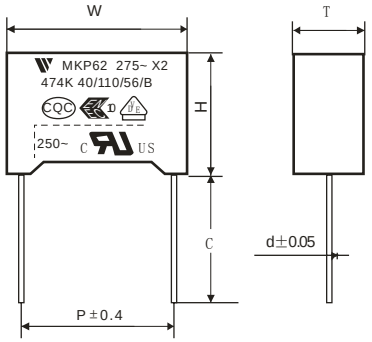
■外形图 Outline Drawing



W±0.4mm, H±0.4mm, T±0.4mm

■特点

- ●专门设计用于与 100~240VAC 电源串联的电容降压电路场合，如电表、LED 驱动模块等
- ●金属化聚丙烯
- ●自愈性能优异,能承受浪涌电压冲击
- ●长期负载下优异的电容量稳定性
- ●优异的防潮性能
- ●优异的阻燃性能

■ Features

- ● This is specifically designed for applications in serial with the 100~240Vac main, i.e.: capacitive divider, for example, energy meter,LED driver, etc.
- ● Metallized polypropylene structure
- ● Good self-healing properties, withstanding surge voltage stressing
- ● Long stability of capacitance
- ● Good properties in damp environment
- ● Excellent active and passive flame resistant abilities

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 14472 (IEC60384-14)	
安全认证 Safety Approvals	CQC ENEC-VDE UL-CUL	
电容器类别 Class	Class X2 类	
气候类别 Climatic Category/Passive Flammability Class	40/110/56/B	
工作温度范围 Operating temperature range	-40℃ ～+110℃	
额定电压 Rated Voltage	275VAC	
电容量范围 Capacitance Range	0.15μF～1.0μF (available on request)	
容量偏差 Capacitance Tolerance	±10%(K), ±20%(M)(Other tolerance available on request)	
耐电压 Voltage Proof	引线之间 Between Terminals:	2 000Vdc(2s) C_R≤1.0μF
	极壳之间 Between Terminals To Case:	2 050Vac(60s)
承受的脉冲电压 Endure impulse voltage	2500V	
绝缘电阻 Insulation Resistance	≥15 000MΩ , C_R≤0.33μF ≥5 000s, C_R>0.33μF (20℃, 100V ,1min)	
损耗角正切 Dissipation Factor	≤10×10^{-4}(1kHz,20℃) Typical value 3×10^{-4} ≤20×10^{-4}(10kHz,20℃) Typical value 8×10^{-4}	

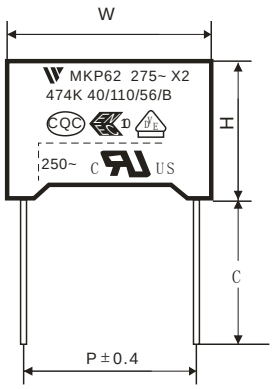
Test Method And Performance

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: 0.50<d≤0.80, 10N 0.80<d≤1.25, 20N Bend: 0.50<d≤0.80, 5N 0.80<d≤1.25, 10N The terminals shall be bent 2 times in each direction
3	Resistance to solder heat		There shall be no visible damage ΔC/C ≤±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.	θ_A=-40˚C, θ_B =+110˚C 5 cycles Duration: t=30min
	Vibration		There shall be no evidence of deterioration.	Amplitude 0.75mm or acceleration 100m/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 ΔC/C ≤±5%(relative to the initial value)	
6	climate sequence	Initial measurement		
		Dry heat		+110℃, 16h
		Damp heat,Cyclic		Test Db, Severity: b, the first cycle
		Cold		-40℃, 2h
		Damp heat, cyclic other		Test Db, Severity b, the other cycles,
		Final measurement	There shall be no visible damage, legible marking ΔC/C ≤±5%(relative to the initial value) Increase of tgδ: C_R≤1μF: ≤0.008 (10kHz) C_R>1μF: ≤0.005 (1kHz) Dielectric strength : there shall be no permanent breakdown or flashover I.R.: ≥ 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 ΔC/C ≤±5%(relative to the initial value) Increase of tgδ: C_R≤1μF: ≤0.008 (10kHz) C_R>1μF: ≤0.005 (1kHz) Dielectric strength: there shall be no permanent breakdown or flashover I.R.: ≥ 50% of the rated value	Temperature:40˚C ±2˚C Humidity: 93^{+2}_{-3} %RH Duration: 56 days
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: 2.5kV(suitable for CR≤1μF; When CR>1μF, the capacitor can endure pulse voltage value is $2.5/\sqrt{C_R}$ kV)
9	Endurance	There shall be no visible damage, legible marking ΔC/C≤±10%(relative to the initial value) Increase of tgδ: C_R≤1μF: ≤0.008 (10kHz) C_R>1μF: ≤0.005 (1kHz) Dielectric strength : There shall be no breakdown or flashover I.R. : ≥ 50% of the rated value	+110˚C, 1.25U_RVa.c., 1 000h The voltage shall be subjected to 1000Vrms for 0.1s every one hour during test.
10	Charging and discharging	ΔC/C ≤±10%(relative to the initial value) Increase of tgδ: C_R≤1μF: ≤0.008 (10kHz) C_R>1μF: ≤0.005 (1kHz) I.R.: ≥ 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 ≤1.0A (whichever is the minor) Discharging resistance: $R=\frac{\sqrt{2}U_R}{C_R\times\frac{dU}{dt}}(\Omega)$ C_R: Capacitance (μF) dU/dt(V/us) : 100V/μs

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(mm^3)≤500 20s 500<V(mm^3)≤1750 30s V(mm^3)>1750 60s
12	Active flammability	The cheese cloth around the capacitor shall not burn with a flame.	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. Each sample shall be subjected to 20 discharged,the interval between successive discharges shall be 5s. Ui=2.5kV_0^{+7} % U_R be applied and be maintained for 2 min after the last discharge.

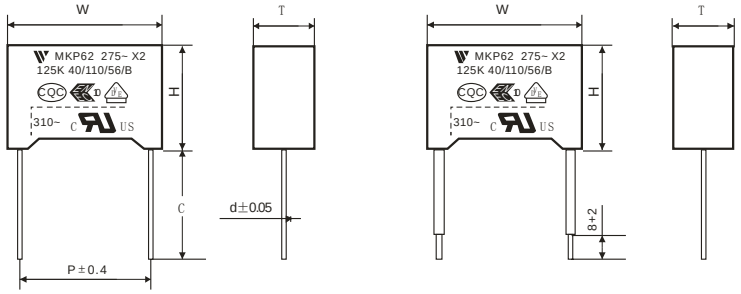
■ Marking



Marking Introduction:

Sign	explain	Sign	explain
W	Brand		ENEC-VDE Approval
MKP62	Type		CQC Approval
275~	Rated voltage		UL,CUL Approval
X2	Class	250~/310~	Rated voltage (UL, UCL)
474K	Rated capacitance and tolerance	40/110/56/B	Climate category / Passive Flammability Class

■外形图 Outline Drawing



W±0.4mm, H±0.4mm, T±0.4mm

Lead Wire　　Insulated Lead Wire(P≥10mm)

Note: There are two kind of the insulated lead wire:
1.Insulated rigid leads;
2.Insulated flexible leads.

Lead Wire Dia.	0.6	0.8	1.0
Insulated Lead Wire Gauge	AWG22	AWG20	AWG18

■特点

- ●金属化聚丙烯
- ●能承受过压冲击
- ●优异的阻燃性能
- ●广泛应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	CQC （中国）	GB/T 14472-1998, X2, 275/300VAC,0.0010μF~10.0μF, 40/110/56/B
•	ENEC 10 DVE	ENEC-VDE (欧盟)	EN 60384-14:2005, X2,275/300VAC,0.0010μF~10.0μF, 40/110/56/B
•	c UL us	UL/CUL (美国/加拿大)	UL1414, CSA C22.2 No.1, 250 VAC, 0.001μF to 1.0μF
			UL1283, CSA C22.2 No.8, 310 VAC, 0.001μF to 45.0μF
•	**CB TEST CERTIFICATE**		IEC 60384-14:2005, X2, 275/300 VAC, 0.001μF~10.0μF, 40/110/56/B

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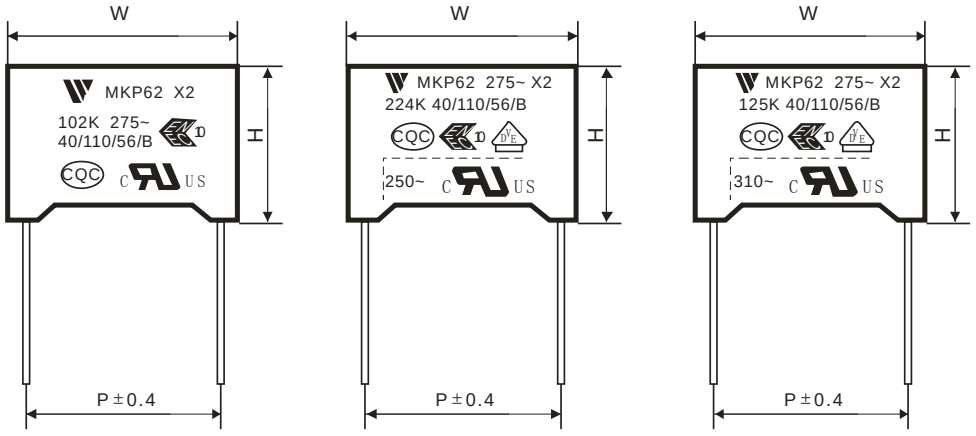
■ Marking



P=7.5 or 10.0mm　　P≥15.0mm and C_R≤1.0μF　　C_R＞1.0μF

Marking Introduction

Sign	explain	Sign	explain
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MKP62	Type		CQC Approval
275~	Rated voltage		UL,CUL Approval
X2	Class	250~/310~	Rated voltage (UL, UCL)
102/224/125K	Rated capacitance and tolerance	40/110/56/B	Climate category / Passive Flammability Class