

SGV SERIES

UPGRADE

105°C Standard

- Load Life : 105°C 2000~5000 hours.
- AEC-Q200.
- High Temperature Reflow soldering is available. (JGV series) (http://www.rubycon.co.jp/catalog/j_pdfs/aluminum/j_JGV.pdf)



RoHS
compliance



◆SPECIFICATIONS

Items	Characteristics																																																																							
Category Temperature Range	−55~+105°C			−40~+105°C			−25~+105°C																																																																	
Rated Voltage Range	6.3~50Vdc			63, 100Vdc			160~450Vdc																																																																	
Capacitance Tolerance	±20% (20°C, 120Hz)																																																																							
Leakage Current(MAX)	6.3~100Vdc			160~450Vdc																																																																				
	I=0.01CV or 3μA whichever is greater. (After 2 minutes application of rated voltage)				I=0.04CV+100μA (1 minute) I=0.02CV+25μA (5minutes)																																																																			
	I=Leakage Current(μA) C=Capacitance(μF) V=Rated Voltage(Vdc)																																																																							
Dissipation Factor(MAX) (tanδ)	<table border="1"> <tr> <td>Rated Voltage (Vdc)</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> <td>160 ~250</td> <td>400 450</td> </tr> <tr> <td>tanδ</td> <td>φ4,φ5,φ6.3×6.1</td> <td>0.30</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td></td> <td>φ6.3×8,φ8~φ18</td> <td>0.35</td> <td>0.26</td> <td>0.24</td> <td>0.18</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.15</td> <td>0.20</td> </tr> </table> <p>When rated capacitance is over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF.</p>										Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160 ~250	400 450	tanδ	φ4,φ5,φ6.3×6.1	0.30	0.24	0.20	0.16	0.14	0.12	—	—	—		φ6.3×8,φ8~φ18	0.35	0.26	0.24	0.18	0.14	0.12	0.10	0.15	0.20																													
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<p>After applying rated voltage with rated ripple current for specified time at 105°C, the capacitors shall meet the following requirements.</p> <table border="1"> <tr> <td>Capacitance Change</td> <td colspan="9">Within ±25% of the initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td colspan="9">Not more than 200% of the specified value.</td> </tr> <tr> <td>Leakage Current</td> <td colspan="9">Not more than the specified value.</td> </tr> <tr> <td>Rated Voltage (Vdc)</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> <td>160 ~250</td> <td>400 450</td> </tr> <tr> <td></td> <td>6.3~100</td> <td>2000</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>160~450</td> <td>5000</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										Capacitance Change	Within ±25% of the initial value.									Dissipation Factor	Not more than 200% of the specified value.									Leakage Current	Not more than the specified value.									Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160 ~250	400 450		6.3~100	2000										160~450	5000								
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Low Temperature Stability Impedance Ratio(MAX)	<table border="1"> <tr> <td>Rated Voltage (Vdc)</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> <td>160 ~250</td> <td>400 450</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</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> <td>3</td> <td>6</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>8</td> <td>8</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>5</td> <td>5</td> <td>—</td> <td>—</td> </tr> </table>										Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160 ~250	400 450	Z(-25°C)/Z(20°C)	4	3	2	2	2	2	2	2	3	6	Z(-40°C)/Z(20°C)	8	8	4	4	3	3	5	5	—	—																													
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Z(-40°C)/Z(20°C)	8	8	4	4	3	3	5	5	—	—																																																														

◆MULTIPLIER FOR RIPPLE CURRENT

Frequency(Hz)	60(50)	120	500	1k	10k≤
Coefficient	0.47~1μF	0.50	1.00	1.20	1.30
	2.2~6.8μF	0.65	1.00	1.20	1.30
	10~68μF	0.80	1.00	1.20	1.30
	100~1000μF	0.80	1.00	1.10	1.15
	2200~6800μF	0.80	1.00	1.05	1.10

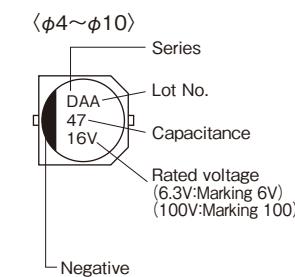
◆PART NUMBER

□□□ SGV □□□□□ M □□□ DXL
 Rated Voltage Series Capacitance Capacitance Tolerance Option Case Size

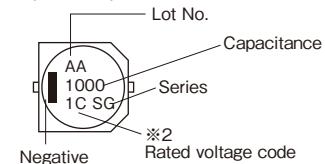
◆DIMENSIONS (mm)

<table border="1"> <tr> <td>φD</td> <td>L</td> <td>A1</td> <td>B1</td> <td>C</td> <td>W1</td> <td>P</td> <td>K</td> <td>α</td> </tr> <tr> <td>4</td> <td>6.1</td> <td>4.3</td> <td>4.3</td> <td>1.8</td> <td>0.5~0.8</td> <td>1.0</td> <td>0.5 MAX</td> <td>0</td> </tr> <tr> <td>5</td> <td>6.1</td> <td>5.3</td> <td>5.3</td> <td>2.2</td> <td>0.5~0.8</td> <td>1.3</td> <td>0.5 MAX</td> <td>0</td> </tr> <tr> <td>6.3</td> <td>6.1</td> <td>6.6</td> <td>6.6</td> <td>2.7</td> <td>0.5~0.8</td> <td>1.8</td> <td>0.5 MAX</td> <td>0</td> </tr> <tr> <td>6.3</td> <td>8</td> <td>6.6</td> <td>6.6</td> <td>2.7</td> <td>0.5~0.8</td> <td>1.8</td> <td>0.5 MAX</td> <td>0</td> </tr> <tr> <td>8</td> <td>6.5</td> <td>8.3</td> <td>8.3</td> <td>3.4</td> <td>0.5~0.8</td> <td>2.2</td> <td>0.5 MAX</td> <td>0</td> </tr> <tr> <td>8</td> <td>10.5</td> <td>8.3</td> <td>8.3</td> <td>2.9</td> <td>0.8~1.1</td> <td>3.1</td> <td>0.5 MAX</td> <td>※1</td> </tr> <tr> <td>10</td> <td>10.5</td> <td>10.3</td> <td>10.3</td> <td>3.2</td> <td>0.8~1.1</td> <td>4.5</td> <td>0.5 MAX</td> <td>※1</td> </tr> <tr> <td>12.5</td> <td>13.5</td> <td>13</td> <td>13</td> <td>4.9</td> <td>0.8~1.1</td> <td>4.5</td> <td>0.7±0.4</td> <td>0.5</td> </tr> <tr> <td>12.5</td> <td>16</td> <td>13</td> <td>13</td> <td>4.9</td> <td>0.8~1.1</td> <td>4.5</td> <td>0.7±0.4</td> <td>0.5</td> </tr> <tr> <td>16</td> <td>16.5</td> <td>17</td> <td>17</td> <td>6</td> <td>1.0~1.6</td> <td>6.8</td> <td>0.7±0.4</td> <td>0.5</td> </tr> <tr> <td>16</td> <td>21.5</td> <td>17</td> <td>17</td> <td>6</td> <td>1.0~1.6</td> <td>6.8</td> <td>0.7±0.4</td> <td>0.5</td> </tr> <tr> <td>18</td> <td>16.5</td> <td>19</td> <td>19</td> <td>7</td> <td>1.0~1.6</td> <td>6.8</td> <td>0.7±0.4</td> <td>0.5</td> </tr> <tr> <td>18</td> <td>21.5</td> <td>19</td> <td>19</td> <td>7</td> <td>1.0~1.6</td> <td>6.8</td> <td>0.7±0.4</td> <td>0.5</td> </tr> </table>	φD	L	A1	B1	C	W1	P	K	α	4	6.1	4.3	4.3	1.8	0.5~0.8	1.0	0.5 MAX	0	5	6.1	5.3	5.3	2.2	0.5~0.8	1.3	0.5 MAX	0	6.3	6.1	6.6	6.6	2.7	0.5~0.8	1.8	0.5 MAX	0	6.3	8	6.6	6.6	2.7	0.5~0.8	1.8	0.5 MAX	0	8	6.5	8.3	8.3	3.4	0.5~0.8	2.2	0.5 MAX	0	8	10.5	8.3	8.3	2.9	0.8~1.1	3.1	0.5 MAX	※1	10	10.5	10.3	10.3	3.2	0.8~1.1	4.5	0.5 MAX	※1	12.5	13.5	13	13	4.9	0.8~1.1	4.5	0.7±0.4	0.5	12.5	16	13	13	4.9	0.8~1.1	4.5	0.7±0.4	0.5	16	16.5	17	17	6	1.0~1.6	6.8	0.7±0.4	0.5	16	21.5	17	17	6	1.0~1.6	6.8	0.7±0.4	0.5	18	16.5	19	19	7	1.0~1.6	6.8	0.7±0.4	0.5	18	21.5	19	19	7	1.0~1.6	6.8	0.7±0.4	0.5
φD	L	A1	B1	C	W1	P	K	α																																																																																																																						
4	6.1	4.3	4.3	1.8	0.5~0.8	1.0	0.5 MAX	0																																																																																																																						
5	6.1	5.3	5.3	2.2	0.5~0.8	1.3	0.5 MAX	0																																																																																																																						
6.3	6.1	6.6	6.6	2.7	0.5~0.8	1.8	0.5 MAX	0																																																																																																																						
6.3	8	6.6	6.6	2.7	0.5~0.8	1.8	0.5 MAX	0																																																																																																																						
8	6.5	8.3	8.3	3.4	0.5~0.8	2.2	0.5 MAX	0																																																																																																																						
8	10.5	8.3	8.3	2.9	0.8~1.1	3.1	0.5 MAX	※1																																																																																																																						
10	10.5	10.3	10.3	3.2	0.8~1.1	4.5	0.5 MAX	※1																																																																																																																						
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18	16.5	19	19	7	1.0~1.6	6.8	0.7±0.4	0.5																																																																																																																						
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※1:α dimensions																																																																																																																														
Rated Voltage α																																																																																																																														
6.3~100 0																																																																																																																														
160~400 0.2																																																																																																																														

◆MARKING



<φ12.5~φ18>



※2 Voltage code

Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160	200	250	400	450
Rated Voltage code	0J	1A	1C	1E	1V	1H	1J	2A	2C	2D	2E	2G	2W

◆STANDARD SIZE

Size ϕ D×L(mm), Rated Ripple Current (mA r.m.s./105°C, 120Hz)			
Vdc	Cap (μ F)	Size (ϕ DXL)	Ripple
6.3	22	4×6.1	26
	33	4×6.1	29
	47	5×6.1	46
	100	6.3×6.1	71
	220	6.3×8	121
	470	8×10.5	210
	1000	10×10.5	495
		12.5×13.5	
	2200	12.5×16	750
	3300	16×21.5	930
		18×16.5	
	4700	18×21.5	1200
	6800	18×21.5	1350
10	33	5×6.1	43
	100	6.3×6.1	71
	330	8×10.5	195
	470	8×10.5	210
		10×10.5	440
	1000	12.5×16	500
	2200	16×16.5	810
	3300	16×21.5	1000
		18×16.5	
	4700	18×21.5	1200
16	10	4×6.1	28
	22	5×6.1	39
	47	6.3×6.1	70
	100	6.3×8	111
	220	8×10.5	185
	330	8×10.5	290
		10×10.5	440
	470	8×10.5	320
		10×10.5	460
	1000	16×16.5	630
	2200	16×21.5	930
		18×16.5	
	3300	18×21.5	1150
25	33	6.3×6.1	65
	47	6.3×8	79
		8×6.5	91
	100	8×10.5	180
	220	8×10.5	320
		10×10.5	355
	330	10×10.5	450
		12.5×13.5	
	470	10×10.5	490
	1000	16×21.5	700
		18×16.5	
	2200	18×21.5	1050
	3300	18×21.5	1700
Size ϕ D×L(mm), Rated Ripple Current (mA r.m.s./105°C, 120Hz)			
Vdc	Cap (μ F)	Size (ϕ DXL)	Ripple
35	4.7	4×6.1	15
	10	5×6.1	28
	22	6.3×6.1	55
	33	6.3×8	76
		8×6.5	84
	100	8×10.5	180
		10×10.5	305
	220	10×10.5	450
		12.5×13.5	
50	330	12.5×16	460
	470	16×16.5	490
	1000	16×21.5	750
		18×16.5	
	0.47	4×6.1	4
	1	4×6.1	8
	2.2	4×6.1	11
	3.3	4×6.1	14
63	4.7	5×6.1	19
	10	6.3×6.1	35
	22	6.3×8	67
		8×6.5	70
	33	8×10.5	140
	47	8×10.5	167
	100	10×10.5	180
	100	8×10.5	230
		10×10.5	315
	220	12.5×16	380
	330	16×16.5	470
100	470	16×21.5	550
		18×16.5	
	1000	18×21.5	820
	22	8×10.5	55
	33	8×10.5	115
	47	8×10.5	120
	100	12.5×16	225
	220	16×16.5	385
		18×16.5	
	330	16×21.5	490
		18×16.5	
160	470	18×21.5	590
	10	8×10.5	65
	22	10×10.5	90
	33	10×10.5	135
	47	12.5×13.5	160
	100	16×16.5	285
	220	16×21.5	440
		18×16.5	
Size ϕ D×L(mm), Rated Ripple Current (mA r.m.s./105°C, 120Hz)			
Vdc	Cap (μ F)	Size (ϕ DXL)	Ripple
200	12	8×10.5	115
	22	10×10.5	150
	39	12.5×13.5	250
	47	12.5×16	310
	68	16×16.5	400
	100	18×16.5	480
	120	16×21.5	560
	150	18×21.5	690
250	10	8×10.5	100
	15	10×10.5	130
	33	12.5×13.5	230
	42	12.5×16	270
	56	16×16.5	350
	68	18×16.5	440
	100	16×21.5	500
	120	18×21.5	620
400	6.8	8×10.5	85
	12	10×10.5	115
	22	12.5×13.5	190
	33	12.5×16	240
	47	16×16.5	320
	56	18×16.5	400
	68	16×21.5	450
	100	18×21.5	560
450	2.7	8×10.5	45
	4.7	10×10.5	75
	10	12.5×13.5	135
	12	12.5×16	165
	18	16×16.5	220
	22	18×16.5	280
	33	16×21.5	320
	47	18×21.5	400

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