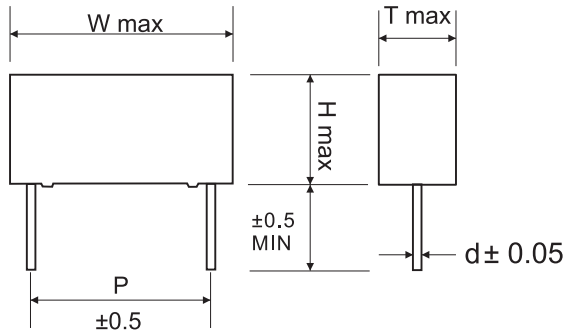


■ INTRODUCTION

MKP-UB series capacitors are constructed specifically for difficult applications; such as, smart meters and other high temperature and high humidity outdoor applications. They feature a very long operational life and excellent temperature stability.



■ FEATURES

- 310VAC, X2 Class
- Excellent long-term stability under tough environmental conditions: such as high ambient temperatures and high humidity
- Very long life
- Tough environment construction
- Flame retardant plastic case and epoxy resin
- In accordance with UL, CUL, ENEC, COC, safety regulations

■ TYPICAL APPLICATIONS

- All applications with high demand on excellent long term stability, such as: Power Meters, Power Supply
- Capacity Power Supply applications
- Outdoor applications
- For severe ambient Temperature and Humidity conditions
- For connection in series with the mains
- Across-the-Line
- EMI Filter (Interference Suppressors)

■ MECHANICAL DATA

- Dielectric Metallized Polypropylene Film
- Winding: non-inductive type
- Leads: Tinned wire
- Outer Coating: Flame retardant plastic case and epoxy filled

■ RELIABILITY TEST

Test Method	Requirements
Temperature 85 °C	Capacitance Change $\Delta C/C$: $\leq 10\%$
Relative Humidity 85%	$\Delta \tan \delta \leq 2.4\%$ at 10KHz, $C \leq 1 \mu F$
Voltage Applied	$\Delta \tan \delta \leq 1.5\%$ at 1KHz, $C > 1 \mu F$
Duration: 1000 hours	Insulation Resistance: $\geq 50\%$ of spec value

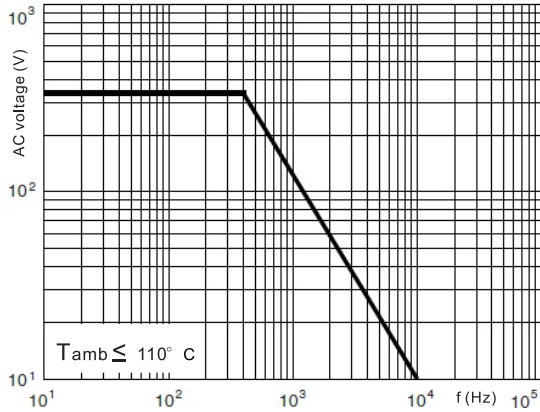
■ ELECTRICAL CHARACTERISTICS (T_a=25°C Unless otherwise specified)

Parameter	Specification				
Operating Temperature Range	~40°C ~ +110°C				
Capacitance Range	0.027μF ~ 10μF				
Capacitance Tolerance	±5%(J), ±10%(K), ±20%(M),				
Rate Voltage (50-60Hz)	310VAC (DC Voltage rating is 750VDC max.)				
Dissipation Factor	0.1% max at 1KHz, 20°C ±5°C				
Insulation Resistance	Terminal to Terminal: ≥15000MΩ at DC 100V (C≤0.33μF)				
	Terminal to Enclosure: ≥30000MΩ at DC 100V				
	≥5000MΩ x μF at DC 100V(C>0.33μF) ≥500MΩ at DC 500V				
Climatic Category	-40°C / +110°C / 56 days in Humidity				
Withstand Voltage	[Between Terminals] Nothing abnormal shall be found when 2200VDC is applied for 3 sec.				
	[Between Terminal and Enclosure] Nothing abnormal shall be found when 2050VAC is applied for 1 minute.				
Pulse Slope dV/dt (V/μs)	Lead Spacing				
	V _R				
	15 mm	22.5 mm	27.5 mm	37.5 mm	
	750VDC	300	180	120	100

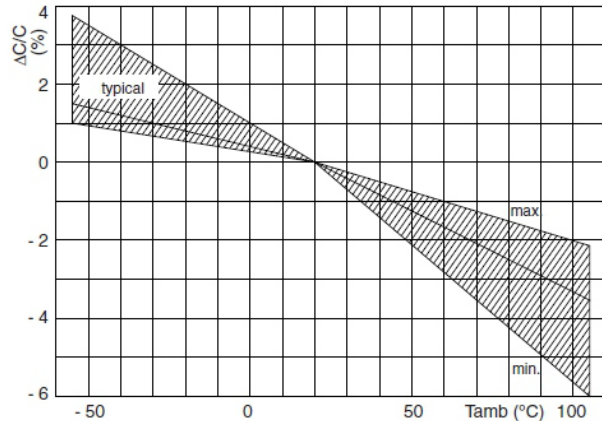
NOTE: See MKP type for standard X2 application
 See MKP-P type for reduced size X2 application
 See MKP-U type for THB Rugged Environment application

■ CHARACTERISTICS (TYPICAL)

Max. RMS Voltage vs Frequency (Typical Curve)



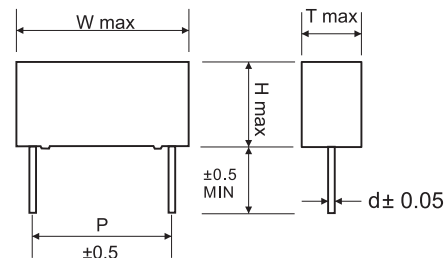
Capacitance vs Temperature (Typical Curve)



■ DIMENSION

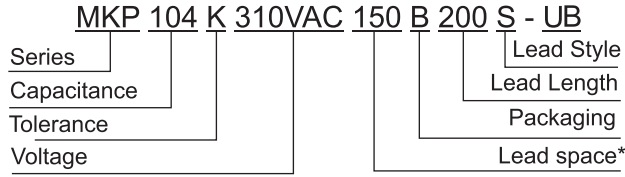
Rating	Maximum Dimension (mm)					
μF	Code	W	H	T	P	d
0.047	473	18	12	6	15	0.8
0.068	683	18	13	7	15	0.8
0.1	104	18	13.5	7.5	15	0.8
0.15	154	18	13.5	7.5	15	0.8
		26	14.5	6	22.5	0.8
0.22	224	18	15	9	15	0.8
		26	15	7.5	22.5	0.8
0.33	334	18	18	10	15	0.8
		26	17	8	22.5	0.8
0.47	474	18	19	12.5	15	0.8
		26	19	10	22.5	0.8
		31	18	9	27.5	0.8
0.56	564	26	20	10	22.5	0.8
		31	20	10	27.5	0.8
0.68	684	26	20	11.5	22.5	0.8
		31	20	10	27.5	0.8
0.82	824	26	22	12	22.5	0.8
		31	21	11	27.5	0.8

Rating	Maximum Dimension (mm)					
μF	Code	W	H	T	P	d
1.0	105	26.5	24	13.5	22.5	0.8
		31.5	23	13.5	27.5	0.8
1.5	155	31.5	24.5	15	27.5	0.8
2.2	225	31	28	18	27.5	0.8
3.3	335	41.5	30	18	37.5	1.0
3.9	395	41.5	32	20	37.5	1.0
4.7	475	41.5	35	21	37.5	1.0
5.6	565	41.5	36	24	37.5	1.0
6.8	685	41.5	39	26	37.5	1.0
8.2	825	41.5	41	29	37.5	1.0
10	106	41.5	45	32	37.5	1.0



NOTE: See MKP type for standard X2 application
 See MKP-P type for reduced size X2 application
 See MKP-U type for THB Rugged Environment application

■ **PART NUMBER EXAMPLE**






* Leadspace is straight lead non-formed original leadspace.

■ **LEAD STYLE**

Code	Style
S	Straight

■ **RECOGNITION**

Agency	File number	Monogram
UL/CUL	E346827	
ENEC	ENEC-2300178	
CQC	CQC11001060989	

■ **STRAIGHT LEAD SPACING (P)**

mm	15	22.5	27.5	37.5
Code	150	225	275	375

■ **LEAD LENGTH FROM SEATING PLANE**

mm	3.5	4	4.5	20
Code	35	40	45	200