td> <td>6</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> </tr> <tr> <td style="font-size: small;">Z(-40°C)/Z(+20°C)</td> <td>12</td> <td>10</td> <td>8</td> <td>6</td> <td>6</td> </tr> </table> (at 120Hz)	Rated voltage(V _{DC})	10	16	25	35	50	Z(-25°C)/Z(+20°C)	6	4	3	2	2	Z(-40°C)/Z(+20°C)	12	10	8	6	6
Rated voltage(V _{DC})	10	16	25	35	50														
Z(-25°C)/Z(+20°C)	6	4	3	2	2														
Z(-40°C)/Z(+20°C)	12	10	8	6	6														
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 1,000 hours at 150°C. Capacitance change ≤ ±30% of the initial value Tan δ ≤ 300% of the initial specified value Leakage current ≤ The initial specified value																		
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 150°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. Capacitance change ≤ ±30% of the initial value Tan δ ≤ 300% of the initial specified value Leakage current ≤ The initial specified value																		
Others	Satisfied characteristics KS C IEC 60384-4																		

VDA Series

PART NUMBERING SYSTEM



RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Freq.(Hz)	120	1K	10K	100K
Factor	1.00	1.36	1.50	1.50

DIMENSIONS OF VDA Series

Unit(mm)

DIMENSIONS

● Vibration Resistance

<Size code: J10~K14> <Size code: J10~K14>

▨ : Dummy terminals

Recommended solder land on PC board

■ : Solder land on PC board

MARKING

<J10> <K14>

Case code	φ D	L	A	B	C	W	P	a	b	c	a	b	c
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 VDA Series

V _{DC} μF	10	16	25	35	50
47				J10 90	J10 90
100			J10 123	J10 132	K14 167
220		J10 163	J10 183	K14 249	
330	J10 183	J10 200	K14 285		
470	J10 218	K14 304			
1,000	K14 405				

