

EM Series

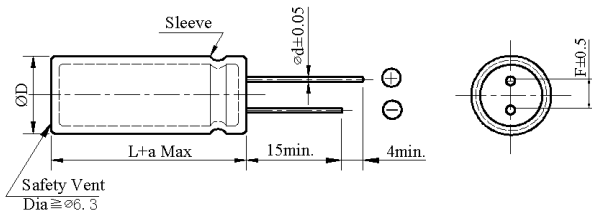
- Low impedance, high ripple current and miniature size with 7 to 9 mm height



◆ SPECIFICATIONS

Item	Performance Characteristics														
Category Temperature Range	-40 ~ +105°C														
Working Voltage Range	6.3 ~ 35Vdc														
Capacitance Range	33 ~ 470 µF														
Capacitance Tolerance	±20% (at 25°C and 120Hz)														
Dissipation Factor (tanδ) (at 25°C, 120Hz)	<table border="1"> <tr> <td>Rated Voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>30</td> <td>35</td> </tr> <tr> <td>tanδ(Max)</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.14</td> <td>0.14</td> </tr> </table>	Rated Voltage (V)	6.3	10	16	25	30	35	tanδ(Max)	0.24	0.20	0.16	0.14	0.14	0.14
Rated Voltage (V)	6.3	10	16	25	30	35									
tanδ(Max)	0.24	0.20	0.16	0.14	0.14	0.14									
Leakage Current	I=0.01CV or 3 µA, whichever is greater I : Leakage current (µA) C : Rated capacitance (µF) V : Rated voltage (V) Impress the rated voltage for 2 minutes														
Low Temperature Characteristics Impedance Ratio(MAX)	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>30</td> <td>35</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>8</td> <td>6</td> <td>6</td> <td>5</td> <td>4</td> <td>4</td> </tr> </table> <p style="text-align: right;">(at 120Hz)</p>	Rated voltage (V)	6.3	10	16	25	30	35	Z(-40°C)/Z(+20°C)	8	6	6	5	4	4
Rated voltage (V)	6.3	10	16	25	30	35									
Z(-40°C)/Z(+20°C)	8	6	6	5	4	4									
Endurance	<p>The following requirements shall be satisfied when the capacitor are restored to 25°C after the rated voltage applied for 1,000~2,000 hours at 105°C.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>≅ ±25% of the initial value (6.3V、10V: ≅ ±30%)</td> <td>Size</td> <td>Life time (hours)</td> </tr> <tr> <td>Dissipation factor(tanδ)</td> <td>≅ 200% of the specified value</td> <td>≅ 6.3Φ</td> <td>1,000</td> </tr> <tr> <td>Leakage current</td> <td>≅ specified value</td> <td>≅ 8 Φ</td> <td>2,000</td> </tr> </table>	Capacitance change	≅ ±25% of the initial value (6.3V、10V: ≅ ±30%)	Size	Life time (hours)	Dissipation factor(tanδ)	≅ 200% of the specified value	≅ 6.3Φ	1,000	Leakage current	≅ specified value	≅ 8 Φ	2,000		
Capacitance change	≅ ±25% of the initial value (6.3V、10V: ≅ ±30%)	Size	Life time (hours)												
Dissipation factor(tanδ)	≅ 200% of the specified value	≅ 6.3Φ	1,000												
Leakage current	≅ specified value	≅ 8 Φ	2,000												
Shelf Life	<p>The following requirements shall be satisfied when the capacitor are restored to 25°C after the rated voltage applied for 500 hours at 105°C without voltage applied.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>≅ ±25% of the initial value (6.3V、10V: ≅ ±30%)</td> </tr> <tr> <td>Dissipation factor(tanδ)</td> <td>≅ 200% of the specified value</td> </tr> <tr> <td>Leakage current</td> <td>≅ 200% of the specified value</td> </tr> </table>	Capacitance change	≅ ±25% of the initial value (6.3V、10V: ≅ ±30%)	Dissipation factor(tanδ)	≅ 200% of the specified value	Leakage current	≅ 200% of the specified value								
Capacitance change	≅ ±25% of the initial value (6.3V、10V: ≅ ±30%)														
Dissipation factor(tanδ)	≅ 200% of the specified value														
Leakage current	≅ 200% of the specified value														
Others	Conforms to JIS-C-5101-4 (1998), characteristic W														

◆ DIMENSIONS (mm)



ΦD	8 × 7	8 × 9
ΦD	ΦD + 0.5 Max	
Φd	0.45	0.50
F	3.5	
a	L + 1.0 Max	

◆ PART NUMBER SYSTEM(Example : 25V 220µF)

E	M	1	E	2	2	1	M	N	N	0	8	0	9						
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Special Request

Size code(0809 : 8×9)

Lead length code

Lead forming Type code

Capacitance tolerance code(M:±20%)

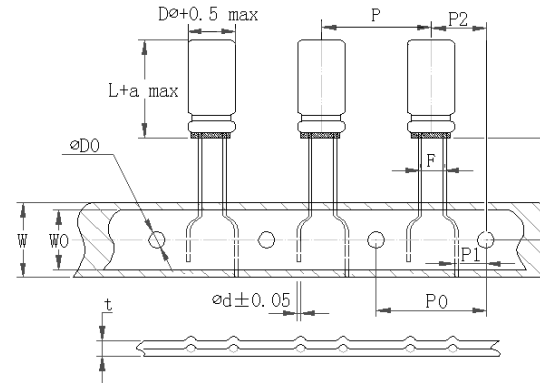
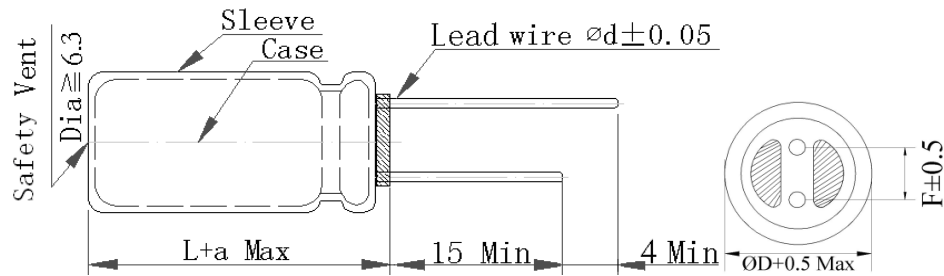
Capacitance code (220µF)

Voltage code (25V)

Series code (EM)

Aluminum Electrolytic Capacitor

Customer	Digi-Key	SERIES	EM	NO.:	PUBLISH DATE	2022-03-25
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Unit (mm):

P=12.7±1.0	H=18.5±0.5
P0=12.7±0.2	P1=3.85±0.5
P2=6.35±1.0	W=18.0±0.5
F=2.5+0.8/-0.2	WO=12.5MIN
ΦD0=4.0±0.2	t=0.7±0.2

Original

FIG-1

No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tanδ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 105°C 100kHz	ESR @25°C (mΩ max/ 120Hz)	Impedance @20°C (mΩ max/ 100kHz)	Endurance @ 105°C (Hours)	Dimensions (mm)					Appearance Drawing No
														DΦ	L	a	d	F	
1	EM1H100MP26307F2P9U	/	10 μF	±20%	50 V	/	-40~+105	/	/	105	/	3500	2000	6.3	7	/	/	2.5	FIG-1
2	EM1H220MP26307F2P9U	/	22 μF	±20%	50 V	/	-40~+105	/	/	150	/	2000	2000	6.3	7	/	/	2.5	FIG-1

※Test leakage current before testing dissipation factor and capacitance during the electric characteristic test.

REMARKS:

- 1.Suffix P9 : indicates Black PET sleeve.
- 2.Suffix F2 indicates the life of the capacitor is 2000 hrs.
3. Suffix U indicates convex rubber cover.

APPROVED BY

张洪斌

CHECKED BY

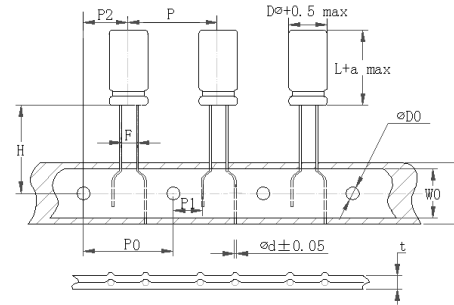
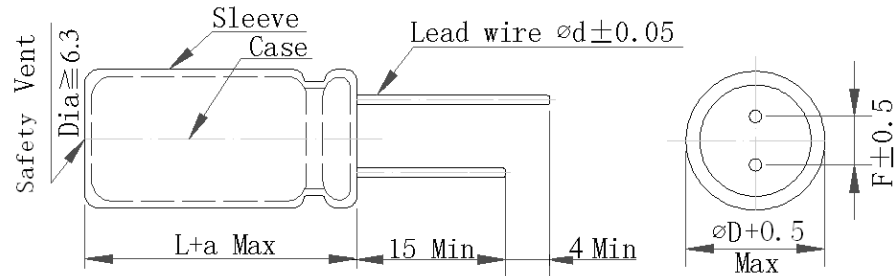
曾爱娥

PREPARED BY

梁慧妍

Aluminum Electrolytic Capacitor

Customer	Digi-Key	SERIES	EM	NO.:	PUBLISH DATE	2022-03-25
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Unit (mm):

P=12.7±1.0	H=18.5±0.5
P0=12.7±0.2	P1=3.85±0.5
P2=6.35±1.0	W=18.0±0.5
F=3.5+0.8/-0.2	W0=12.5MIN
ΦD0=4.0±0.2	t=0.7±0.2

Original

FIG-1

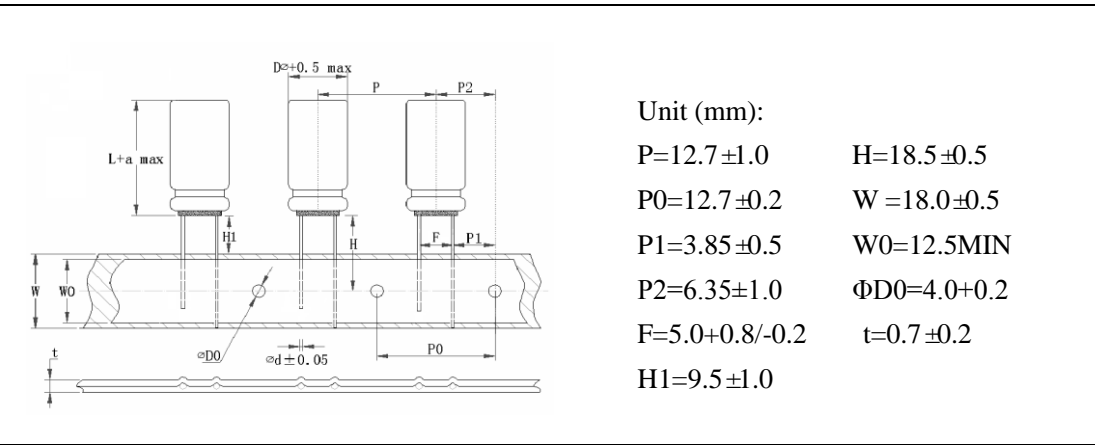
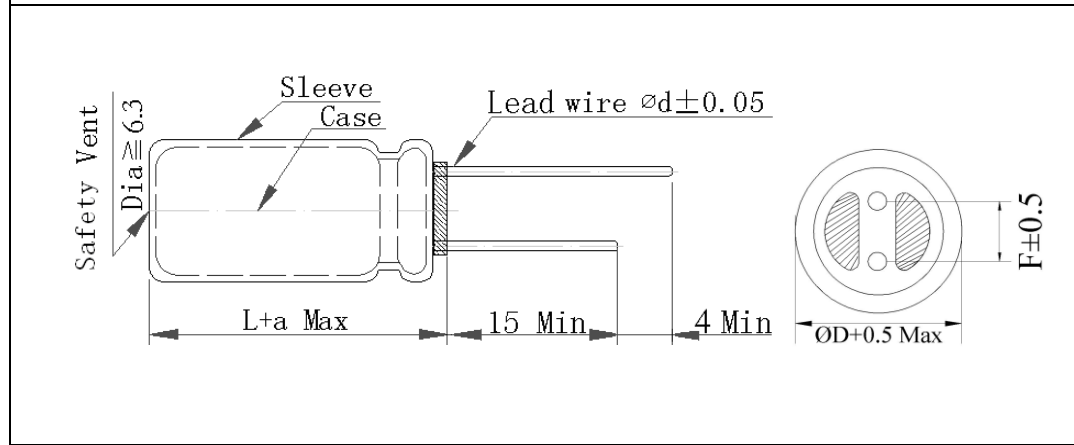
No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tanδ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 105°C 100kHz	ESR @25°C (mΩ max/ 120Hz)	Impedance @20°C (mΩ max/ 100kHz)	Endurance @ 105°C (Hours)	Dimensions (mm)					Appearance Drawing No
														D Φ	L	a	d	F	
1	EM1C331MP30809	/	330 μF	±20%	16 V	/	-40~+105	/	/	550	/	120	2000	8	9	/	/	3.5	FIG-1

※Test leakage current before testing dissipation factor and capacitance during the electric characteristic test.

REMARKS:	APPROVED BY	CHECKED BY	PREPARED BY
Sleeve Color: Brown.	张洪斌	曾爱娥	梁慧妍

Aluminum Electrolytic Capacitor

Customer	Digi-Key	SERIES	EM	NO.:	PUBLISH DATE	2022-03-25
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Original **FIG-1**

No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tanδ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 105°C 100kHz	ESR @25°C (mΩ max/ 120Hz)	Impedance @20°C (mΩ max/ 100kHz)	Endurance @ 105°C (Hours)	Dimensions (mm)					Appearance Drawing No
														DΦ	L	a	d	F	
1	EM1V101MP51009U	/	100 μF	±20%	35 V	/	-40~+105	/	/	350	/	300	2000	10	9	/	/	5	FIG-1

※Test leakage current before testing dissipation factor and capacitance during the electric characteristic test.

REMARKS:	APPROVED BY	CHECKED BY	PREPARED BY
1.Sleeve Color: Brown. 2.Suffix U indicates convex rubber cover.	张洪斌	曾爱娥	梁慧妍