

ER Series

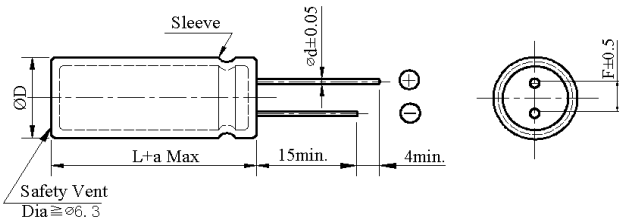
- Low impedance, high ripple current and miniature size with 7 to 9 mm height



◆ 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>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> </tr> </table>	Rated Voltage (V)	6.3	10	16	25	35	tanδ(Max)	0.24	0.20	0.16	0.14	0.14
	Rated Voltage (V)	6.3	10	16	25	35							
tanδ(Max)	0.24	0.20	0.16	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>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> </tr> </table>	Rated voltage (V)	6.3	10	16	25	35	Z(-40°C)/Z(+20°C)	8	6	6	5	4
	Rated voltage (V)	6.3	10	16	25	35							
Z(-40°C)/Z(+20°C)	8	6	6	5	4								
	(at 120Hz)												
Endurance	The following requirements shall be satisfied when the capacitor are restored to 25°C after the rated voltage applied for 3,000 hours at 105°C.												
	<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>≅ 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	≅ specified value						
	Capacitance change	≅ ±25% of the initial value(6.3V、10V: ≅ ±30%)											
	Dissipation factor(tanδ)	≅ 200% of the specified value											
Leakage current	≅ specified value												
Shelf Life	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.												
	<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												

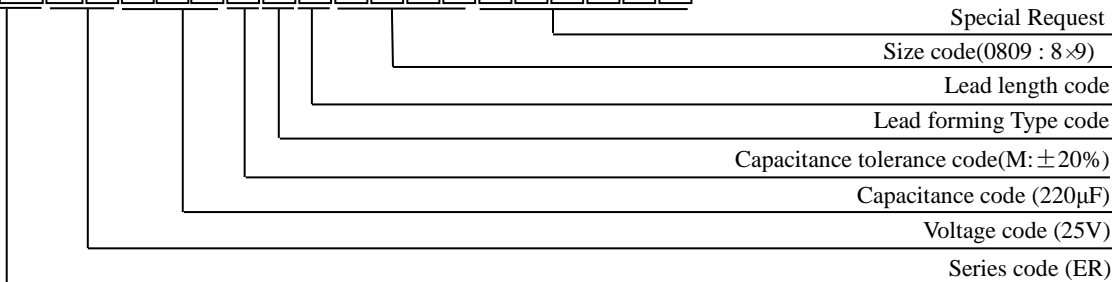
◆ DIMENSIONS (mm)



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

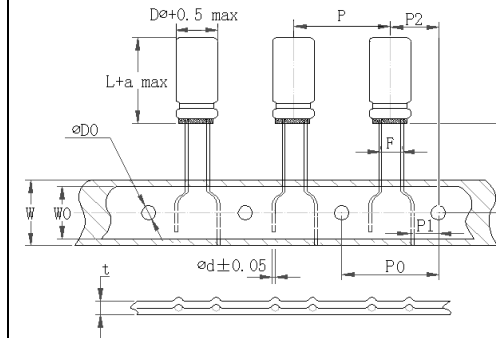
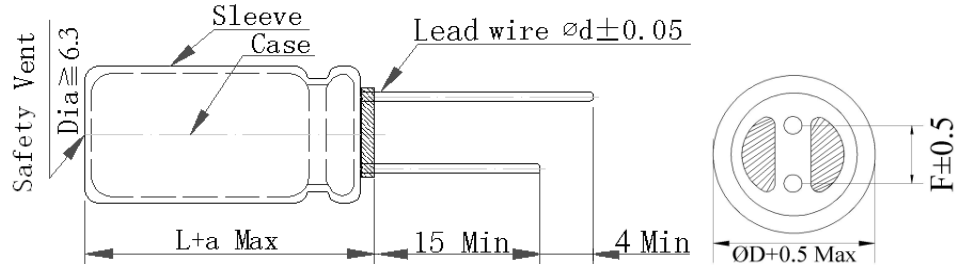
◆ PART NUMBER SYSTEM (Example : 25V 220 µF)

E R 1 E 2 2 1 M N N 0 8 0 9



Aluminum Electrolytic Capacitor

Customer	Digi-Key	SERIES	ER	NO.:	PUBLISH DATE	2022-03-25
-----------------	-----------------	---------------	-----------	-------------	---------------------	-------------------



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	W0=12.5MIN
ΦD0=4.0±0.2	t=0.7±0.2

Original

FIG-1

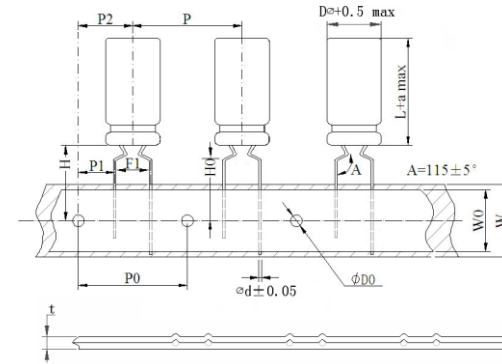
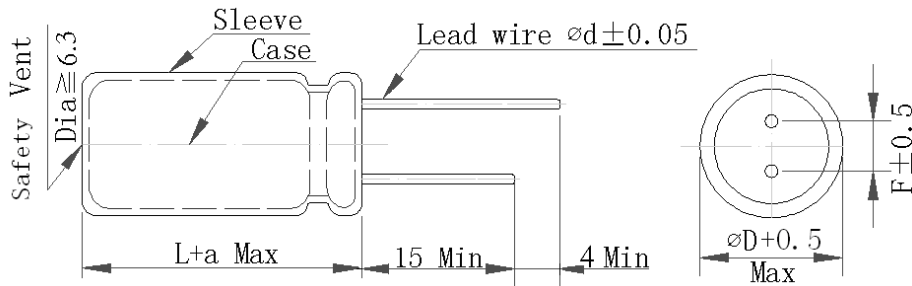
No.	CHINSAN Part No.	Customer Part No.	Capacitance (μF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tanδ @ 25°C (120Hz) (Max)	Leakage Current (μA) (2 min.)	Rated Ripple Current (mA rms) @ 105°C 100kHz	ESR @25°C (mΩ max/ 120Hz)	Impedance @20°C (mΩ max/ 100kHz)	Endurance @ 105°C (Hours)	Dimensions (mm)					Appearance Drawing No
														D Φ	L	a	d	F	
1	ER1C101MP26307RU	/	100 μF	±20%	16 V	/	-40~+105	/	/	400	/	980	3000	6.3	7	/	/	2.5	FIG-1
2	ER1V470MP26307P9U	/	47 μF	±20%	35 V	/	-40~+105	/	/	210	/	/	3000	6.3	7	/	/	2.5	FIG-1
3	ER1H220MP26307EF5U	/	22 μF	±20%	50 V	/	-40~+105	/	/	230	/	2200	5000	6.3	7	/	/	2.5	FIG-1
4	ER1H2R2MP26307P9U	/	2.2 μF	±20%	50 V	/	-40~+105	/	/	80	/	/	3000	6.3	7	/	/	2.5	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 F5 indicates the life of the capacitor is 5000 hrs. 3.Suffix P9 : indicates Black PET sleeve. 4.Suffix U indicates convex rubber cover.	张洪斌	曾爱娥	梁慧妍

Aluminum Electrolytic Capacitor

Customer	Digi-Key	SERIES	ER	NO.:	PUBLISH DATE	2022-03-25
-----------------	-----------------	---------------	-----------	-------------	---------------------	-------------------



Unit(mm):

P=12.7±1.0	H0=16.0±0.5
P0=12.7±0.2	W =18.0±0.5
P1=3.85±0.5	W0=12.5MIN
P2=6.35±1.0	ΦD0=4.0±0.2
F1=5.0+0.8/-0.2	H=18.5±0.5
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	F1	
1	ER1C221MP50807EF5R	/	220 μF	±20%	16 V	/	-40~+105	/	/	1100	/	100	5000	8	7	/	/	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.
- Suffix F5 indicates the life of the capacitor is 5000 hrs.

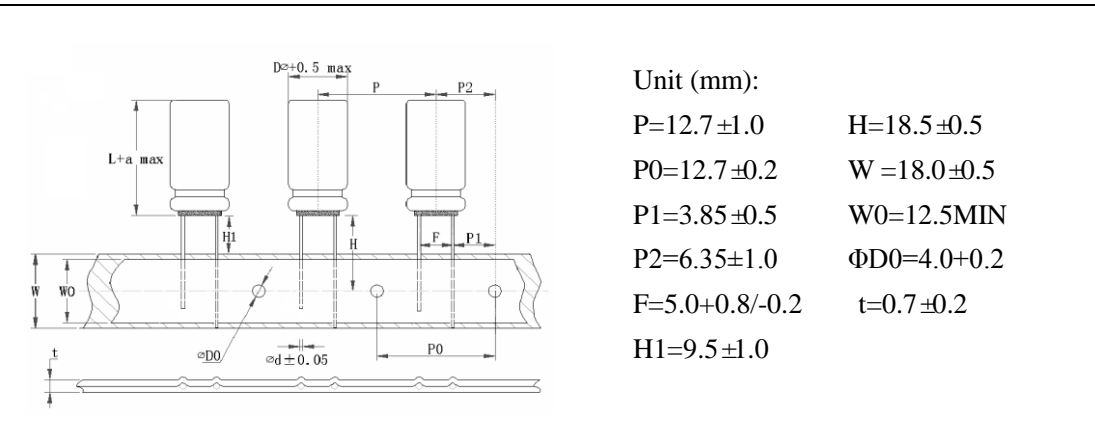
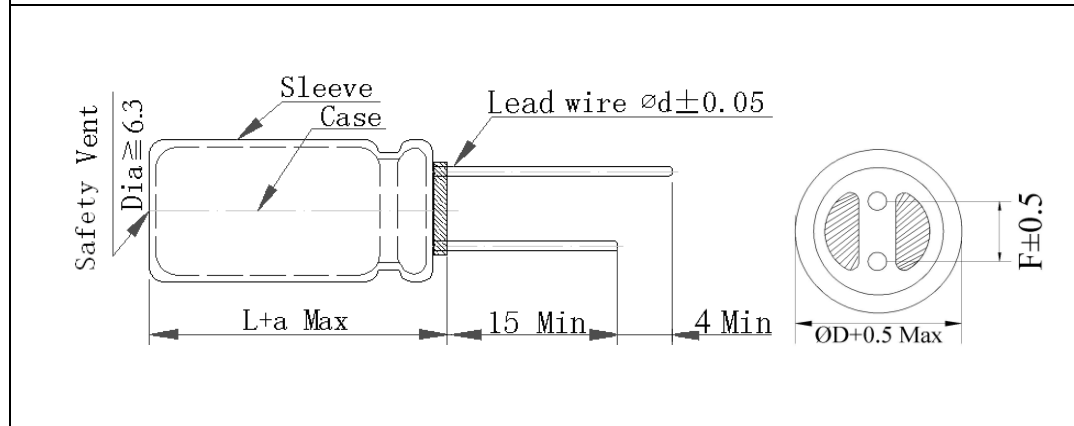
张洪斌

曾爱娥

梁慧妍

Aluminum Electrolytic Capacitor

Customer	Digi-Key	SERIES	ER	NO.:	PUBLISH DATE	2022-03-25
----------	----------	--------	----	------	--------------	------------



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	ER1E221MP51007RU	/	220 μF	±20%	25 V	/	-40~+105	/	/	800	/	400	3000	10	7	/	/	5	FIG-1
2	ER1C331MP51007RU	/	330 μF	±20%	16 V	/	-40~+105	/	/	1000	/	400	3000	10	7	/	/	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