

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℃				-40~+105℃				-25~+105℃																																								
Rated Voltage Range	6.3~50Vdc				63, 100Vdc				160~450Vdc																																								
Capacitance Tolerance	±20% (20℃, 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><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</td><td>450</td></tr><tr><td rowspan="2">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><td>-</td></tr><tr><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><td></td></tr></table>												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		(20℃, 120Hz)	
	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																																							
When rated capacitance is over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF.																																																	
Endurance	After applying rated voltage with rated ripple current for specified time at 105℃, the capacitors shall meet the following requirements.																																																
	Capacitance Change		Within ±25% of the initial value.							Rated Voltage (Vdc)		Life Time (hrs)																																					
	Dissipation Factor		Not more than 200% of the specified value.							6.3~100		2000																																					
	Leakage Current		Not more than the specified value.							160~450		5000																																					
Low Temperature Stability Impedance Ratio(MAX)	<table><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</td><td>450</td></tr><tr><td>Z(-25℃)/Z(20℃)</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><td></td></tr><tr><td>Z(-40℃)/Z(20℃)</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><td></td></tr></table>												Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160~250	400	450	Z(-25℃)/Z(20℃)	4	3	2	2	2	2	2	2	3	6		Z(-40℃)/Z(20℃)	8	8	4	4	3	3	5	5	-	-		(120Hz)
	Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160~250	400	450																																					
	Z(-25℃)/Z(20℃)	4	3	2	2	2	2	2	2	3	6																																						
Z(-40℃)/Z(20℃)	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	1.50
	2.2~6.8μF	0.65	1.00	1.20	1.30	1.50
	10~68μF	0.80	1.00	1.20	1.30	1.50
	100~1000μF	0.80	1.00	1.10	1.15	1.20
	2200~6800μF	0.80	1.00	1.05	1.10	1.15

◆PART NUMBER

□□□ SGV □□□□□ M □□□ D×L
 Rated Voltage Series Capacitance Capacitance Tolerance Option Case Size

◆DIMENSIONS

(mm)

Technical drawing of a capacitor showing dimensions. The drawing includes a side view and a top view. Dimensions are labeled as follows: L (total length), A1 (distance from end to mounting hole center), B1 (distance between mounting hole centers), C (height of mounting hole), W1 (width of mounting hole), P (pitch between mounting holes), K (width of capacitor body), α (angle of mounting hole), φD (diameter of mounting hole), and 0.3MAX (maximum thickness of mounting hole).

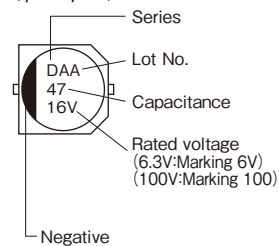
φD	L	A1	B1	C	W1	P	K	α
4	6.1	4.3	4.3	1.8	0.5~0.8	1.0	0.5 MAX	0
5	6.1	5.3	5.3	2.2	0.5~0.8	1.3	0.5 MAX	0
6.3	6.1	6.6	6.6	2.7	0.5~0.8	1.8	0.5 MAX	0
6.3	8	6.6	6.6	2.7	0.5~0.8	1.8	0.5 MAX	0
8	6.5	8.3	8.3	3.4	0.5~0.8	2.2	0.5 MAX	0
8	10.5	8.3	8.3	2.9	0.8~1.1	3.1	0.5 MAX	※1
10	10.5	10.3	10.3	3.2	0.8~1.1	4.5	0.5 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

※1: α dimensions

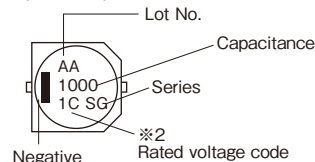
Rated Voltage	α
6.3~100	0
160~400	0.2

◆MARKING

〈φ4~φ10〉



〈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 $\phi D \times L$ (mm), Rated Ripple Current (mA r.m.s./105°C, 120Hz)

Vdc	Cap (μF)	Size (φDXL)	Ripple	Vdc	Cap (μF)	Size (φDXL)	Ripple	Vdc	Cap (μF)	Size (φDXL)	Ripple	
6.3	22	4×6.1	26	35	4.7	4×6.1	15	160	12	8×10.5	115	
	33	4×6.1	29		10	5×6.1	28		22	10×10.5	150	
	47	5×6.1	46		22	6.3×6.1	55		39	12.5×13.5	250	
	100	6.3×6.1	71		33	6.3×8	76		47	12.5×16	310	
	220	6.3×8	121			8×6.5	84		68	16×16.5	400	
	470	8×10.5	210		100	8×10.5	180		100	18×16.5	480	
	1000	10×10.5	495			10×10.5	305		120	16×21.5	560	
		12.5×13.5			450	150	18×21.5		690			
	2200	12.5×16	750			12.5×13.5	200	10	8×10.5	100		
	3300	16×21.5	930		330	12.5×16		460	15	10×10.5	130	
18×16.5		470		16×16.5	490	33		12.5×13.5	230			
4700	18×21.5	1200	1000	16×21.5	750	42		12.5×16	270			
6800	18×21.5	1350		18×16.5		56		16×16.5	350			
10	33	5×6.1	43	50	0.47	4×6.1		4	250	68	18×16.5	440
	100	6.3×6.1	71		1	4×6.1		8		100	16×21.5	500
	330	8×10.5	195		2.2	4×6.1		11		120	18×21.5	620
	470	8×10.5	210		3.3	4×6.1	14	400		6.8	8×10.5	85
		10×10.5	440		4.7	5×6.1	19			12	10×10.5	115
	1000	12.5×16	500		10	6.3×6.1	35			22	12.5×13.5	190
	2200	16×16.5	810		22	6.3×8	67			33	12.5×16	240
	3300	16×21.5	1000			8×6.5	70			47	16×16.5	320
		18×16.5			33	8×10.5	140		56	18×16.5	400	
	4700	18×21.5	1200		47	8×10.5	167		68	16×21.5	450	
16	10	4×6.1	28	10×10.5		180	100		18×21.5	560		
	22	5×6.1	39	100	8×10.5	230	450	2.7	8×10.5	45		
	47	6.3×6.1	70		10×10.5	315		4.7	10×10.5	75		
	100	6.3×8	111	220	12.5×16	380		10	12.5×13.5	135		
	220	8×10.5	185	330	16×16.5	470		12	12.5×16	165		
	330	8×10.5	290	470	16×21.5	550		18	16×16.5	220		
		10×10.5	440		18×16.5			22	18×16.5	280		
	470	8×10.5	320	63	1000	18×21.5		820	33	16×21.5	320	
		10×10.5	460		22	8×10.5		55	47	18×21.5	400	
	1000	16×16.5	630		33	8×10.5	115	450	6.8	12.5×13.5	110	
	2200	16×21.5	930		47	8×10.5	120		8.2	12.5×16	150	
		18×16.5			100	12.5×16	225		12	16×16.5	195	
	3300	18×21.5	1150		220	16×16.5	385		18	18×16.5	245	
25	33	6.3×6.1	65		330	16×21.5	490		22	16×21.5	275	
	47	6.3×8	79			27			18×21.5	345		
	47	8×6.5	91		470	18×21.5	590					
		100	8×10.5	180		10	8×10.5	65				
	220	8×10.5	320	100	22	10×10.5	90					
		10×10.5	355		33	10×10.5	135					
	330	10×10.5	450		47	12.5×13.5	160					
		12.5×13.5			100	16×16.5	285					
	470	10×10.5	490		220	16×21.5	440					
	1000	16×21.5	700			18×16.5						
2200	18×21.5	1050										
3300	18×21.5	1700										

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[50SGV22M8X6.5](#) [6.3SGV3300M16X21.5](#) [6.3SGV470M8X10.5](#) [63SGV330M16X21.5](#) [63SGV33M8X10.5](#)
[6.3SGV6800M18X21.5](#) [6.3SGV47M5X6.1](#) [63SGV100M12.5X16](#) [50SGV0R47M4X6.1](#) [50SGV470M18X16.5](#)
[50SGV47M10X10.5](#) [50SGV47M8X10.5](#) [50SGV4R7M5X6.1](#) [6.3SGV33M4X6.1](#) [25SGV2200M18X21.5](#)
[160SGV150M18X21.5](#) [160SGV39M12.5X13.5](#) [400SGV47M18X21.5](#) [35SGV33M8X6.5](#) [400SGV4R7M10X10.5](#)
[450SGV33M18X21.5](#) [50SGV1M4X6.1](#) [50SGV1000M18X21.5](#) [50SGV100M8X10.5](#) [50SGV330M16X16.5](#)
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[250SGV6R8M8X10.5](#) [35SGV220M10X10.5](#) [6.3SGV4700M18X21.5](#) [63SGV470M18X21.5](#) [6.3SGV2200M12.5X16](#)
[6.3SGV220M6.3X8](#) [6.3SGV22M4X6.1](#) [63SGV47M8X10.5](#) [16SGV470M8X10.5](#) [200SGV42M12.5X16](#)
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