

## *Data Sheet*

Customer: \_\_\_\_\_

Product: Aluminum Electrolytic Capacitors – EUK Series 8000Hours

Size : 22x30mm ~ 35x70mm

Issued Date: 06-Aprt.-2023

Edition: Ver. 1

### Record of change

Date	Ver.	Description	Page
06-Apr-2023	1		

### **HITANO ENTERPRISE CORP.**

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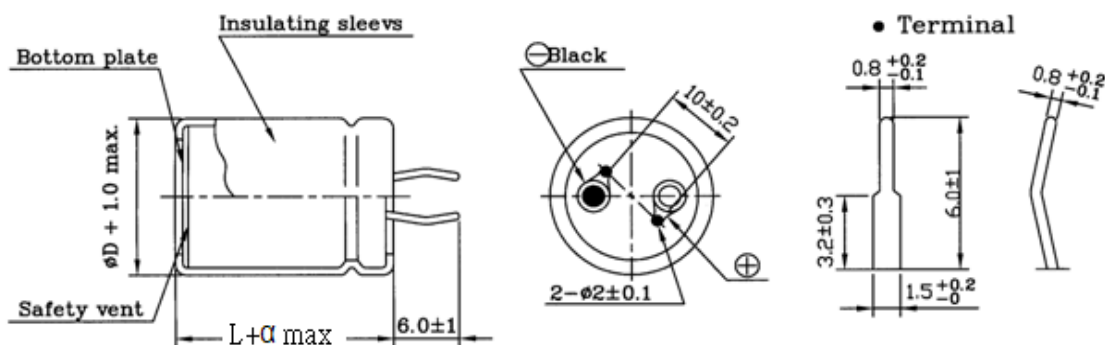
Prepared by	Checked by	Approved by	Accepted by (customer)
06-Apr-2023	06-Apr-2023	06-Apr-2023	
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- ALUMINUM ELECTROLYTIC CAPACITOR • Snap-In type
- Useful life: 105°C 8000 hours.
- Extremely stable dissipation factor and leakage current.
- Especially for applications with demanding operating environment.

**Characteristics**

Items		Performance Characteristics		
Operating Temperature Range		-40 ~ +105°C		
Rated Voltage Range	$V_R$	200 ~ 450V		
Surge Voltage	$V_S$	$(V_R \leq 315V) \cdot V_S = 1.15 \cdot V_R$		
Capacitance Range	$C_R$	68 ~ 2200uF		
Capacitance Tolerance	$\Delta C$	$\pm 20\%$ at 120Hz • 20°C		
Leakage Current	$I_{LEAK}$	$\leq 3 \cdot \sqrt{C_R \cdot V_R}$ • After 5 minutes [ $I_{LEAK}$ ( $\mu A$ ); $C_R$ ( $\mu F$ ); $V_R$ (V)]		
Dissipation Factor % (20°C • 120Hz)	$\tan \delta$	Rated voltage	200~400	450
		$\tan \delta$	15	20
Self-Resistance (20°C • 120Hz)	ESR	Not to exceed the values shown in standard ratings.		
Low Temperature Characteristics at 120Hz	Z ratio max.	Impedance ration at 120Hz between the -25°C or -40°C value and 20°C value shall not exceed the values given below.		
		Rated Voltage (V)	200~250	315~450
		Z-25°C/Z 20°C	4	5
		Z-40°C/Z 20°C	7	10
<b>Lifetime Test</b>				
Useful Life 105°C ( $V_R$ & $I_R$ applied)	Test	8000hours		
	$\Delta C/CR$	$\leq \pm 20\%$ of initial measured value		
	$\tan \delta$	$\leq 175\%$ of initial specified value		
	$I_{LEAK}$	$\leq$ the initial specified value		
	Deviation Rate at Useful Life: 100 FIT = 0.01%/1000h with 60% confidence level • parts show higher drift as test criteria			
Endurance 105°C ( $V_R$ & $I_R$ applied)	Test	3000hours		
	$\Delta C/CR$	$\leq \pm 15\%$ of initial measured value		
	$\tan \delta$	$\leq 175\%$ of initial specified value		
	$I_{LEAK}$	$\leq$ the initial specified value		
Shelf Life 105°C ( $V_R = 0$ )	Test	1000hours		
	$\Delta C/CR$	$\leq \pm 15\%$ of initial measured value		
	$\tan \delta$	$\leq 175\%$ of initial specified value		
	$I_{LEAK}$	$\leq$ the initial specified value		
	Before measurement: Restore capacitor to 20°C, apply $V_R$ for 30 min according JIS-C-5101-4			
<b>Vibration Resistance Test</b>	Max. 10g force, FRANGE 10Hz ... 55Hz, amplitude 0.75mm; X/Y/Z-axis each 2h; capacitor rigidly clamped by body to surface • IEC 60068-2-6			

**Diagram of dimensions**



(mm)

Dia	22	25	30	35
$a$	2	2	3	3

**Case size & Maximum Ripple Current (A rms 105°C 120Hz) & ESR. ( $\Omega$  20°C 120Hz)**

$\phi$  DxL (mm)

$V_R$ (V)	$C_R$ ( $\mu$ F)	$\phi D$ (mm)	L (mm)	Typ. ESR +20°C • 120Hz (m $\Omega$ )	Max. ESR +20°C • 120Hz (m $\Omega$ )	$I_R$ • Max. Ripple Current +105°C • 120Hz (mA rms)	HITANO Part Number
200	330	22	30	320	600	1380	EUK331M2DBA
	390	22	35	280	510	1450	EUK391M2DBA
	470	22	40	230	420	1680	EUK471M2DBA
	470	25	35	230	420	1680	EUK471M2DBB
	560	22	45	190	360	1810	EUK561M2DBA
	560	25	40	190	360	1780	EUK561M2DBB
	680	30	45	190	360	1960	EUK681M2DBA
	680	22	40	160	290	2150	EUK681M2DBB
	680	25	30	160	290	2060	EUK681M2DBC
	820	30	60	160	290	2170	EUK821M2DBA
	820	22	50	130	240	2420	EUK821M2DBB
	820	25	35	130	240	2220	EUK821M2DBC
	1000	25	60	110	200	2720	EUK102M2DBA
	1000	30	40	110	200	2910	EUK102M2DBB
	1000	35	35	110	200	3140	EUK102M2DBC
	1200	30	50	92	170	3420	EUK122M2DBA
	1200	35	40	92	170	3380	EUK122M2DBB
	1500	30	60	70	130	4120	EUK152M2DBA
	1500	35	50	70	130	3910	EUK152M2DBB
	1800	30	70	59	110	4330	EUK182M2DBA
1800	35	60	59	110	4460	EUK182M2DBB	
2200	35	70	49	90	5110	EUK222M2DBA	
250	220	22	25	490	900	1150	EUK221M2EBA
	270	22	25	400	740	1210	EUK271M2EBA
	330	22	30	320	600	1520	EUK331M2EBA
	330	25	25	320	600	1450	EUK331M2EBB
	390	22	35	280	510	1720	EUK391M2EBA
	390	22	40	280	510	1820	EUK391M2EBB
	390	25	30	280	510	1580	EUK391M2EBC
	390	30	25	280	510	1620	EUK391M2EBD
	470	22	40	230	420	1960	EUK471M2EBA
	470	25	30	230	420	1720	EUK471M2EBB
	470	30	25	230	420	1880	EUK471M2EBC
	560	25	45	190	360	1960	EUK561M2EBA
	560	30	35	190	360	2220	EUK561M2EBB
	560	35	30	190	360	2080	EUK561M2EBC
	680	25	50	160	290	2210	EUK681M2EBA
	680	30	35	160	290	2350	EUK681M2EBB
	680	35	35	160	290	2500	EUK681M2EBC
	820	30	45	130	240	2780	EUK821M2EBA
	820	35	40	130	240	2900	EUK821M2EBB
	1000	30	50	110	200	3300	EUK102M2EBA
1000	35	45	110	200	3360	EUK102M2EBB	

**Case size & Maximum Ripple Current (A rms 105°C 120Hz) & ESR. ( $\Omega$  20°C 120Hz)**
 $\phi$  D $\times$ L (mm)

$V_R$ (V)	$C_R$ ( $\mu$ F)	$\phi D$ (mm)	L (mm)	Typ. ESR +20°C • 120Hz (m $\Omega$ )	Max. ESR +20°C • 120Hz (m $\Omega$ )	$I_R$ • Max. Ripple Current +105°C • 120Hz (mA rms)	HITANO Part Number
250	1200	30	60	92	170	3850	EUK122M2EBA
	1200	35	50	92	170	3820	EUK122M2EBB
	1500	30	70	70	130	4330	EUK152M2EBA
	1500	35	60	70	130	4340	EUK152M2EBB
	1800	35	70	59	110	4700	EUK182M2EBA
	2200	35	80	49	90	5580	EUK222M2EBA
315	150	22	35	720	1330	1000	EUK151M2FBA
	180	22	35	600	1110	1150	EUK181M2FBA
	220	22	40	490	900	1300	EUK221M2FBA
	220	25	30	490	900	1300	EUK221M2FBB
	270	22	50	400	740	1410	EUK271M2FBA
	270	25	35	400	740	1420	EUK271M2FBB
	330	22	60	320	600	1740	EUK331M2FBA
	330	25	40	320	600	1580	EUK331M2FBB
	330	30	35	320	600	1620	EUK331M2FBC
	390	22	60	280	510	1940	EUK391M2FBA
	390	25	45	280	510	1700	EUK391M2FBB
	390	30	35	280	510	1780	EUK391M2FBC
	390	35	30	280	510	1800	EUK391M2FBD
	470	22	70	230	420	2050	EUK471M2FBA
	470	25	55	230	420	2040	EUK471M2FBB
	470	30	40	230	420	2030	EUK471M2FBC
	470	35	35	230	420	2070	EUK471M2FBD
	560	25	60	190	360	2280	EUK561M2FBA
	560	30	45	190	360	2230	EUK561M2FBB
	560	35	40	190	360	2250	EUK561M2FBC
	680	30	55	160	290	2660	EUK681M2FBA
	680	35	45	160	290	2700	EUK681M2FBB
	820	30	60	130	240	3120	EUK821M2FBA
	820	35	50	130	240	3100	EUK821M2FBB
	1000	30	80	110	200	3640	EUK102M2FBA
	1000	35	60	110	200	3560	EUK102M2FBB
1200	35	70	92	170	4050	EUK122M2FBA	
1500	35	80	70	130	4350	EUK152M2FBA	

**Case size & Maximum Ripple Current (A rms 105°C 120Hz) & ESR. ( $\Omega$  20°C 120Hz)**
 $\phi$  D $\times$ L (mm)

$V_R$ (V)	$C_R$ ( $\mu$ F)	$\phi D$ (mm)	L (mm)	Typ. ESR +20°C • 120Hz (m $\Omega$ )	Max. ESR +20°C • 120Hz (m $\Omega$ )	$I_R$ • Max. Ripple Current +105°C • 120Hz (mA rms)	HITANO Part Number
350	100	22	30	1080	1990	740	EUK101M2VBA
	100	25	25	1080	1990	520	EUK101M2VBB
	120	22	30	900	1660	920	EUK121M2VBA
	150	22	35	720	1330	1060	EUK151M2VBA
	180	22	40	600	1110	1170	EUK181M2VBA
	180	25	30	600	1110	1170	EUK181M2VBB
	220	22	45	490	900	1400	EUK221M2VBA
	220	25	35	490	900	1330	EUK221M2VBC
	220	30	30	490	900	1350	EUK221M2VBC
	270	22	50	400	740	1550	EUK271M2VBA
	270	25	40	400	740	1470	EUK271M2VBB
	270	30	35	400	740	1370	EUK271M2VBC
	330	25	50	320	600	1680	EUK331M2VBA
	330	30	35	320	600	1640	EUK331M2VBB
	330	35	30	320	600	1690	EUK331M2VBC
	390	25	55	280	510	1860	EUK391M2VBA
	390	30	40	280	510	1840	EUK391M2VBB
	390	35	35	280	510	1870	EUK391M2VBC
	470	25	60	230	420	2090	EUK471M2VBA
	470	30	45	230	420	2090	EUK471M2VBB
	470	35	40	230	420	2080	EUK471M2VBC
	560	30	50	190	360	2240	EUK561M2VBA
	560	35	45	190	360	2260	EUK561M2VBB
	680	30	60	160	290	2670	EUK681M2VBA
680	35	50	160	290	2710	EUK681M2VBB	
820	35	60	130	240	3250	EUK821M2VBA	
1000	35	65	110	200	3580	EUK102M2VBA	
1200	35	80	92	170	4100	EUK122M2VBA	

**Case size & Maximum Ripple Current (A rms 105°C 120Hz) & ESR. ( $\Omega$  20°C 120Hz)**
 **$\phi$  DxL (mm)**

$V_R$ (V)	$C_R$ ( $\mu$ F)	$\phi D$ (mm)	L (mm)	Typ. ESR +20°C • 120Hz (m $\Omega$ )	Max. ESR +20°C • 120Hz (m $\Omega$ )	$I_R$ • Max. Ripple Current +105°C • 120Hz (mA rms)	HITANO Part Number
400	82	22	30	1310	2430	610	EUK820M2GBA
	100	22	30	1080	1990	670	EUK101M2GBA
	120	22	35	900	1660	790	EUK121M2GBA
	120	25	30	900	1660	790	EUK121M2GGB
	150	22	40	720	1330	950	EUK151M2GBA
	150	25	35	720	1330	960	EUK151M2GGB
	150	30	25	720	1330	990	EUK151M2GBC
	180	25	35	600	1110	1120	EUK181M2GBA
	180	30	30	600	1110	1170	EUK181M2GGB
	220	22	50	490	900	1200	EUK221M2GBA
	220	25	40	490	900	1200	EUK221M2GGB
	220	30	30	490	900	1240	EUK221M2GBC
	220	35	25	490	900	1240	EUK221M2GBD
	270	25	50	400	740	1420	EUK271M2GBA
	270	30	35	400	740	1350	EUK271M2GGB
	270	35	30	400	740	1390	EUK271M2GBC
	330	25	60	320	600	1570	EUK331M2GBA
	330	30	40	320	600	1580	EUK331M2GGB
	330	35	35	320	600	1640	EUK331M2GBC
	390	25	60	280	510	1700	EUK391M2GBA
	390	30	45	280	510	1800	EUK391M2GGB
	390	35	40	280	510	1780	EUK391M2GBC
	470	30	50	230	420	2070	EUK471M2GBA
	470	35	45	230	420	2160	EUK471M2GGB
	560	30	60	190	360	2260	EUK561M2GBA
	560	35	50	190	360	2360	EUK561M2GGB
	680	30	70	160	290	2490	EUK681M2GBA
	680	35	60	160	290	2720	EUK681M2GGB
	820	35	70	130	240	3230	EUK821M2GBA
	1000	35	80	110	200	3570	EUK102M2GBA
1200	35	95	92	170	3910	EUK122M2GBA	

Case size & Maximum Ripple Current (A rms 105°C 120Hz) & ESR. ( $\Omega$  20°C 120Hz)

$\phi$  DxL (mm)

$V_R$ (V)	$C_R$ ( $\mu$ F)	$\phi D$ (mm)	L (mm)	Typ. ESR +20°C • 120Hz (m $\Omega$ )	Max. ESR +20°C • 120Hz (m $\Omega$ )	$I_R$ • Max. Ripple Current +105°C • 120Hz (mA rms)	HITANO Part Number
450	68	22	25	2110	3900	550	EUK680M2WBA
	82	22	30	1750	3230	610	EUK820M2WBA
	100	22	35	1430	2650	720	EUK101M2WBA
	100	25	25	1430	2650	720	EUK101M2WBB
	120	22	35	1190	2210	850	EUK121M2WBA
	120	22	40	1190	2210	900	EUK121M2WBB
	120	25	30	1190	2210	850	EUK121M2WBC
	120	25	35	1190	2210	910	EUK121M2WBD
	120	30	25	1190	2210	850	EUK121M2WBE
	150	22	45	960	1770	1000	EUK151M2WBA
	150	25	35	960	1770	1020	EUK151M2WBB
	150	30	30	960	1770	1060	EUK151M2WBC
	180	22	50	790	1470	1210	EUK181M2WBA
	180	25	35	790	1470	1120	EUK181M2WBB
	180	30	30	790	1470	1210	EUK181M2WBC
	180	30	35	790	1470	1240	EUK181M2WBD
	220	25	45	650	1210	1280	EUK221M2WBA
	220	30	35	650	1210	1280	EUK221M2WBB
	220	35	30	650	1210	1280	EUK221M2WBC
	270	25	50	530	980	1420	EUK271M2WBA
	270	30	35	530	980	1350	EUK271M2WBB
	270	35	30	530	980	1390	EUK271M2WBC
	270	35	35	530	980	1480	EUK271M2WBD
	330	30	45	430	800	1660	EUK331M2WBA
	330	35	35	430	800	1660	EUK331M2WBB
	390	30	50	370	680	1890	EUK391M2WBA
	390	35	40	370	680	1890	EUK391M2WBB
	390	35	45	370	680	1970	EUK391M2WBC
	470	30	55	300	560	2080	EUK471M2WBA
	470	35	45	300	560	2160	EUK471M2WBB
560	35	50	250	470	2470	EUK561M2WBA	
560	35	55	250	470	2570	EUK561M2WBB	
680	35	60	210	390	2940	EUK681M2WBA	
820	35	70	170	320	3350	EUK821M2WBA	