# **Aluminum Electrolytic Capacitors**

# YUSCON

## **KP Series**

### **BI-POLARIZED, WIDE TEMPERATURE**

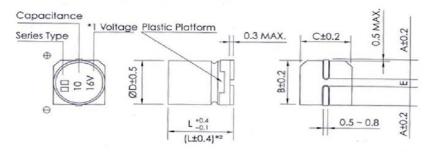
- ullet Bi-polarized with wide temperature range -55  $^{\circ}$ C ~ +105  $^{\circ}$ C
- ●Load life of 1000 hours
- Comply with the RoHS directive

### ■ SPECIFICATIONS



Voltage Range Capacitance Range Capacitance Tolerance Leakage Current  Measurement frequency:120Hz , Temperature:20°C Rated Voltage (V) 6.3 10 16,25 35,50 tan δ(max.) 0.24 0.20 0.17 0.15  Measurement frequency:120Hz  Rated Voltage (V) 6.3 10 16,25 35,50 tan δ(max.) 0.24 0.20 0.17 0.15  Measurement frequency:120Hz  Rated Voltage (V) 6.3 10 16,25 35,50 tan δ(max.) 0.24 0.20 0.17 0.15  Measurement frequency:120Hz  Rated Voltage (V) 6.3 10 16,25 35,50 tan δ(max.) 0.24 0.20 0.17 0.15  Measurement frequency:120Hz  Rated Voltage (V) 6.3 10 16,25 35,50 tan δ(max.) 0.25 (γ.25°C) / Z (+20°C) 4 3 2 2 2 (√.25°C) / Z (+20°C) 8 6 4 3 3 2 2 2 (√.25°C) / Z (+20°C) 8 6 6 4 3 3 (γ.25°C) / Z (+20°C) 8 6 6 7 4 3 3 2 2 2 (√.25°C) / Z (+20°C) 8 6 7 4 3 3 2 2 2 (√.25°C) / Z (+20°C) 8 7 4 3 3 2 2 2												
Voltage Range Capacitance Range Capacitance Tolerance Leakage Current  Measurement frequency:120Hz, Temperature:20°C Rated Voltage (V) Active ability at Low Temperature  After 1000 hours application of the rated voltage at 105°C, (the polarity needs to exchange every 250hours), they meet the characteristics listed below.  Capacitance Change  Method (Sapacitance Tolerance)  Measurement frequency:120Hz  Rated Voltage (V) Active (V) Acti	Item	Characteristics										
Capacitance Range Capacitance Tolerance Leakage Current    Capacitance Tolerance   Capacitance Change   Capacitance	Operating Temperature Range	- 55 ~ +105℃										
Capacitance Tolerance         - 20% ~ + 20% at 20 ℃, 120Hz           Leakage Current         Leakage current ≤0.005CV or10uA,whichever is greater (after 2 minutes application of rated voltage)           Measurement frequency:120Hz, Temperature:20℃           Rated Voltage (V)         6.3         10         16,25         35,50           tan δ(max.)         0.24         0.20         0.17         0.15           Ability at Low Temperature	Voltage Range	6.3 ~ 50 V										
Leakage Current    Leakage current ≤ 0.005CV or10uA,whichever is greater (after 2 minutes application of rated voltage)	Capacitance Range	0.1 ~ 47 μ F										
Measurement frequency:120Hz ,Temperature:20°C	Capacitance Tolerance	- 20% ~ + 20% at 20 ℃, 120Hz										
Rated Voltage (V)   6.3   10   16,25   35,50     tan δ(max.)   0.24   0.20   0.17   0.15     Ability at Low Temperature   Rated Voltage (V)   6.3   10   16,25   35,50     Impedance Ratio   ZT/Z20(max.)   Z(-25°C) / Z(+20°C)   4   3   2   2     Z(-55°C) / Z(+20°C)   8   6   4   3   3     After 1000 hours application of the rated voltage at 105°C, (the polarity needs to exchange every 250hours), they meet the characteristics listed below.   Capacitance Change   Within ±20% of initial value     Dissipation Factor   200% or less of initial specified value     Leakage Current   initial specified value or less     After reflow soldering and restored at room temperature, they meet the characteristics listed below.   Capacitance Change   Within ±10% of initial value     Dissipation Factor   initial specified value or less     Leakage Current   Initial	Leakage Current	Leakage current ≤0.005CV or10uA,whichever is greater (after 2 minutes application of rated voltage)										
Load Life   Max.   Measurement frequency:120Hz		Measurement frequency:120Hz ,Temperature:20°C										
Measurement frequency:120Hz  Rated Voltage (V)  After 1000 hours application of the rated voltage at 105°C, (the polarity needs to exchange every 250hours), they meet the characteristics listed below.  Capacitance Change  Within ±20% of initial specified value  Leakage Current  After reflow soldering and restored at room temperature, they meet the characteristics listed below.  Capacitance Change  Within ±10% of initial value  Dissipation Factor  Capacitance Change  Within ±10% of initial value  Dissipation Factor  Leakage Current  Within ±10% of initial value  Dissipation Factor  Leakage Current  Initial specified value or less  After reflow soldering and restored at room temperature, they meet the characteristics listed below.  Capacitance Change  Within ±10% of initial value  Dissipation Factor  Leakage Current  Initial specified value or less  Leakage Current  Initial specified value or less  Initial specified value or less  Leakage Current  Initial specified value or less	Dissipation Easter(tens)	Rated Voltage (V) 6.3			10		1	35,50				
Rated Voltage (V)  Impedance Ratio ZT/Z20(max.)    Tolerand   Tole	Dissipation Factor(tano)	tan δ(max.)	0.2	24	0.20		0.17		0.15			
Rated Voltage (V)  Impedance Ratio ZT/Z20(max.)    Tolerand   Tole												
Impedance Ratio ZT/Z20(max.)      Total Composition   Z(-25°C)/Z(+20°C)   4   3   2   2   2   2   2   2   2   2   2		Measurement frequency:120Hz										
Impedance Ratio ZT/Z20(max.)	Ctability at Law Tamparatura		Rated Volta	age (V)	ige (V)		10	16,25	35,50			
After 1000 hours application of the rated voltage at 105°C, (the polarity needs to exchange every 250hours),they meet the characteristics listed below.  Capacitance Change Within ±20% of initial value  Dissipation Factor 200% or less of initial specified value  Leakage Current initial specified value or less  Shelf Life After leaving capacitors under no load at 105°C for 1000 hours,they meet the specified value for load life characteristics.  After reflow soldering and restored at room temperature, they meet the characteristics listed below.  Capacitance Change Within ±10% of initial value  Dissipation Factor initial specified value or less  Leakage Current initial specified value or less	Stability at Low Temperature	Impedance Ratio ZT/Z20(max.)		Z(-25°C)/Z(+20°C)		4	3	2	2			
Load Life  Capacitance Change  Dissipation Factor  Leakage Current  Mithin ±20% of initial value  Dissipation Factor  Leakage Current  After leaving capacitors under no load at 105 °C for 1000 hours, they meet the specified value for load life characteristics.  After reflow soldering and restored at room temperature, they meet the characteristics listed below.  Capacitance Change  Within ±10% of initial value  Dissipation Factor  Leakage Current  initial specified value or less  Leakage Current  initial specified value or less				Z(-55°C)/Z(+20°C)		8	6	4	3			
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sistance to Soldering Heat  Capacitance Change Within ±10% of initial value  Dissipation Factor initial specified value or less  Leakage Current initial specified value or less	Shelf Life	After leaving capacitor	s under no load	at 105 ℃ for 10	00 hours,they mee	et the specified	value for load	life characteristics.				
Dissipation Factor initial specified value or less  Leakage Current initial specified value or less	Resistance to Soldering Heat											
Dissipation Factor initial specified value or less  Leakage Current initial specified value or less		Capacitance Change	е	Within ±10% of initial value								
Leakage Current initial specified value or less		Dissipation Factor										
		·										
	Marking	Black print on the case top.										

### □ DRAWING (Unit: mm) 外形圖



<sup>\*1.</sup> Voltage mark for 6.3V is [6V]

6.3V 的產品標識為 [6V]

<sup>\*2.</sup> Applicable to Ø6.3×7.7

# **Aluminum Electrolytic Capacitors**



# **KP** Series

## ● DIMENSIONS(Unit:mm)

size(ΦDxL)	4×5.4	5×5.4	6.3×5.4
Α	1.8	2.1	2.4
В	4.3	5.3	6.6
С	4.3	5.3	6.6
E±0.2	1.0	1.3	2.2
L	5.4	5.4	5.4

#### **■**DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

Cap (µF)	WV(Vdc)	6.	3	1	0	16	6	25	j	3	5	50	0
0.1	0R1											4×5.4	1
0.22	R22											4×5.4	2
0.33	R33											4×5.4	2.8
0.47	R47											4×5.4	4
1	10											4×5.4	8.4
2.2	2R2									4×4.5	8.4	5×5.4	13
3.3	3R3							5×5.4	12	5×5.4	16	5×5.4	17
4.7	4R7					4×5.4	12	5×5.4	16	5×5.4	18	6.3×5.4	20
10	100			4×5.4	17	5×5.4	23	6.3×5.4	27	6.3×5.4	29		
22	220	5×5.4	28	6.3×5.4	33	6.3×5.4	37						
33	330	6.3×5.4	37	6.3×5.4	41	6.3×5.4	49						
47	470	6.3×5.4	45										

Rated Ripple Current (mArms) at 105 °C 120Hz

Case Size: Ф DxL (mm)

#### ☐FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

Frequency	50HZ	120HZ	300HZ	1KHZ	10KHZ~
Coefficient	0.70	1.00	1.17	1.36	1.50