



XH SERIES ▪ ULTRA FLAT, 1.4MM HEIGHT MULTILAYER TYPE

KEY FEATURES



- **MLPC - MULTILAYER CONDUCTIVE POLYMER** ▪ SMD type
- Endurance: 105°C ▪ 2 000 hours
- Ultra-low ESR and highest ripple current
- No voltage derating
- No dry-out effect guarantees extremely long life

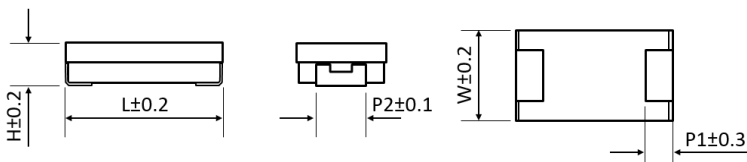


SPECIFICATIONS

Items		Performance Characteristics
Operating Temperature Range		-55 ~ +105°C
Rated Voltage Range	V_R	2 ~ 25V DC
Surge Voltage	V_S	$V_S = 1.25 \cdot V_R$ (2 ~ 16VDC); $V_S = 1.15 \cdot V_R$ (20 ~ 25VDC)
Capacitance Range	C_R	22 ~ 330 μ F
Cap. Tolerance	ΔC	$\pm 20\%$ (120Hz ▪ 20°C)
Leakage Current (20°C ▪ V_R applied)	I_{LEAK}	$\leq 0.1 \cdot C_R \cdot V_R$ (μ A) [≤ 6.3 VDC]; $\leq 0.3 \cdot C_R \cdot V_R$ (μ A) [> 6.3 VDC] After 2 minutes
Dissipation Factor % (20°C ▪ 120Hz)	$\tan\delta$	Not to exceed the values shown in standard ratings
Equivalent Series Resistance (20°C ▪ 100kHz)	ESR	Not to exceed the values shown in standard ratings

Lifetime Test			
Endurance 105°C (V_R applied)	Test	2 000 hours	
	$\Delta C/C_R$	Within $\pm 20\%$ of the initial value	
	$\tan\delta$	< 2 times of the initial limit	
	ESR	Less than 200% of the specified value	
	I_{Leak}	< 3 times of the initial limit	≤ 6.3 VDC
	Within the initial limit	> 6.3 VDC	
Moisture Resistance stored at 60°C (RH 90 ~ 95%)	Test	500 hours	
	$\Delta C/C_R$	Within +70 to -20% of the initial value	
	$\tan\delta$	< 2 times of the initial limit	
	ESR	Less than 200% of the specified value	
	I_{Leak}	< 3 times of the initial limit	≤ 6.3 VDC
	Within the initial limit	> 6.3 VDC	

DIMENSIONS ▪ All dimensions in mm



L	W	H	P1	P2
7.3	4.3	1.4	1.3	2.4



STANDARD RATINGS

Part number shows blister tape on plastic reel

V _R (V)	C _R (μF)	L (mm)	W (mm)	H (mm)	I _{LEAK} (μA, 2min)	tanδ +20°C · 120Hz (%)	Max. ESR +20°C · 100kHz (mΩ)	Max. I _R +45°C · 100kHz (mA rms)	CapXon Part Number
2	330	7.3	4.3	1.4	66	6	9	6300	XH331M0027014P090
							6	7500	XH331M0027014P060
2.5	330	7.3	4.3	1.4	83	6	9	6300	XH331M2R57014P090
							6	7500	XH331M2R57014P060
6.3	68	7.3	4.3	1.4	43	6	15	5100	XH680M6R37014P150
							12	5600	XH680M6R37014P120
	100				15	5100	XH101M6R37014P150		
					12	5600	XH101M6R37014P120		
16	47	7.3	4.3	1.4	225	6	40	3200	XH470M0167014P400
25	22	7.3	4.3	1.4	165	6	40	3200	XH220M0257014P400

MULTIPLIER K_I for RIPPLE CURRENT vs. SURFACE TEMPERATURE T_S

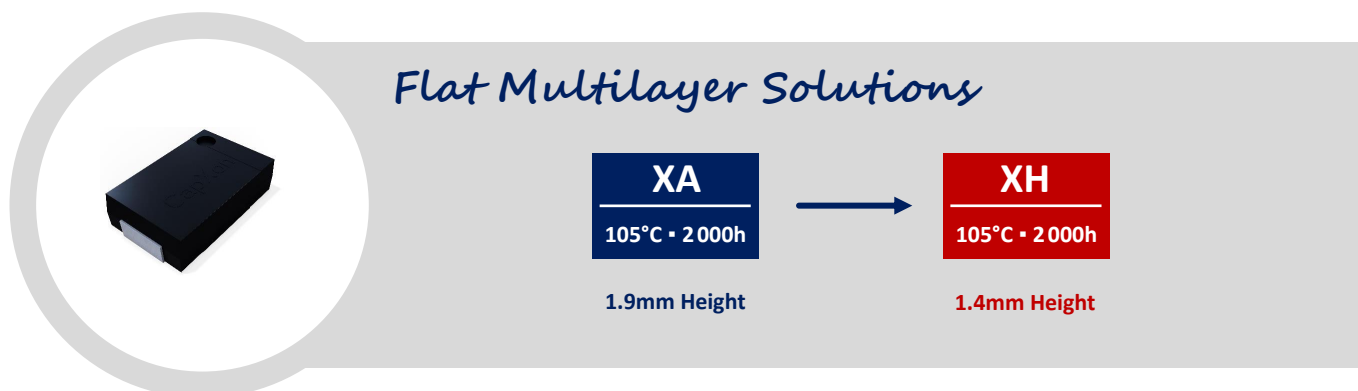
Temperature T_S		$T_S \leq 45^\circ\text{C}$	$45^\circ\text{C} \leq T_S < 85^\circ\text{C}$	$85^\circ\text{C} \leq T_S \leq 105^\circ\text{C}$
K_I	$V_R: 2V \sim 6.3V$	1	0.7	0.25
K_I	$V_R: 8V \sim 25V$	1	0.8	0.5

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.

General Precautions & Guidelines	Packaging Information	3D Models	Reliability Tests

GROUP CHART





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.

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