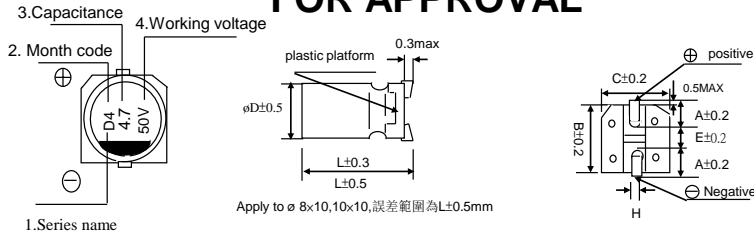


Dongguan Heyue Electronics Co., Ltd

DIMENSIONS(mm)

■ Chip Type



Apply to $\phi 8 \times 10, 10 \times 10$, 誤差範圍為 $L \pm 0.5 \text{mm}$

ΦD	4*5.4	5*5.4	6.3*5.4	6.3*6	6.3*7.7	8*10	10*10
A	1.8	2.1	2.4	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	2.2	3.1	4.5
L	5.4	5.4	5.4	6.0	7.7	10	10
H	0.5-0.8	0.5-0.8	0.5-0.8	0.5-0.8	0.5-0.8	0.8-1.1	0.8-1.1

Customer:	Electrolytic Capacitors HD Series	Heyue Code
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Electric Characteristics:

P/N	Heyue P/N	Cap. (μF)	Cap. Tol. (%)	Rate Volt. (V-DC)	Surge Volt. (V-DC)	Oper. Temp. ($^{\circ}\text{C}$)	Nominal Case Size D*L(mm)	Leakage Current Max (μA)	D.F. MAX (%)	R.C 100KHz (mA rms)	IMP 100KHz at 25 $^{\circ}\text{C}$ (Ω)Max	Load Life (hours)
	HD2A220M1010VG-A	22	± 20	100	115	105	10*10	17.6	7.0	200	0.90	2000

REMARKS:

- Leakage Current Test:** 6.3V ~100V at 20 $^{\circ}\text{C}$ for 2 minutes ;
 - Operating temperature:** 6.3V~100V -55 $^{\circ}\text{C}$ ~ +105 $^{\circ}\text{C}$;
 - .Dissipation Factor Test:** at 20 $^{\circ}\text{C}$, 120 Hz.
 - Capactitance Test:** at 20 $^{\circ}\text{C}$, 120 Hz.
 - Ripple Current Test:** at 105 $^{\circ}\text{C}$, 100K Hz ;
 - Load Life:** 3000 hours, with application of rated voltage at 105 $^{\circ}\text{C}$.
(L<10mm, 2000 hours;)
- Capacitance Change:** Within $\pm 30\%$ of initial value;
tan δ : 300% or less of initial specified value;
Leakage Current: Initial specified value or less;
- 7. Shelf Life:** The following specifications shall be satisfied when the capacitors are restored to 20 $^{\circ}\text{C}$ after exposing them for 1000 hours 105 $^{\circ}\text{C}$ without voltage applide. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.
- Capacitance Change:** Within $\pm 30\%$ of initial value;
tan δ : 300% or less of initial specified value;
Leakage Current: Initial specified value or less;
- 8. when have characteristic requested :** Load life & shelf life test and etc. , judgment standard reference to our catalogue.
- 9.Remarks:** Heyue Part Number with suffix code "A" is specially offered for automotive project, which meets AEC-Q200 standard.

●SPECIFICATION

Leakage Current 洩漏電流	After 2 minutes application of rated voltage,leakage current is not more than 0.01cv or 3(μA),whichever is greater.											
Dissipation Factor 散逸因素 (損失角) (tan δ)	Measurement Frequency:120Hz. Temperature:20 $^{\circ}\text{C}$											
	Rate Voltage(V)	6.3	10	16	25	35	50	63	80	100		
	tan δ (MAX)	0.30	0.26	0.22	0.16	0.13	0.10	0.08	0.08	0.07		
Low Temperature Stability 低溫特性	Measurement Frequency:120Hz.											
	Rate Voltage(V)	6.3	10	16	25	35	50	63	80	100		
	Impedance Ratio(MAX) 阻抗比率(MAX)	Z(-25 $^{\circ}\text{C}$)/Z(20 $^{\circ}\text{C}$)	4	3	2	2	2	2	2	2	2	2
	Z(-55 $^{\circ}\text{C}$)/Z(20 $^{\circ}\text{C}$)	8	5	4	3	3	3	3	3	3	3	

●Frequency Coefficient of Permissible Ripple Current

Frequency(Hz)	120 \leq F < 1K	1K \leq F < 10K	10K \leq F < 100K	100K \leq F
≤ 33	0.35	0.70	0.90	1.00
33~150	0.40	0.85	0.92	1.00
>150	0.60	0.85	0.95	1.00

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5 $^{\circ}\text{C}$ rise.

When long life performance is required in actual use, the rms ripple current has to be reduced.