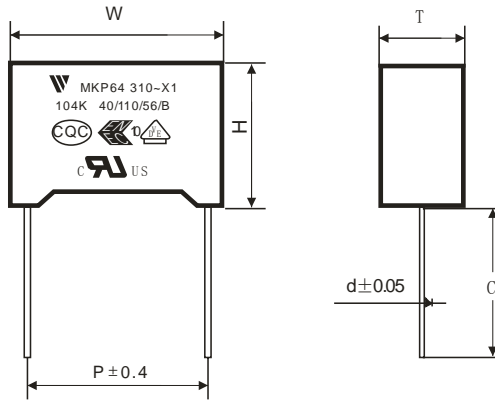


■外形图 Outline Drawing



W±0.4mm, H±0.4mm, T±0.4mm




■特点

- 金属化聚丙烯
- 能承受过压冲击
- 优异的阻燃性能
- 广泛用于电源跨线路等抗干扰场合

■ Features

- Metallized polypropylene structure
- Withstanding overvoltage stressing
- Excellent active and passive flame resistant abilities
- Widely used in across-the-line, interference suppression circuit, etc.

■安全认证 Safety Approvals

●		CQC (中国)	GB/T 14472-1998 X1, 300VAC, 0.010μF~2.2μF
●		ENEC-VDE (欧盟)	EN 60384-14:2005 X1, 300VAC, 0.010μF~2.2μF
●		UL/CUL (美国/加拿大)	UL1414, CSA C22.2 No.1 250 VAC, 0.0047μF to 1.0μF
			UL1283, CSA C22.2 No.8, 310 VAC, 0.010μF to 6.8μF
●	CB TEST CERTIFICATE		IEC 60384-14:2005 X1, 310 VAC, 0.010μF~2.2μF, 40/110/56/B

■ 技术要求 Specifications

气候类别/阻燃等级 Climatic Category/Passive Flammability Class	40/110/56/B		
工作温度范围 Operating Temperature Range	-40°C ~ +110°C		
电容器类别 Class	Class X1		
额定电压 Rated Voltage (U_R)	310Vac		
最大连续交流电压 Maximum continuous AC voltage	330Vac		
最大连续直流电压 Maximum continuous DC voltage	800Vdc		
电容量范围 Capacitance Range	0.010 μ F~2.2 μ F		
电容量偏差 Capacitance Tolerance	$\pm 10\%$ (K), $\pm 20\%$ (M)		
耐电压 Voltage Proof	引线之间 Between Terminals:	2 850Vdc(2s)	
	极壳之间 Between Terminals To Case:	2 120Vac (1min)	
绝缘电阻 Insulation Resistance	$\geq 15\ 000M\Omega$, $C_R \leq 0.33\mu F$ $\geq 5\ 000s$, $C_R > 0.33\mu F$ (20°C, 100V, 1min)		
损耗角正切 Dissipation Factor	$0.010\mu F < C_R \leq 0.47\mu F$	$\leq 10 \times 10^{-4}$ (1kHz, 20°C)	$\leq 20 \times 10^{-4}$ (10kHz, 20°C)
	$0.47\mu F < C_R \leq 1.0\mu F$	$\leq 20 \times 10^{-4}$ (1kHz, 20°C)	$\leq 40 \times 10^{-4}$ (10kHz, 20°C)
	$1.0\mu F < C_R$	$\leq 30 \times 10^{-4}$ (1kHz, 20°C)	-----

■ Test Method And Performance

No.	Item	Performance	Test Method (IEC 60384-14)
1	Solderability	Good quality of tinning	Solder temperature: 245°C ±5°C Immersion time: 2.0s±0.5s
2	Terminal strength	There shall be no visible damage	Tense: 10N Bend: 5N The terminals shall be bent 2 times in each direction
3	Resistance to solder heat	There shall be no visible damage $\Delta C/C \leq \pm 5\%$ (relative to the initial value)	Solder temperature: 260°C ±5°C Immersion time: 10s ±1s
4	Solvent resistance of the marking	The marking shall be legible	Solvent: Industrial isopropanol. Solvent temperature: 23°C ±5°C Dipping time: 5min ±0.5min Condition: scrub Scrub material: absorbent cotton Reverting time: No
5	Initial measurement	Capacitance, Tgδ	
	Rapid change of temperature	There shall be no evidence of deterioration.	$\theta_A = -40^\circ\text{C}$, $\theta_B = +110^\circ\text{C}$ 5 cycles Duration: t=30min
	Vibration	There shall be no evidence of deterioration.	Amplitude 0.75mm or acceleration 98m/s ² (whichever is the smaller severity), f: 10Hz to 500Hz. Three directions, 2h for each direction, total 6h.
	Bump	There shall be no evidence of deterioration.	4 000 times, Acceleration: 400m/s ² , Pulse duration, 6ms
	Final measurement	There shall be no visible damage $\Delta C/C \leq \pm 5\%$ (relative to the initial value)	
6	Climate sequence	Initial measurement	
		Dry heat	+110°C, 16h
		Damp heat, Cyclic	Test Db, Severity: b, the first cycle
		Cold	-40°C, 2h
		Damp heat, cyclic other	Test Db, Severity b, the other cycles,
		Final measurement	There shall be no visible damage, legible marking $\Delta C/C \leq \pm 5\%$ (relative to the initial value) Increase of tgδ: $C_R \leq 1\mu\text{F}$: ≤ 0.008 (10kHz) $C_R > 1\mu\text{F}$: ≤ 0.005 (1kHz) Dielectric strength : there shall be no permanent breakdown or flashover I.R.: $\geq 50\%$ of the rated value

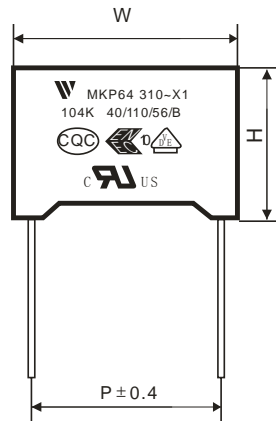
No.	Item	Performance	Test Method (IEC 60384-14)
7	Damp heat steady state	There shall be no visible damage, legible marking $\Delta C/C \leq \pm 5\%$ (relative to the initial value) Increase of tgδ:	Temperature: 40°C ±2°C Humidity: 93 ⁺² / ₋₃ %RH Duration: 56 days

		$C_R \leq 1\mu\text{F}$: ≤ 0.008 (10kHz) $C_R > 1\mu\text{F}$: ≤ 0.005 (1kHz) Dielectric strength : there shall be no permanent breakdown or flashover I.R.: $\geq 50\%$ of the rated value	
8	Impulse voltage	There are three or more waveforms which indicate that no self-heating breakdown have occurred when it is monitored by the monitor	Each individual capacitor shall be subjected to 24 impulses of the same polarity (when any three successive impulses are shown by the monitor to have a wave form indicating that no self-healing breakdown have taken place the impulses can be stopped), the time between impulses shall not be less than 10S, and the peak value of the voltage impulse: 4.0Kv(suitable for $C_R \leq 1\mu\text{F}$; When $C_R > 1\mu\text{F}$, the capacitor can endure pulse voltage value is $4.0/\sqrt{C_R}$ Kv)
9	Endurance	There shall be no visible damage, legible marking $\Delta C/C \leq \pm 10\%$ (relative to the initial value) Increase of $\text{tg}\delta$: $C_R \leq 1\mu\text{F}$: ≤ 0.008 (10kHz) $C_R > 1\mu\text{F}$: ≤ 0.005 (1kHz) Dielectric strength : There shall be no breakdown or flashover I.R. : $\geq 50\%$ of the rated value	+110°C, 1.25U _R Va.c., 1 000h The voltage shall be subjected to 1000Vrms for 0.1s every one hour during test.
10	Charging and discharging	$\Delta C/C \leq \pm 10\%$ (relative to the initial value) Increase of $\text{tg}\delta$: $C_R \leq 1\mu\text{F}$: ≤ 0.008 (10kHz) $C_R > 1\mu\text{F}$: ≤ 0.005 (1kHz) I.R.: $\geq 50\%$ of the rated value	Times: 10 000 Duration of charging: 0.5s Duration of discharging: 0.5s Charging voltage: $\sqrt{2}U_R$ Vd.c. Charging resistance: $220/C_R$ (Ω) or the current $\leq 1.0\text{A}$ (whichever is the minor) Discharging resistance: $R = \frac{\sqrt{2}U_R}{C_R \times \frac{dU}{dt}} (\Omega)$ C _R : Capacitance (μF)

No.	Item	Performance	Test Method (IEC 60384-14)
11	Passive flammability	The flaming time of each capacitor shall not go beyond 10s after it is taken apart from the flame. Drop of each capacitor caused by flame shall not fire the tissue below.	Ref.item 4.17 Needle flame test The category of flammability: B Expose time: 1 time Capacitor Volume Exposing time

			$250 < V(\text{mm}^3) \leq 500$ 20s $500 < V(\text{mm}^3) \leq 1750$ 30s $V(\text{mm}^3) > 1750$ 60s
12	Active flammability	The cheese cloth around the capacitor shall not burn with a flame.	<p>The specimens shall be individually wrapped in at least 1, but not more than 2, complete layers of cheesecloth, the cheesecloth shall be untreated pure cotton cloth.</p> <p>Each sample shall be subjected to 20 discharged, the interval between successive discharges shall be 5s.</p> <p>$U_i = 4.0\text{kV}_0^{+7}\%$</p> <p>$U_R$ be applied and be maintained for 120_0^{+10} s after the last discharge.</p>

■ Marking



Marking Introduction:

Sign	explain	Sign	explain
W	Brand	40/110/56/B	Climate category / Passive Flammability Class
MKP64	Type	CQC	CQC Approval
310~	Rated voltage	ENEC-VDE	ENEC-VDE Approval
X1	Class	UL US	UL&CUL Approval
104K	Rated capacitance and tolerance		