SMD ALUMINUM ELECTROLYTIC CAPACITORS
- CV3 SERIES -

FEATURES

- 3Ø~10Ø, 85°C, 2,000 hours assured
- Chip type large capacitance capacitors
- Designed for surface mounting on high density PC board
- RoHS Compliance

CONSTRUCTION AND DIMENSIONS

FIG. 1

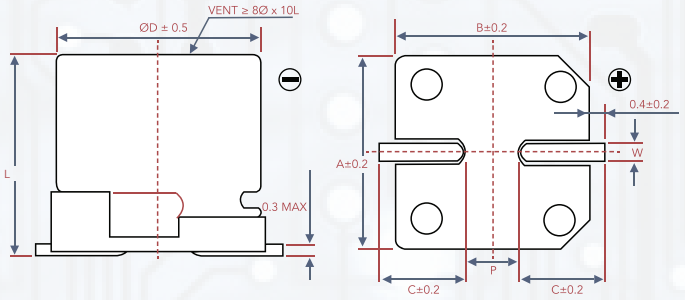
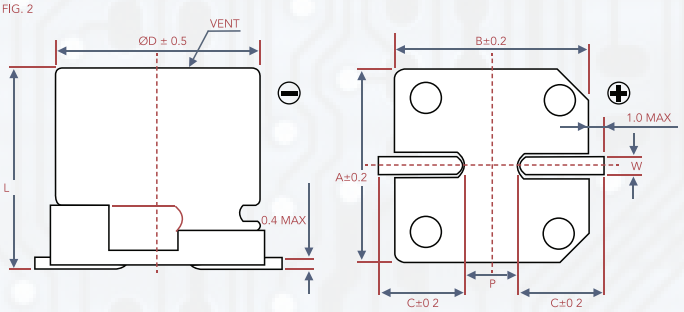


FIG. 2



LEAD SPACING AND DIAMETER

øD	L	A	B	C	W	P ± 0.2	FIG NO.
3	5.3 ± 0.2	3.3	3.3	4.1	0.45~0.75	0.8	1
4	5.3 ± 0.2	4.3	4.3	5.1	0.5 ~ 0.8	1.0	1
5	5.3 ± 0.2	5.3	5.3	5.9	0.5 ~ 0.8	1.5	1
6.3	5.3 ± 0.2	6.6	6.6	7.2	0.5 ~ 0.8	2.0	1
6.3	7.7 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0	1
8	6.5 ± 0.3	8.4	8.4	9.0	0.5 ~ 0.8	2.3	1
8	10 ± 0.5	8.4	8.4	9.0	0.7 ~ 1.1	3.1	1
10	7.7 ± 0.3	10.4	10.4	11.0	0.7 ~ 1.3	4.7	1
10	10 ± 0.5	10.4	10.4	11.0	0.7 ~ 1.3	4.7	1
12.5	13.5 ± 0.5	13.0	13.0	13.7	1.1 ~ 1.4	4.4	2
12.5	16 ± 0.5	13.0	13.0	13.7	1.1 ~ 1.4	4.4	2
16	16.5 ± 0.5	17.0	17.0	18.0	1.1 ~ 1.4	6.4	2
16	21.5 ± 0.5	17.0	17.0	18.0	1.1 ~ 1.4	6.4	2
18	16.5 ± 0.5	19.0	19.0	20.0	1.1 ~ 1.4	6.4	2
18	21.5 ± 0.5	19.0	19.0	20.0	1.1 ~ 1.4	6.4	2

PART NUMBERING

CV3	1C	100	M	D55	R
SERIES NAME	RATED VOLTAGE	CAPACITANCE	TOLERANCE	CASE SIZE	PACKAGE TYPE
Series is represented by a three/four digit code	OG - 4V OJ - 6.3V 1A - 10V 1C - 16V 1E - 25V 1V - 35V 1H - 50V 1J - 63V 1K - 80V 2A - 100V 2C - 160V 2D - 200V 2E - 250V 2G - 400V 2W - 450V	0R1 - 0.1uF R47 - 0.47uF 010 - 1uF 4R7 - 4.7uF 100 - 10uF 470 - 47uF 101 - 100uF 471 - 470uF 102 - 1000uF	M: -20% ~+20%	B55-3x5.3 D55-3x5.3 D60-4x5.7 E55-5x5.3 E60-5x5.7 F55-6.3x5.3 F60-6.3x5.7 F62-6.3x6.0 F72-6.3x7.0 F80-6.3x7.7 G68-8x6.5 G72-8x7.0 G10-8x10.0 G12-8x12.0 H82-10x8.0 H10-10x10.0 H13-10x13.0 K14-12.5x13.5 K16-12.5x16.0 L17-16x16.5 M22-16 X 21.5 N17-18 X 16.5 N22- 18 X 21.5	R - Tape and Reel

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MS LEVEL 1

SPECIFICATIONS

ITEM	SPECIFICATION
Category Temperature Range	-40°C ~ +85°C
Capacitance Tolerance	±20% (at 120Hz, 20°C)

Leakage Current (20°C)

RATED VOLTAGE	6.3 ~ 100V		160 ~ 450V
TIME	after 2 minutes		after 5 minutes
CASE SIZE	3 ~ 10Ø	12.5 ~ 18Ø	12.5 ~ 18Ø
LEAKAGE CURRENT	I = 0.01CV or 3μA, whichever is greater	I = 0.03CV or 4μA, whichever is greater	I = 0.04CV + 100μA

Where, C= rated capacitance in μF. V= rated DC working voltage in V

Tan δ at 120Hz, 20°C

RATED VOLTAGE	4	6.3	10	16	25	35	50	63	100	160 ~ 250	400 ~ 450
3 ~ 10Ø	0.42	0.28	0.24	0.20	0.14	0.12	0.10	0.10	0.10	-	-
12.5 ~ 18Ø	-	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.20	0.25

When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase.

Low Temperature Characteristics (at 120Hz)

Impedance ratio shall not exceed the values given in the table below.

RATED VOLTAGE			4	6.3	10	16	25	35	50	63	100	160~250	400 ~ 450
IMPEDANCE RATIO	Z(-25°C) / Z(+20°C)	Ø D<12.5	7	4	4	3	2	2	2	2	2	-	-
		Ø D≥12.5	-	5	5	4	2	2	2	2	2	3	6
	Z(-40°C) / Z(+20°C)	Ø D<12.5	15	8	5	4	3	3	3	3	3	-	-
		Ø D≥12.5	-	14	12	10	5	4	3	3	3	6	10

Endurance

TEST TIME	2,000 Hrs
CAPACITANCE CHANGE	Within ±20% of initial value (4V: ±30%)
TAN δ	Less than 200% of specified value (4V: ±300%)
LEAKAGE CURRENT	Within specified value

*The above specifications shall be satified when the capacitors are restored to 20°C after the rated voltage applied for 2,000 hrs at 85°C.

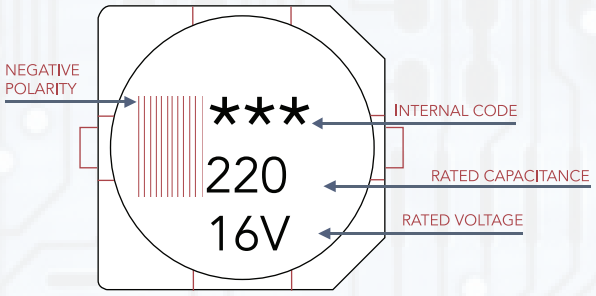
Shelf Life Test

Test time: 1,000hrs; other items are the same as those for the Endurance.
The rated voltage shall be applied to the capacitors before the measurements for 160~450V (Refer to JIS C 5101-4 4.1).

Ripple Current & Frequency Multipliers

CAP. (μF)	FREQUENCY	50	120	1K	10K up
Under 1,000		0.80	1.0	1.25	1.40
1,000 < C ≤ 6,800		0.85	1.0	1.15	1.25

MARKING



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DIMENSION & PERMISSIBLE RIPPLE CURRENT

VDC / CONTENTS µF		4V (OG)		6.3V (OJ)		10V (1A)		16V (IC)		25V (IE)		35V (1V)		50V (1H)	
		ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA
1	010													4x5.3	10
2.2	2R2													4x5.3	14
3.3	3R3									3x5.3	14	3x5.3	14	4x5.3	17
4.7	4R7					3x5.3	14	3x5.3	14	4x5.3	26	4x5.3	26	4x5.3	20
10	100			3x5.3	16	4x5.3	26	4x5.3	26	5x5.3	44	5x5.3	44	5x5.3	35
22	220	3x5.3	16	4x5.3	26	5x5.3	44	4x5.3 5x5.3	30 44	5x5.3 6.3x5.3	47 59	5x5.3 6.3x5.3	47 59	6.3x5.3 6.3x7.7	50 65
33	330	4x5.3	31	4x5.3	31	4x5.3 5x5.3	31 55	5.3x5.3	55	5x5.3 6.3x5.3	55 67	6.3x5.3 6.3x7.7	67 85	6.3x7.7 8x6.5	75 95
47	470	4x5.3	34	4x5.3 5x5.3	34 55	6.3x5.3	75	5x5.3 6.3x5.3	55 75	6.3x5.3 6.3x7.7	75 98	6.3x7.7 8x6.5	98 105	6.3x7.7 8x10	75 190
68	680	5x5.3	58	5x5.3 6.3x5.3	58 89	5x5.3 6.3x5.3	58 89	6.3x5.3	89	6.3x7.7	109	6.3x7.7	109	8x10	190
100	101	5x5.3 6.3x5.3	58 89	6.3x5.3	89	6.3x5.3 6.3x7.7	89 109	6.3x5.3 6.3x7.7 8x6.5	89 109 125	6.3x7.7 8x6.5	109 125	8x10	252	8x10	190
150	151											10x7.7	252		
220	221	6.3x5.3 6.3x7.7	89 124	6.3x5.3 6.3x7.7	89 124	6.3x7.7 8x6.5 8x10	124 175 270	6.3x7.7 8x10	124 270	8x10 10x7.7	270 270	8x10 10x10	270 370	10x10	320
330	331	6.3x7.7	124	6.3x7.7 8x6.5	124 190	8x10	290	8x10 10x7.7	290 290	10x10	400	10x10	400	12.5x13.5	600
470	471	8x10	290	8x10	290	10x7.7 10x10	290 400	10x10	400	10x10	400	12.5x13.5	750	12.5x16	740
680	681			10x7.7	290	10x10	410	10x10	410	12.5x13.5	680	12.5x13.5	680	16x16.5	1,000
1000	102			10x10	430	10x10	430	12.5x13.5	750	12.5x13.5	750	16x16.5	1,100	18x16.5 16x21.5	1,350 1,400
2200	222			12.5x13.5	890	12.5x13.5	890	16x16.5	1,100	16x16.5	1,100	18x16.5 16x21.5	1,450 1,500		
3300	332			12.5x16	1,000	16x16.5	1,300	16x16.5	1,300	18x16.5 16x21.5	1,450 1,500	18x21.5	1,750		
4700	472			16x16.5	1,400	16x16.5	1,400	18x16.5 16x21.5	1,600 1,650	18x21.5	1,750				
6800	682			18x16.5 16x21.5	1,700 1,750	18x16.5 16x21.5	1,700 1,750	18x21.5	2,000						
8200	822			18x21.5	2,000	18x21.5	2,000								

DIMENSION & PERMISSIBLE RIPPLE CURRENT

VDC / CONTENTS / μF		63V (1J)		100V (2A)		160V (2C)		200V (2D)		250V (2E)		400V (2G)		450V (2W)	
		ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA
1	010	4x5.3	8												
2.2	2R2	4x5.3	12												
3.3	3R3	5x5.3	22												
4.7	4R7	5x5.3	25									12.5x13.5		12.5x13.5	120
10	100	6.3x5.3 8x6.5	40 46	8x10	90					12.5x13.5	150	12.5x13.5	120	12.5x16	130
22	220	8x10	139	8x10	90			12.5x13.5	240	12.5x13.5	150	16x16.5	140	16x16.5	140
33	330	8x10	139	10x10	120	12.5x13.5	290	12.5x16	310	12.5x16	240	16x16.5	140	18x16.5	180
47	470	10x10	200	10x10	120	12.5x16	370	16x16.5	420	16x16.5	340	18x16.5	280	18x21.5	250
68	680	10x10	226	12.5x13.5	380	16x16.5	500	16x16.5	420	18x16.5 16x21.5	440 450	18x21.5	350		
100	101	10x10	226	12.5x13.5	440	18x16.5 16x21.5	650 690	18x16.5 16x21.5	550 590	18x21.5	490				
220	221	12.5x13.5	500	16x16.5	600										
330	331	12.5x16	600	18x16.5 16x21.5	780 850										
470	471	16x16.5	850												
680	681	18x18.5	1,000												

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