

Data Sheet

Customer : _____

Product : Conductive Polymer Hybrid Aluminum Electrolytic Capacitors
SMD Type, Standard, 125°C 4,000Hours – AHMR Series
AEC-Q200 Version Available

Size : 6.3x6mm ~ 10x16.5mm

Issued Date : 01-Sep.-2025

Edition : Ver.1

Record of change

Date	Ver.	Description	Page

HITANO ENTERPRISE CORP.

7F-7, No. 3, Wu Chuan 1st Road, New Taipei Industrial Park,
New Taipei City, TAIWAN, R.O.C.
Tel: +886 2 2299 1331 (Rep.)
Fax: +886 2 2298 2466, 2298 2969

Prepared by	Checked by	Approved by	Accepted by (customer)
01-Sep.-2025	01-Sep.-2025	01-Sep.-2025	
Randy Yu	Michelle Lin	Arthur Su	

CONDUCTIVE POLYMER HYBRID ALUMINUM ELECTROLYTIC CAPACITORS

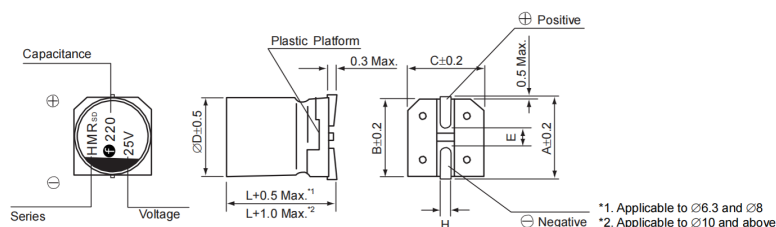
SMD Type, 125°C Standard

- High reliability and high voltage realized by hybrid electrolyte
- Endurance: 4,000 hours at 125°C
- Rated Voltage : 16V ~ 100V
- Rated capacitance : 22 ~ 1,800 μF
- For high temperature & reliability applications.
- AEC-Q200 Compliant, for automotive equipment.

SPECIFICATIONS

Item	Performance Characteristics								
Operating Temperature range	-55 + 125°C								
Rated Voltage Range	16V ~ 100V								
Capacitance Tolerance	± 20% (at 120 Hz/ 20°C)								
Leakage Current	I ≤ 0.01 CV or less (2 minutes , 20°C) Not greater than the formula above after 2 minutes voltage applied. I : Leakage current (μA) C : Capacitance (μF) V : Voltage(VDC)								
Dissipation Factor (tan δ)	Rated voltage(V)	16	25	35	50	63	80	100	(20°C · 120 Hz)
	tan δ (Max.)	0.16	0.14	0.12	0.10	0.08	0.08	0.08	
Temperature Characteristics (Impedance ratio at 100 KHz)	Z (-25°C)/ Z (+20°C) < 2.0 Z (-55°C)/ Z (+20°C) < 2.5								
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 4,000 hours at 125°C.								
	Capacitance change		≤ ± 30% of the initial value						
	D. F. (Tan δ)		≤ 200% of initial specified value						
	ESR		≤ 200% of initial specified value						
	Leakage current		Initial specified value or less						
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 125°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to item 4.1 of JIS C 5101-4.								
	Capacitance change		≤ ± 30% of the initial value						
	D. F. (Tan δ)		≤ 200% of initial specified value						
	ESR		≤ 200% of initial specified value						
	Leakage current		Initial specified value or less						
Bias Humidity Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to the DC rated voltage at 85°C, 85% RH for 2,000 hours.								
	Capacitance change		≤ ± 30% of the initial value						
	D. F. (Tan δ)		≤ 200% of initial specified value						
	ESR		≤ 200% of initial specified value						
	Leakage current		Initial specified value or less						
Appearance		No significant damage							
Resistance to Soldering heat	The following specifications shall be satisfied when the capacitors are restored to 20°C after the soldering.								
	Capacitance change		≤ ± 10% of the initial value						
	D. F. (Tan δ)		≤ the initial specified value						
	Leakage current		≤ the initial specified value						

Dimension



ϕD	L	A	B	C	H	E
6.3	6.0	6.6	6.6	7.2	0.5~0.8	1.9
6.3	7.7	6.6	6.6	7.2	0.5~0.8	1.9
8	10.0	8.3	8.3	9	0.7~1.1	3.1
8	12.5	8.3	8.3	9	0.7~1.1	3.1
10	10.5	10.3	10.3	11	0.7~1.1	4.5
10	12.8	10.3	10.3	11	0.7~1.1	4.5
10	16.5	10.3	10.3	11	0.7~1.1	4.5

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■ Part Numbering (example: 220 μ F 25V 8x10mm)

A H M R	<u>2 2 1</u>	<u>M</u>	<u>1 E</u>	<u>C</u>	<u>R</u>	<u>D</u>	<u>1 0 0</u>	<u>S</u>
SERIES	CAPACITANCE	TOL.	W.V.	TYPE	LEAD	DIA.	LENGTH	PRINTING COLOR

■ Standard Products Table

Rated voltage (V.DC)	Rated Capacitance (μF)	Case Size D x L (mm)	tan δ	ESR (mΩ max. 20°C/100 KHz)	Rated ripple current (mA rms/125°C,100KHz)
16 (1C)	100	6.3 x 6	0.16	45	950
	220	6.3 x 7.7	0.16	27	1,450
	270	8 x 10	0.16	22	1,700
	470	8 x 10	0.16	22	1,700
	820	8 x 12.5	0.16	20	1,850
	470	10 x 10.5	0.16	18	2,100
	820	10 x 10.5	0.16	18	2,100
	1500	10 x 12.8	0.16	14	3,000
1800	10 x 16.5	0.16	12	3,400	
25 (1E)	68	6.3 x 6	0.14	50	900
	100	6.3 x 7.7	0.14	30	1,400
	150	6.3 x 7.7	0.14	30	1,400
	220	8 x 10	0.14	27	1,600
	330	8 x 10	0.14	27	1,600
	470	8 x 12.5	0.14	23	1,900
	330	10 x 10.5	0.14	20	2,000
	470	10 x 10.5	0.14	20	2,000
	680	10 x 12.8	0.14	15	2,700
1000	10 x 16.5	0.14	11	4,000	
35 (1V)	47	6.3 x 6	0.12	60	900
	68	6.3 x 7.7	0.12	35	1,400
	100	6.3 x 7.7	0.12	35	1,400
	150	8 x 10	0.12	27	1,600
	180	8 x 10	0.12	27	1,600
	220	8 x 12.5	0.12	24	1,800
	270	10 x 10.5	0.12	20	2,000
	330	10 x 10.5	0.12	20	2,000
	470	10 x 12.8	0.12	16	2,600
	680	10 x 16.5	0.12	11	4,000
50 (1H)	22	6.3 x 6	0.10	80	750
	33	6.3 x 7.7	0.10	40	1,100
	68	8 x 10	0.10	30	1,250
	100	8 x 10	0.10	30	1,250
	120	8 x 12.5	0.10	28	1,400
	100	10 x 10.5	0.10	25	1,600
	150	10 x 10.5	0.10	25	1,600
	220	10 x 12.8	0.10	23	1,800
	270	10 x 16.5	0.10	13	3,700
63 (1J)	22	6.3 x 7.7	0.08	80	900
	33	8 x 10	0.08	40	1,100
	47	8 x 10	0.08	40	1,100
	100	8 x 12.5	0.08	36	1,300
	56	10 x 10.5	0.08	30	1,400
	100	10 x 10.5	0.08	30	1,400
	150	10 x 12.8	0.08	26	1,600
	180	10 x 16.5	0.08	15	3,500

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■ Standard Products Table

Rated voltage (V.DC)	Rated Capacitance (μF)	Case Size D x L (mm)	tan δ	ESR (mΩ max. 20°C/100 KHz)	Rated ripple current (mA _{rms} /125°C,100KHz)
80 (1K)	22	8 x 10	0.08	45	1,050
	33	8 x 10	0.08	45	1,050
	47	8 x 12.5	0.08	42	1,200
	47	10 x 10.5	0.08	36	1,200
	56	10 x 10.5	0.08	36	1,200
	82	10 x 12.8	0.08	33	1,350
	100	10 x 16.5	0.08	20	2,200
100 (2A)	33	10 x 10.5	0.08	80	850
	47	10 x 12.8	0.08	60	1,050

■ Frequency coefficient of allowable ripple current

Frequency	120 Hz < f < 1 KHz	1 KHz < f < 10 KHz	10 KHz < f < 100 KHz	100 KHz < f < 300 KHz
Coefficient	0.10	0.40	0.70	1.00