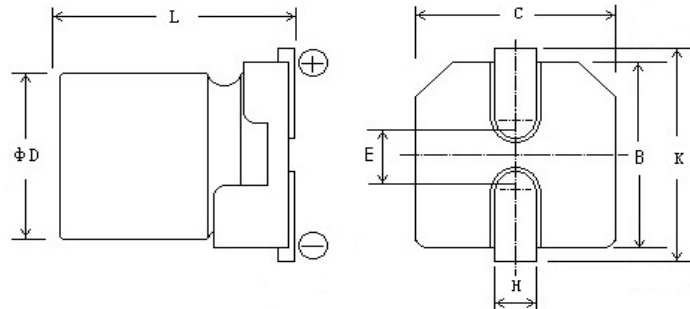


ALUMINUM ELECTROLYTIC CAPACITOR SPECIFICATION

1.) Product Code: ECV1VVZ2330M0605V1 Series VZ2



2.) Dimensions:

Size	4×5.4	5×5.4	6.3×5.4	6.3×7.7	8×6.2	8×10.2	10×10.2	12.5×13.5	16×21.5	18×21.5
B±0.2	4.3	5.3	6.6	6.6	8.3	8.3	10.3	13	17	19
C±0.2	4.3	5.3	6.6	6.6	8.3	8.3	10.3	13	17	19
D±0.2	4.0	5.0	6.3	6.3	8.0	8.0	10	12.5	16	18
E	1.0	1.3	2.2	2.2	3.1	3.1	4.5	5.2	6.5	6.5
L	5.4±0.3	5.4±0.3	5.4±0.3	7.7±0.3	6.2±0.3	10.2±0.5	10.2±0.5	13.5±0.5	21.5±0.5	21.5±0.5
K±0.2	5.0	6.0	7.2	7.2	9.0	9.0	11.0	13.8	18	20
H	0.5~0.9				0.8~1.1			1.1~1.4		

3.) Specification:

Item:	Value:	Condition:
Capacitance	33μF	±20% at 20°C / 120Hz
Rated Voltage	35VDC	
Surge Voltage	40.25VDC	
Operating Temperature	-55°C ~ +105°C	
Max. Dissipation Factor Tan δ	0.12	at 20°C / 120Hz
Max. Leakage Current	11.55μA	after 2 minutes at 20°C
Max. Ripple Current I _R	230mA _{rms}	at 105°C / 100KHz
Max. Imp	0.58	at 20°C / 100KHz
Load Life	2000h	at 105°C, I _R , U _R : ΔC ≤ ±20%; Tan δ ≤ 200% specified value
Remark		

4.) Ripple Current Frequency Coefficient:

Frequency	120Hz	1KHz	10KHz	100KHz
Coefficient	0.5	0.83	0.95	1.0

5.) Temperature Coefficient:

Temperature	≤65	+85	+105
Coefficient	1.73	1.41	1.0



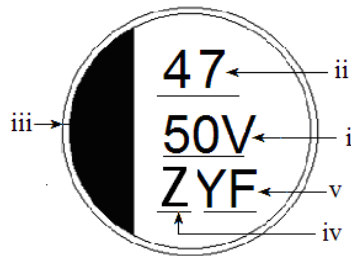
ALUMINUM ELECTROLYTIC CAPACITOR SPECIFICATION

6.) Performance:

No	Items	Conditions	Criteria
1	Capacitance	20±2°C 120HZ	Within the tolerance in page 1.
2	Dissipation Factor		Not more than value of page 1.
3	Leakage current	Leakage is measured with rated DC voltage applied to the capacitor (1 kΩ resistor series). Measurement is made after 5 minutes charging period.	Not more than value of page 1.
4	High temperature Exposure	Condition: Upper category temperature, U=0V, 1000±8 h. Voltage treatment: After test, U _R shall be applied for 30min. The capacitor shall then be stored under standard atmospheric conditions for 24±4 hours.	$\Delta C/C \leq \pm 20\%$ of initial value $\tan \delta \leq 200\%$ of specified value $L_c \leq$ specified value
5	Biased Humidity	Test Temperature : 60°C Relative Humidity : 90-95%Rh Test time : 500 ⁺⁴⁸ ₋₀ h To expose in the atmospheric condition for 1-2 hours after completion of test.	$\Delta C/C \leq \pm 20\%$ of initial value $\tan \delta \leq 150\%$ of specified value $L_c \leq$ specified value
6	Load Life	Applied the rated voltage with the specified ripple current at upper catalog temperature for 2000 ⁺⁴⁸ h. The capacitors shall then be removed from the test chamber and stabilized at room temperature for 24 hrs.	$\Delta C/C \leq \pm 20\%$ of initial value $\tan \delta \leq 200\%$ of specified value $L_c \leq$ specified value
7	Impedance at low temperature	Max impedance ratio at 120Hz $Z_{40^\circ C}/Z_{20^\circ C}$	3
8	Resistance To Solvents	Step 1: The capacitor shall be immersed into the isopropyl. Step 2: Immersion time: 3 ^{+0.5} ₋₀ minutes at 25±5°C. Step 3: Use wool brush to brush capacitor for 10 times. Repeat step 1~3 for 3 times.	Print cannot fall off or ambiguous
9	Vibration	Frequency range : 10~55Hz Total amplitudes : 0.75mm Time : 3 orthogonal directions, Mutually each for 2hrs total 6hrs	$\Delta C/C \leq \pm 10\%$ of initial value $\tan \delta \leq$ the specified value $L_c \leq$ specified value
10	Solder ability test (SMD)	Chip type: Install the product on the circuit board coated with solder paste. After reflow welding at 230 - 250 C, check whether the product is well welded.	Sn is more than 95% in the surface of terminal
11	Surge Voltage	Test temperature : 15~35°C Test voltage : Surge voltage (page 1) Resistor : 1 kΩ series Charge time : 30±5sec Discharge time : 5min 30s (6min every cycle) Cycles : 1000 cycles	$\Delta C/C \leq \pm 20\%$ of initial value $\tan \delta \leq 175\%$ of specified value $L_c \leq$ specified value
12	Terminal Strength	Capacitor is placed in the PCB by solder paste and do high temperature test (Reflow) to endurance the power of 1.8kg for 60S, no dropping	No visible damage Electrical parameters are within the standard range

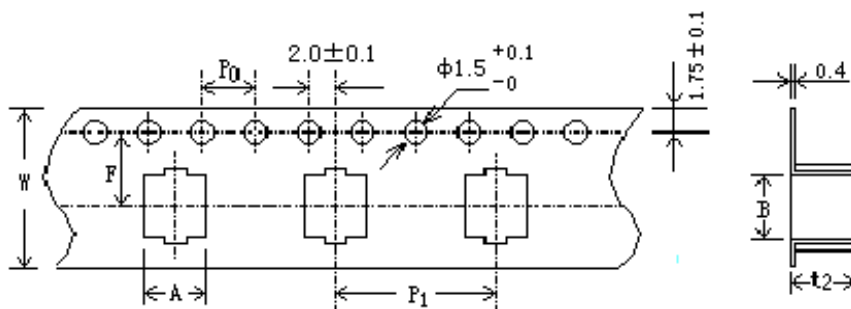
ALUMINUM ELECTROLYTIC CAPACITOR SPECIFICATION

7.) Marking:

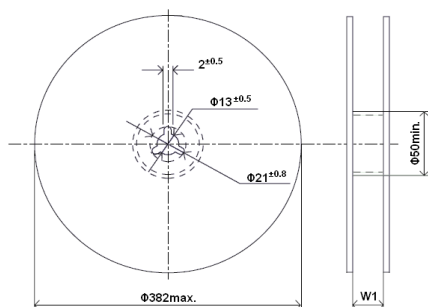


i	Rated Voltage
ii	Capacitance
iii	Negative Polarity
iv	Series
v	Code

8.) Taping shapes & Dimensions:



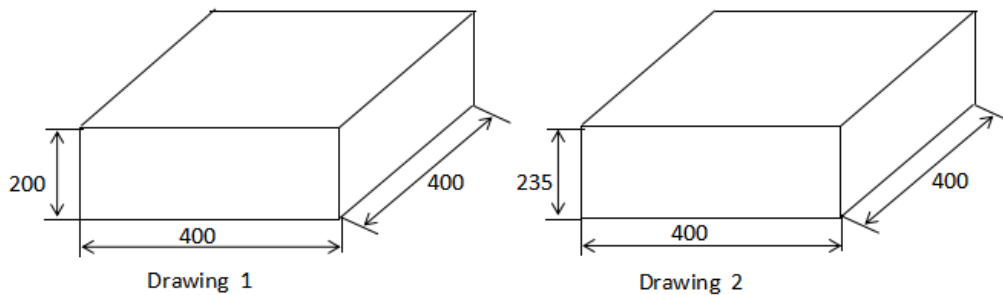
φD×L	W±0.3	A±0.2	B±0.2	F±0.1	P ₁ ±0.1	t ₂ ±0.2
φ4×5.4	12.0	4.7	4.7	5.5	8.0	5.8
φ5×5.4	12.0	6.0	6.0	5.5	12.0	5.8
φ6.3×5.4	16.0	7.0	7.0	7.5	12.0	5.8
φ6.3×7.7	16.0	7.0	7.0	7.5	12.0	8.0
φ8×6.2	16.0	8.7	8.7	7.5	12.0	8.8
φ8×10.2	24.0	8.7	8.7	11.5	16.0	11.0
φ10×10.2	24.0	10.7	10.7	11.5	16.0	11.0
φ10×12.5	24.0	10.7	10.7	11.5	16.0	13.0
φ12.5×13.5	32.0	13.4	13.4	14.2	24	14.5
φ12.5×16	32.0	13.4	13.4	14.2	24	17.0
φ16×16.5	44.0	17.5	17.5	20.2	28	17.0
φ16×21.5	44.0	17.5	17.5	20.2	28	22.4
φ18×16.5	44.0	19.5	19.5	20.2	32	17.0
φ18×21.5	44.0	19.5	19.5	20.2	32	22.4



φ D	4	5	6.3	8	10	12.5	16	18
W1	14	14	18	26	26	34	46	46

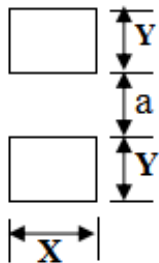
ALUMINUM ELECTROLYTIC CAPACITOR SPECIFICATION

9.) Packing Quantity:



Size	Quantity/one reel (pcs)	Quantity/one box (pcs)	Outer box size
$\phi 4 \times 5.4$	2000	20000	Drawing 1
$\phi 5 \times 5.4$	1000	10000	Drawing 1
$\phi 6.3 \times 5.4$	1000	10000	Drawing 2
$\phi 6.3 \times 7.7$	1000	10000	Drawing 2
$\phi 8 \times 10.2$	500	3000	Drawing 1
$\phi 10 \times 10.2$	500	3000	Drawing 1
$\phi 10 \times 12.5$	400	2400	Drawing 1
$\phi 12.5 \times 13.5$	250	1250	Drawing 1
$\phi 12.5 \times 16$	200	1000	Drawing 1
$\phi 16 \times 16.5$	200	800	Drawing 2
$\phi 16 \times 21.5$	150	600	Drawing 2
$\phi 18 \times 16.5$	150	600	Drawing 2
$\phi 18 \times 21.5$	100	400	Drawing 2

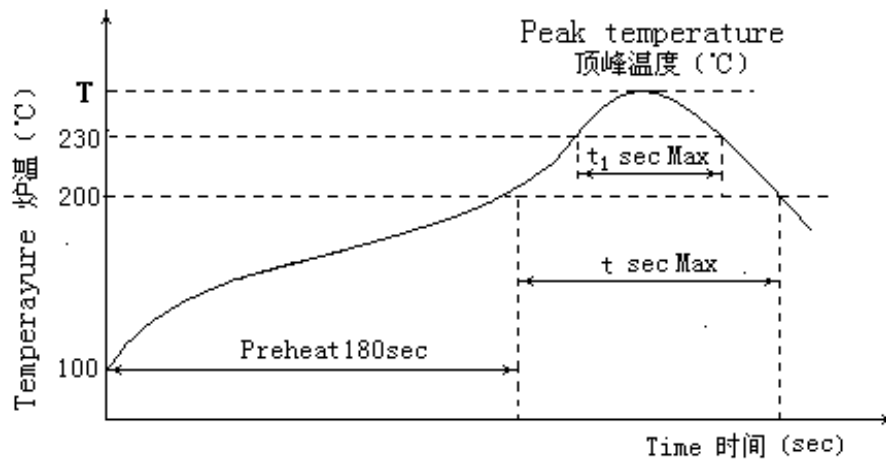
10.) Recommend land size:



尺寸 side	X	Y	a
$\Phi 4$	1.6	2.6	1.0
$\Phi 5$	1.6	3.0	1.4
$\Phi 6.3$	1.6	3.5	2.1
$\Phi 8$	2.2	3.9	3.0
$\Phi 10$	2.5	4.5	4.0
$\Phi 12$	3.0	5.5	5.0
$\Phi 16$	3.0	6.5	7.0
$\Phi 18$	3.0	7.5	7.0

ALUMINUM ELECTROLYTIC CAPACITOR SPECIFICATION

11.) Recommended reflow soldering conditions:



Size	T(°C)	t (second)	t ₁ (second)
φ 4~ φ 6.3	255	100	50
φ 8~10	245	100	40
Φ 12.5~18	245	100	40