

## KC SERIES ■ ULTRA MINIATURIZED, SLIM SIZE 105°C TYPE

### KEY FEATURES



- **ALUMINUM ELECTROLYTIC CAPACITOR** ■ THT type
- Endurance: 105°C ■ 3 000 hours
- Miniaturized for space critical applications
- Ideal in applications where snap-in capacitors are too big
- High voltage version



### SPECIFICATIONS

Items		Performance Characteristics		
Operating Temperature Range		-25 ~ +105°C		
Rated Voltage Range	$V_R$	400 ~ 450V DC		
Surge Voltage	$V_S$	$V_S = 1.10 \cdot V_R$		
Capacitance Range	$C_R$	82 ~ 220 $\mu$ F		
Cap. Tolerance	$\Delta C$	$\pm 20\%$ (120Hz ■ 20°C)		
Leakage Current (20°C ■ $V_R$ applied)	$I_{LEAK}$	$\leq \sqrt{3} \cdot C_R \cdot V_R$ ■ After 5 minutes [ $I_{LEAK}$ ( $\mu$ A) ; $C_R$ ( $\mu$ F) ; $V_R$ (V) ]		
Dissipation Factor % (20°C ■ 120Hz)	$\tan\delta$	$V_R$ (V DC)	400	450
		$\tan\delta$ (%)	20	20
Low Temperature Characteristics at 120Hz	Z ratio max.	$V_R$ (V DC)	400	450
		Z-25°C/Z+20°C	8	8

Lifetime Test			
Endurance 105°C ( $V_R$ & $I_R$ applied)	Test	<b>3 000 hours</b>	
	$\Delta C/C_R$	$\leq \pm 20\%$ of initial measured value	
	$\tan\delta$	$\leq 200\%$ of initial specified value	
	$I_{Leak}$	$\leq$ the initial specified value	
Shelf Life 105°C ( $V_R = 0$ )	Test	<b>1 000 hours</b>	
	$\Delta C/C_R$	$\leq \pm 20\%$ of initial measured value	
	$\tan\delta$	$\leq 200\%$ 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			

### MULTIPLIER $K_f$ for RIPPLE CURRENT vs. FREQUENCY

$C_R$ ( $\mu$ F) / Frequency (Hz)	50/60	100/120	400	1k	10k	50k ~ 100k
$82 < C_R \leq 220$	0.8	1	1.3	1.45	1.5	1.65

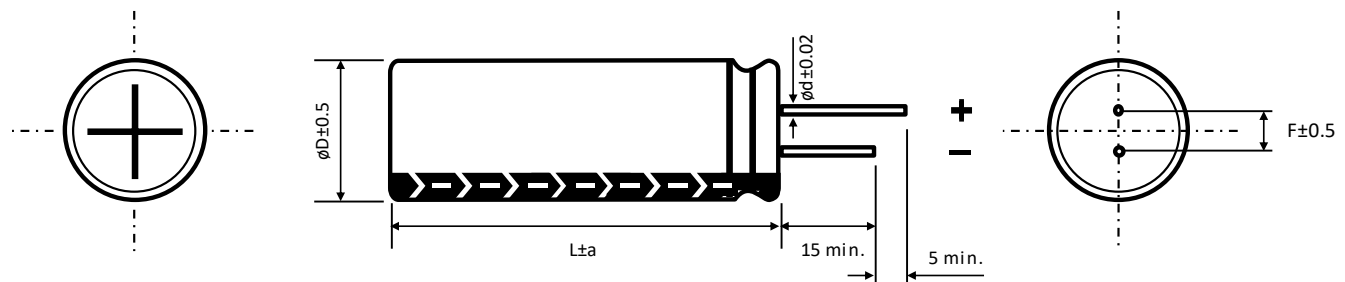
### STANDARD RATINGS

Part number shows bulk version with straight leads

$V_R$ (V)	$C_R$ ( $\mu F$ )	$\phi D$ (mm)	L (mm)	$I_R$ • Max. Ripple Current +105°C • 120Hz (mA rms)	CapXon Part Number
400	82	16	25	600	KC820M400J250A
	100	16	31.5	710	KC101M400J315A
	120	16	35.5	800	KC121M400J355A
	150	16	40	920	KC151M400J400A
	150	18	31.5	890	KC151M400K315A
	180	16	50	1080	KC181M400J500A
	180	18	40	1060	KC181M400K400A
	220	18	45	1200	KC221M400K450A
420	100	16	31.5	690	KC101M420J315A
	120	16	35.5	780	KC121M420J355A
	120	18	31.5	800	KC121M420K315A
	150	16	45	940	KC151M420J450A
	150	18	35.5	920	KC151M420K355A
	180	16	50	1050	KC181M420J500A
	180	18	40	1040	KC181M420K400A
	220	18	50	1220	KC221M420K500A
450	82	16	31.5	640	KC820M450J315A
	100	16	35.5	730	KC101M450J355A
	120	16	40	820	KC121M450J400A
	120	18	31.5	800	KC121M450K315A
	150	16	50	980	KC151M450J500A
	150	18	40	970	KC151M450K400A
	180	18	45	1090	KC181M450K450A
	220	18	50	1220	KC221M450K500A

See "PACKAGING INFORMATION" to taped or formed products.




### DIMENSIONS • All dimensions in mm



$\phi D$	16	18
F	7.5	7.5
$\phi d$	0.8	0.8
a	2	2

## PRECAUTIONS, GUIDELINES AND PACKAGING INFORMATION

Unless otherwise agreed in individual specifications, all products are subject to our “General Precautions and Guidelines” as well as our “Packaging Information”. Please refer to the following links in the table.

		
<a href="#">General Precautions &amp; Guidelines</a>	<a href="#">Packaging Information</a>	<a href="#">3D Models</a>

### DISCLAIMER

All product related data (e.g. specification, statements and general information) are subject to change without any notice. It is necessary that the customer observes all product related technical / application information and handling instructions.

CapXon products are designed and manufactured according to severe quality and safety standards. Under no circumstance, CapXon warrants that any CapXon product is suitable for the purposes intended for your application, even CapXon knows the application. It is customer's duty and obligation to check and make sure that CapXon products are suitable for the purposes intended and select the correct and proper CapXon product. Customers are requested to perform a sufficient validation and reliability evaluation to assure needed safety level and reliability performance by suitable designs and to apply proper safeguards (e.g. redundancies, protective circuits).

Particular operating conditions (ambient temperature, ripple current, voltage, thermal resistance, etc.) as well as storage, production or assembly may affect the performance and the lifetime of the capacitor. Please consult CapXon for lifetime estimation, failure mode considerations or worst-case scenarios according to the product technology, product tolerances / deviations or change of the characteristics of the capacitor due to shipment, storage, handling, production and usage.

For aerospace or military application, life-saving, life-sustaining, safety critical applications or any application where failure may cause severe personal injury or death, please consult us before design-in the capacitor in your application.

Except for the written expressed warranties, CapXon does not impliedly, by assumption or whatever else, warrant, undertake, promise any other warranty or guaranty for any CapXon product.

For further information, please visit our website [www.capxongroup.com](http://www.capxongroup.com) or contact CapXon directly.