



MESSRS: Megasan

Date: 2017 year 10 month 18 day

APPROVE SHEET

Description : INTERFERENCE SUPPRESSION CLASS X2
(MKP – ROHS)

Type No. : MKP-474K0305AB115B

Customer Type No. : _____

APPROVED BY

HUA JUNG COMPONENTS CO., LTD

Head Office:

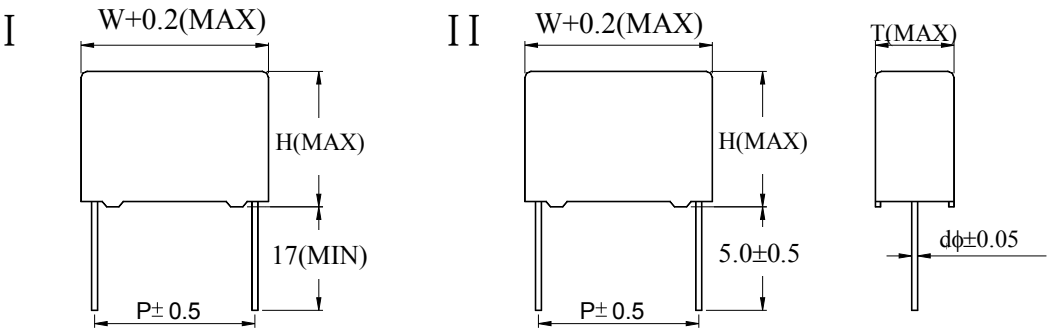
7F,NO. 13,Lane 120,Sec.1,Nei Hu Road,Taipei,Taiwan.R.O.C.

TEL:+886 2-87514568 FAX: +886 2-26597519

Factory:

No.104,Ke Ji E.Road,Shijie,Dongguan,Guangdong.P.R.C.

TEL: +86 769-83075098 FAX: +86 769-83075098+671



TYPE : MKP -X2

UNIT:mm

CUSTOMER TAPE NO	CAP (uF)	CAP TOL ± %	RATED VOLTAGE (VAC)	1 KHZ DF MAX (%)	DIMENSION					Fig	HJC TYPE NO.
					W	H	T	P	d φ		
	0.47	10	305	0.10	18	18	9	15	0.8	II	MKP-474K 0305AB115B

HUA JUNG COMPONENTS CO.,LTD

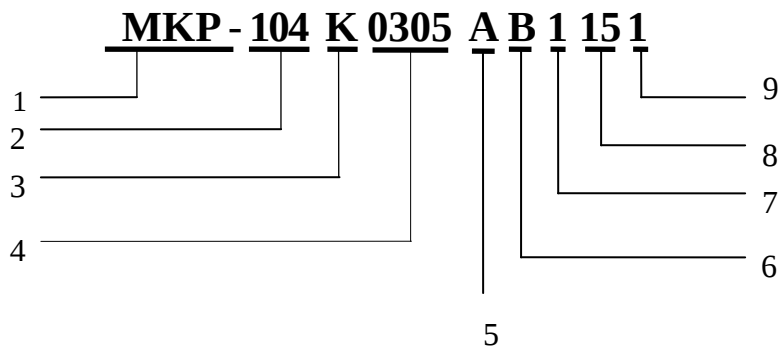
Undertaker

Check

Approved

MKP 0.1 uF K 305 VAC

18*11*5mm P: 15.0mm

**1. TYPE OF CAPACITOR:**

CODE	PPN—	MEF—	MPP—	PPS—	MPPN	MFTD	MPS—	MKP—	MEB—	MEA—	MET—	MFF—
TYPE	PPN	MEF	MPP	PPS	MPPN	MFTD	MPS	MKP	MEB	MEA	MET	MFF

CODE	MPSA	PPSB	MPT—	MPA—	MP2—	MP3—	MP4—	MP5—	PEI—	MPB—	HP4—	HP5—
TYPE	MPSA	PPSB	MPT	MPA	MP2	MP3	MP4	MP5	PEI	MPB	HP4	HP5

2. CAPACITANCE:

Express in picofarad (1 Microfarad = 1,000,000 Picofarads)

first two digits represent significant figures, third digit

specifies the number of zero to follow ex.

102=0.001uF**105=1.0uF****103=0.01uF****106=10.0uF****104=0.1uF****3. TOLERANCE:**

J=5% K=10% M=20%

4. RATED VOLTAGE:

CODE	0250	0275	0300	0305	0630	1000	1200	1600	2000
TYPE	250V	275V	300V	305V	630V	1000V	1200V	1600V	2000V

5. VOLTAGE TYPE:

A=A.C. VOLTAGE

D=D.C. VOLTAGE

H=H-Pulse VOLTAGE

6. PACKAGING TYPE:

B=BULK

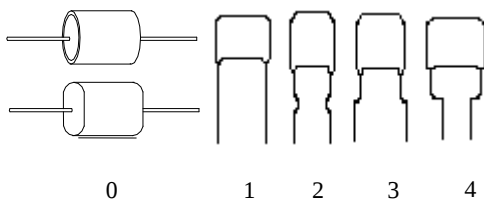
T=TAPING

7. LEAD CONFIGURATION

0=AXIAL(include PSR, PSA) 1=STRAIGHT LEAD

2=FORMED LEAD 3=FORMED LEAD

4=FORMED LEAD *=FORMED LEAD

**9. CODE FOR FINAL LEAD LENGTH (RADIAL): Unit:mm**

1 =17(MIN)

6 =15.0

2 = 3.5

7 =20.0

3 = 4.0

8 =TAP

4 = 4.5

9 =6

5 = 10.0

0 = AXIAL (include PSR , PSA)

B = 5.0

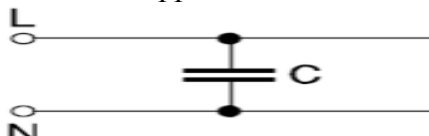
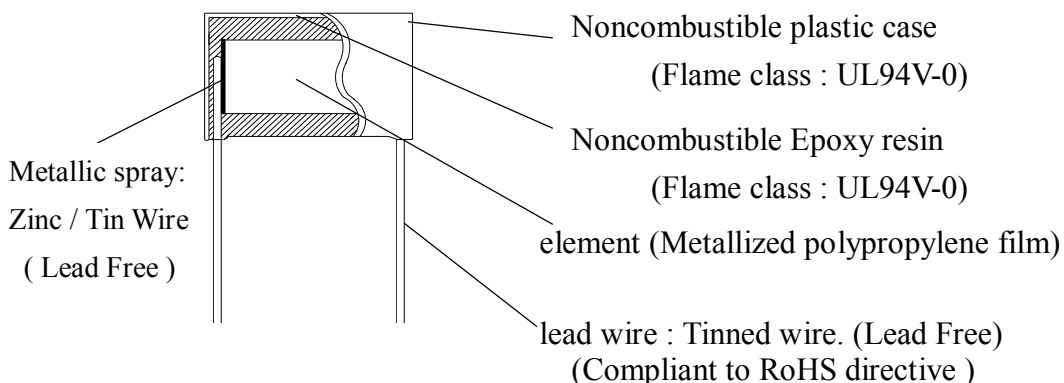
S =3.0

8. CODE FOR FINAL LEAD PITCH (RADIAL): Unit:mm

05 = 5.0 07 = 7.5 10 = 10.0 12 = 12.5 15 = 15.0 16 = 16.5 17 = 17.5

20 = 20.0 22 = 22.5 25 = 25.0 27 = 27.5 30 = 30.0 32 = 32.5

35 = 35.0 37 = 37.5 40 = 40.0 42 = 42.5 00 = AXIAL(include PSR , PSA)

TYPE: MKP		METALLIZED POLYPROPYLENE CAPACITOR		Page.:03
PRODUCT SPECIFICATION				09-17 Rev6
1.SCOPE	This specification covers the requirement for Metallized polypropylene dielectric fixed capacitor which is approved by UL/CUL, CSA, ENEC- SEMKO, CBand CQC. Typical applications:interference suppression and<<across-the-line>>applications  If used in the 3-Phase circuits, Please contact our technical engineer or our FAE for more details.			
2.PRODUCT NAME	Metallized polypropylene capacitor, Type MKP			
3. PRODUCT RANGE	Operating temperature range.	-40 to +110°C (ENEC,UL/CUL,IEC 60384-14) -40 to +110°C (CQC,GB/T6346.14-2015) -40 to +110°C (CSA,IEC 60384-14) (including temperature rise on unit surface)		
	Rated AC voltage (50/60Hz)	250-310VAC (ENEC,UL/CUL,IEC 60384-14) 305VAC max (CQC,GB/T6346.14-2015) 250-310VAC (CSA, IEC 60384-14) 630VDC max.		
	Capacitance range	Refer to the individual drawing.		
	Capacitance tolerance	Refer to the individual drawing.		
	4.APPEARANCE	1. Marking shall be legible in the right place. 2. Plating of lead wire shall be perfect without rust. 3. Coating shall be without any crack, rent, pinhole etc .		
5.CONSTRUCTION	The capacitor has a non-inductive construction, wound with Metallized polypropylene film dielectric. The capacitor is enclosed in noncombustible plastic case, filled with noncombustible filling resin, and has two leads.  Metallic spray: Zinc / Tin Wire (Lead Free) Noncombustible plastic case (Flame class : UL94V-0) Noncombustible Epoxy resin (Flame class : UL94V-0) element (Metallized polypropylene film) lead wire : Tinned wire. (Lead Free) (Compliant to RoHS directive)			
6.DIMENSIONS	As specified in the individual drawing.			
7. CONDITIONAL STANDARD TEST	The test shall be conducted at a temperature of from 15°C to 35°C, a humidity of from 45% to 75%. However the test shall be conducted at a temperature of 20±5°C, a humidity of 65±5%,when doubt is entertained about judgment.			
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TYPE: MKP			Page.:04				
8.CHARACTER							
No.	Item	Performance	Testing method				
1	Voltage Proof	[Between terminals]: Nothing abnormal shall be found, when a voltage specified below is applied : 2200VDC for 3 sec. [Between terminals and enclosure] : Nothing abnormal shall be found, when a voltage of 2050VAC is applied for 1 minute. The capacitor shall be applied the voltage through a resistor of 2KΩ or more when charge and discharge	IEC 60384-14 4.2.1				
2	Insulation resistance	[Between terminals] : 15000MΩ or more (when C ≤ 0.33 μF) at DC100V 5000MΩ. μF or more (when C > 0.33 μF) at DC100V (2000MΩ. μF or more at DC500V) [Between terminals and enclosure] : 30000MΩ or more at DC100V 500MΩ or more at DC500V When the reading of measuring instrument becomes steady at a value after a voltage of DC 100±15V or DC 500±50V is applied for 1 minute ±5 seconds. (Ambient temperature at 20°C)	IEC 60384-14 4.2.5				
3	Capacitance	Within a range of specified value. (Measured at a frequency of 1 ± 0.2 Khz , at 20 °C, 1Vrms)	IEC 60384-14 4.2.2				
4	Dissipation factor	0.1 % or less (Measured at a frequency of 1 ± 0.2 Khz , at 20 °C, 1Vrms)	IEC 60384-14 4.2.3				
5	Termination strength	[Tensile strength] The load specified below shall be applied to the terminal in its draw-out direction gradually up to the specified value and held thus for 10± 1 seconds. After the test , no breaking or loosening of the terminal shall be found. <table><tr><td>Lead wire diameter [mm]</td><td>Tensile force [N]</td></tr><tr><td>over 0.5 to 0.8</td><td>10.0</td></tr></table>	Lead wire diameter [mm]	Tensile force [N]	over 0.5 to 0.8	10.0	IEC 60384-14 4.3
		Lead wire diameter [mm]	Tensile force [N]				
over 0.5 to 0.8	10.0						
	[Bending strength] While the load specified below is applied to the lead wire, the body of the capacitor shall be bent 90° and returned to the original position. This operation shall be conducted in a few seconds. Then the body shall be bent 90° , at the same speed in the opposite direction and returned to the original position. After the test , no breaking or loosening of the terminal shall be found. <table><tr><td>Lead wire diameter [mm]</td><td>Bending force [N]</td></tr><tr><td>over 0.5 to 0.8</td><td>5.0</td></tr></table>	Lead wire diameter [mm]	Bending force [N]	over 0.5 to 0.8	5.0	IEC 60384-14 4.3	
Lead wire diameter [mm]	Bending force [N]						
over 0.5 to 0.8	5.0						
HUA JUNG COMPONENTS CO.,LTD							

TYPE:MKP			Page.:05
No.	Item	Performance	Testing method
6	Vibration proof	The frequency shall be varied form from 10Hz to 55Hz at 1.5mm amplitude and back to 10Hz In approximately 1 minute intervals. This motion shall be applied for a period of 2 hours in each of 3 mutually perpendicular directions. During the last 30 min of vibration in each direction, checks shall be made for open or short-circuiting and interruption. Performance : Bending strength : There shall be no open or short-circuiting and the connections must be stabilized. Appearance :There shall be no such mechanical damage as terminal damage etc.	IEC 60384-14 4.7
7	Solder ability	The lead wire shall be immersed into soldering bath at 245 ± 5 °C for 2.5 ± 0.5 seconds up to the depth of $1.5+0.5/-0$mm from the bottom of the body. Performance: At least 95% of the circumferential face of lead wire up to immersed level shall be covered with new solder.	IEC 60384-14 4.5
8	Soldering heat resistance	The lead wire shall be immersed into soldering bath and its depth of dipping shall be up to $1.5+0.5/-0$mm from the root of terminals by using a heat shielding plate. Temperature and duration of soldering hall be 350 ± 10 °C for 3.5 ± 0.5 seconds or 260 ± 5 °C for 10 ± 1 seconds. After the immersion is finished, the capacitor shall be let alone at ordinary temperature and humidity for 1 ± 0.5 hours. After this , the capacitor shall be satisfied with the following performance. Appearance : No remarkable change. Withstand voltage : Nothing abnormal shall be found , when a voltage specified in item 8.1 is applied for 1 minute . Insulation resistance : Insulation resistance shall conform to Item 8.2. Change rate of capacitance : $\Delta C/C \leq \pm 3\%$ of the value before the test.	IEC 60384-14 4.4
9	Cold resistance	The capacitor shall be placed in the testing chamber at -40 ± 3 °C for $2+1/-0$ hours .After the test , the capacitor shall be let alone at the ordinary condition for 1.5 ± 0.5 hours, and shall be satisfied with the following performance. Change rate of capacitance $\Delta C/C \leq \pm 5\%$ of the value before the test.	IEC 60384-14 4.11.4
10	Dry Heat resistance	The capacitor shall be placed in the testing oven at $+110\pm 2$ °C for $16+1/-0$ hours. After the test , the capacitor shall be let alone at the ordinary condition for 1.5 ± 0.5 hours, and shall be satisfied with the following performance. Insulation resistance: $\geq 50\%$ of the initial specified value. Change rate of capacitance $\Delta C/C \leq \pm 5\%$ of the value before the test.	IEC 60384-14 4.11.2
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TYPE: MKP			Page.:06
No.	Item	Performance	Testing method
11	Damp heat, steady state	The capacitor under test shall be put in the testing oven and kept at condition of the temperature $+40\pm 2^{\circ}\text{C}$ and the humidity at 90 to 95% for 56 days and then shall be let alone at ordinary condition for 1.5 ± 0.5 hours. After the test , the capacitor shall be satisfied with the following performance. Appearance : No remarkable change. Withstand voltage : [between terminals and enclosure] Nothing abnormal shall be found , when a voltage of 2050VAC is applied for 1 minute. Insulation resistance: [between terminals] 7500MΩ or more (when $C\leq 0.33\mu\text{F}$) at DC100V 2500MΩ. μF or more (when $C> 0.33\mu\text{F}$) at DC100V [between terminals and enclosure] 15000MΩ or more at DC100V Change rate of capacitance : $\Delta C/C \leq \pm 5\%$ of the value before the test . Dissipation factor : $\leq 0.15\%$ at 1 KHZ.	IEC 60384-14 4.12
12	Rapid change of Temp.	The capacitor under the test shall be kept in the testing oven and kept at condition of the temperature of $-40\pm 3^{\circ}\text{C}$ for 30 ± 3 minutes. After this, the capacitor shall be let alone at the ordinary temperature for 3 minutes or less. After this , the capacitor under the test shall be kept in the testing oven and kept at condition of the temperature of $+110\pm 2^{\circ}\text{C}$ for 30 ± 3 minutes. Then the capacitor shall be let alone at the ordinary temperature for 3 minutes or less. This operation shall be counted as 1 cycle , and it shall be repeated for 5 cycles successively . After the test , the capacitor shall be let alone at the ordinary condition for 1.5 ± 0.5 hours, and shall be satisfied with the following performance. Appearance : No remarkable change . Insulation resistance : $\geq 50\%$ of initial specified value. Change rate of capacitance : $\Delta C/C \leq \pm 10\%$ of the value before the test . Dissipation factor : $\leq 0.12\%$ at 1 KHZ.	IEC 60384-14 4.6
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TYPE: MKP			Page.:07
No.	Item	Performance	Testing method
13	Endurance	The capacitor shall be submitted to an endurance of 1000h at 110°C at a voltage (*) except that once every hour the voltage shall be increased to 1000Vrms for 0.1 second. Voltage (*) : 125% of rated voltage After the test , the capacitor shall be satisfied with the following performance. Appearance : No remarkable change . Withstand voltage : [between terminals] Nothing abnormal shall be found , when a voltage specified below is applied for 1 minute. DC 1183V [between terminals and enclosure] Nothing abnormal shall be found , when a voltage of AC 2050V is applied for 1 minute. Change rate of capacitance : Within $\Delta C/C: \leq \pm 10\%$ of the value before the test . Insulation resistance : [between terminals] 7500 MΩ or more (when $C \leq 0.33 \mu F$) at DC100V 2500 MΩ. μF or more (when $C > 0.33 \mu F$) at DC100V [between terminals and enclosure] 3000 MΩ or more at DC100V Dissipation factor : $\leq 0.15\%$ at 1KHZ.	IEC60384-14-4.14
14	Impulse voltage	The capacitor shall be subjected to a maximum of 24 impulses of the same polarity. If any three successive impulses are shown by the monitor to have had a waveform indicating that no self-healing breakdowns have occurred, then the capacitor shall be no more subjected to impulses. Impulse voltage(X2): when $C \leq 1.0\mu F$ $U_p = DC 2.5 (kV)$ when $C > 1.0\mu F$ $U_p = DC 2.5\sqrt{C} (kV)$ Appearance : No remarkable change. Others : There shall be no permanent breakdown or flashover. After impulse voltage, the capacitor shall be subjected to high temperature loading (item 13).	IEC 60384-14-4.13
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10. Approved standard

Agency	Country	Specification	File number
UL/CUL	U.S.A	IEC 60384-14 MKP 0.0047~10.0uF 310VAC, 110°C	E149075
CSA	Canada	CSA IEC 60384-14,MKP0.0047~10.0uF 310VAC ,110 °C	2294211
ENEC	ENEC Semko	IEC 60384-14 MKP 0.0047~10.0 uF 250-310VAC , 40/110/56/B	N0.SE/0252-5D
CB	Semko	IEC 60384-14 MKP 0.0047~10.0 uF 250-310VAC , 40/110/56/B	US-26797-A1-UL
CQC	China	GB/T6346.14-2015 MKP0.0047~10.0uF 305VAC, 40/110/56/B	CQC11001064918

The **ENEC** mark was accepted in all European countries as equivalent of
VDE , SEV , SEMKO , DEMKO , NEMKO , FIMKO , etc.

11. Rated Voltage Pulse Slope dv/dt (V/μs) at 630VDC

Pitch V. R	7.5 mm	10 mm	15 mm	22.5 mm	27.5 mm
630 VDC	500	400	300	180	120

NEW MARKING

Capacitor is Marked on Body for Following Items.

- (1) Logo , Manufacturing Symbol
- (2) Nominal Capacitance
- (3) Capacitance Tolerance
- (4) Rated Voltage
- (5) Part Name (Capacitor Class X2)
- (6) Monogram of Safety Standard Approvals.

The ENEC Mark:

ENEC is an abbreviation for “European Norms Electrical Certification”.

ENEC mark was accepted in all European countries as equivalent of



- (7) Date Code :

Year : 16 → 2016 17 → 2017 18 → 2018

Week on : 01 ~ 53

- (8) Application categories are indicated by code letters and number:

1st. Number (40): Minimum Temperature (-40°C).

2nd. Number (110): Maximum Temperature (110°C).

3rd. Number (56): The days of damp heat test.

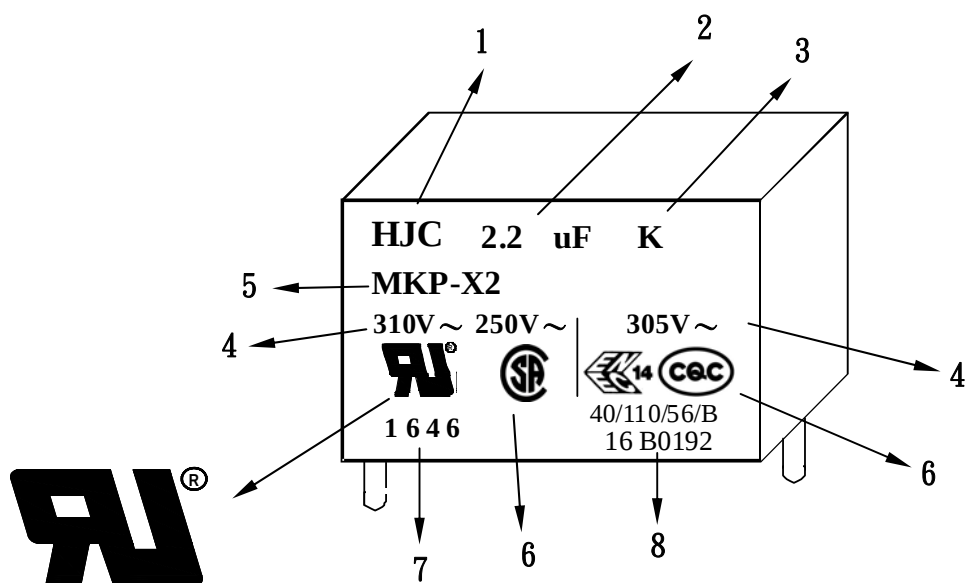
4th. Code letter (B) : Category of Passive flammability.

16B0192 : Production No. (batch number)

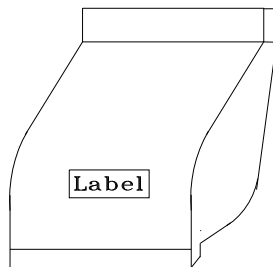
Year : 16 → 2016 17 → 2017 18 → 2018

Month : 1 ~ 9 , A=10 , B=11 , C=12

Serial No. : 0001 ~ XXXX

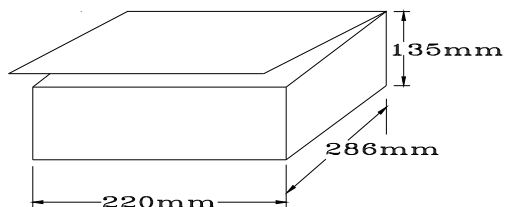


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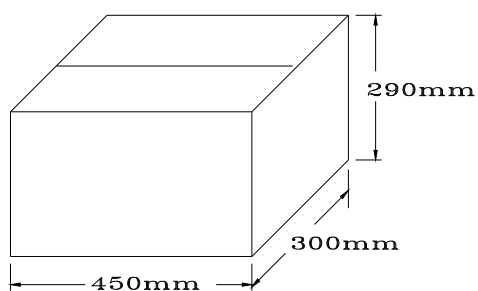
PACKAGE**Package Bag**

BODY SIZE(mm)	PCS / Container
D1 (18×11×5)	500 PCS
D2 (18×12×6)	500 PCS
D3 (18×13.5×7.5)	200 PCS
E2 (26.5×16.5×7)	100 PCS
E3 (26.5×17×8.5)	100 PCS
E4 (26.5×19×10)	100 PCS
F1 (32×20×11)	100 PCS
F2 (32×22.5×13)	50 PCS
F3 (32×24.5×14)	50 PCS

label : 1.Manufacture's name
 2. Type name
 3. Part no
 4. Quantity
 5. Packing

Container

BODY SIZE(mm)	Wrap / Container
D1 (18×11×5)	8 Wrap
D2 (18×12×6)	6 Wrap
D3 (18×13.5×7.5)	5 Wrap
E2 (26.5×16.5×7)	8 Wrap
E3 (26.5×17×8.5)	8 Wrap
E4 (26.5×19×10)	5 Wrap
F1 (32×20×11)	4 Wrap
F2 (32×22.5×13)	4 Wrap
F3 (32×24.5×14)	4 Wrap

Carton

1. 4 Containers / PER CARTON
2. OUTSIDE DETAILS OF CARTON:
 - A. CUSTOMER'S NAME
 - B. TYPE
 - C. SPECIFICATION
 - D. PART ON.
 - E. QUANTITY

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Single Wave Soldering Conditions

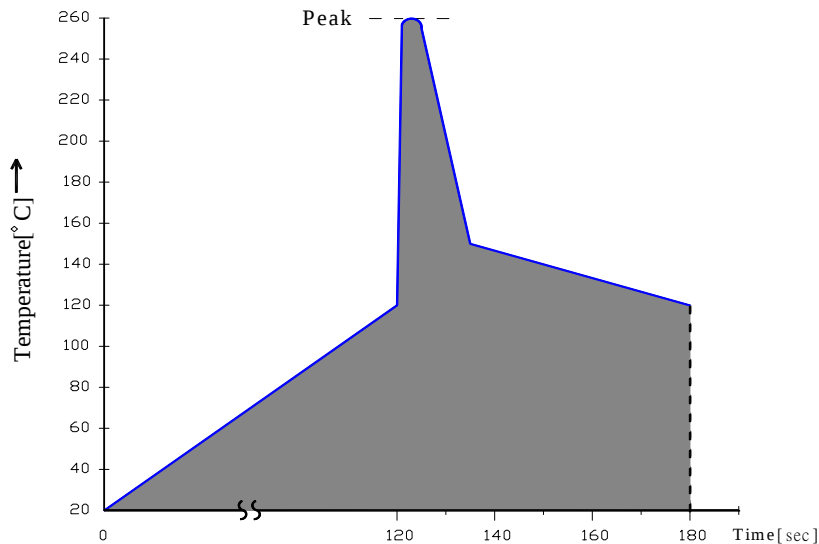
Component: Film Capacitors

1. Soldering Suggestion

When solder a capacitor, heat in soldering is conducted to the element of the capacitor from wire lead and an enclosure, and hence it should be noted that soldering under high temperature and a long period may cause deterioration of breakdown of capacitors. Be sure to solder within the following temperature condition range.

2. Recommendable condition

- a. Preheating max temperature: $\leq 120^{\circ}\text{C}$
- b. Preheating max time: ≤ 120 sec
- c. Peak temperature: $\leq 260^{\circ}\text{C}$
- d. Peak-temperature hold time: ≤ 5 sec



3. Requirement

Polypropylene film capacitor body temperature less than 120°C , 60sec

Polyester film capacitor body temperature less than 150°C , 60sec

4. Hand soldering

- a. Soldering iron tip temperature: $\leq 350^{\circ}\text{C}$
- b. Soldering time: ≤ 3 sec

5. If re-work or dipping twice is necessary, it should be done after the capacitor returned to the normal temperature. Suggestion time is 24 hours.

6. Reflow solder

Not suitable for reflow soldering.

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Double Wave Soldering Conditions

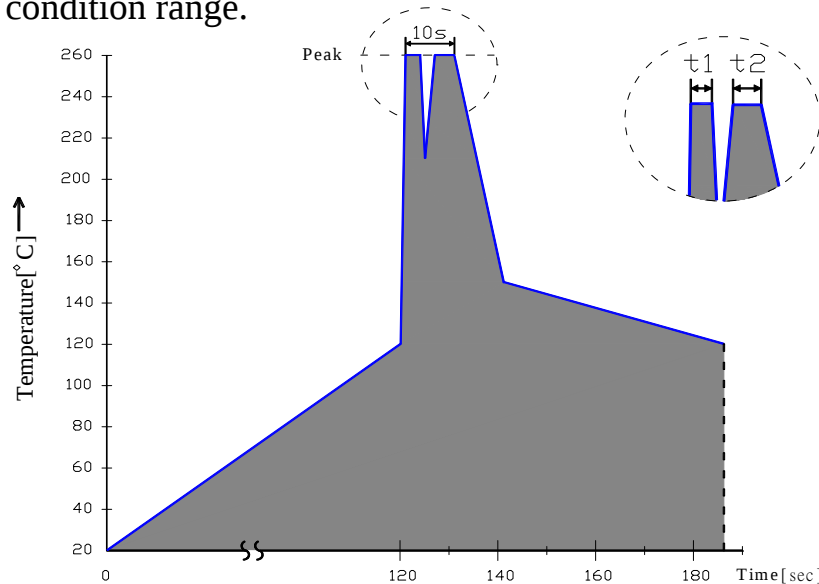
Component: Film Capacitors

1. Soldering Suggestion

When solder a capacitor, heat in soldering is conducted to the element of the capacitor from wire lead and an enclosure, and hence it should be noted that soldering under high temperature and a long period may cause deterioration of breakdown of capacitors. Be sure to solder within the following temperature condition range.

2. Recommendable condition

- a. Preheating max temperature: $\leq 120^{\circ}\text{C}$
- b. Preheating max time: ≤ 120 sec
- c. Peak temperature: $\leq 260^{\circ}\text{C}$
- d. t_1+t_2 : ≤ 5 sec



3. Requirement

Polypropylene film capacitor body temperature less than 120°C , 60sec

Polyester film capacitor body temperature less than 150°C , 60sec

4. Hand soldering

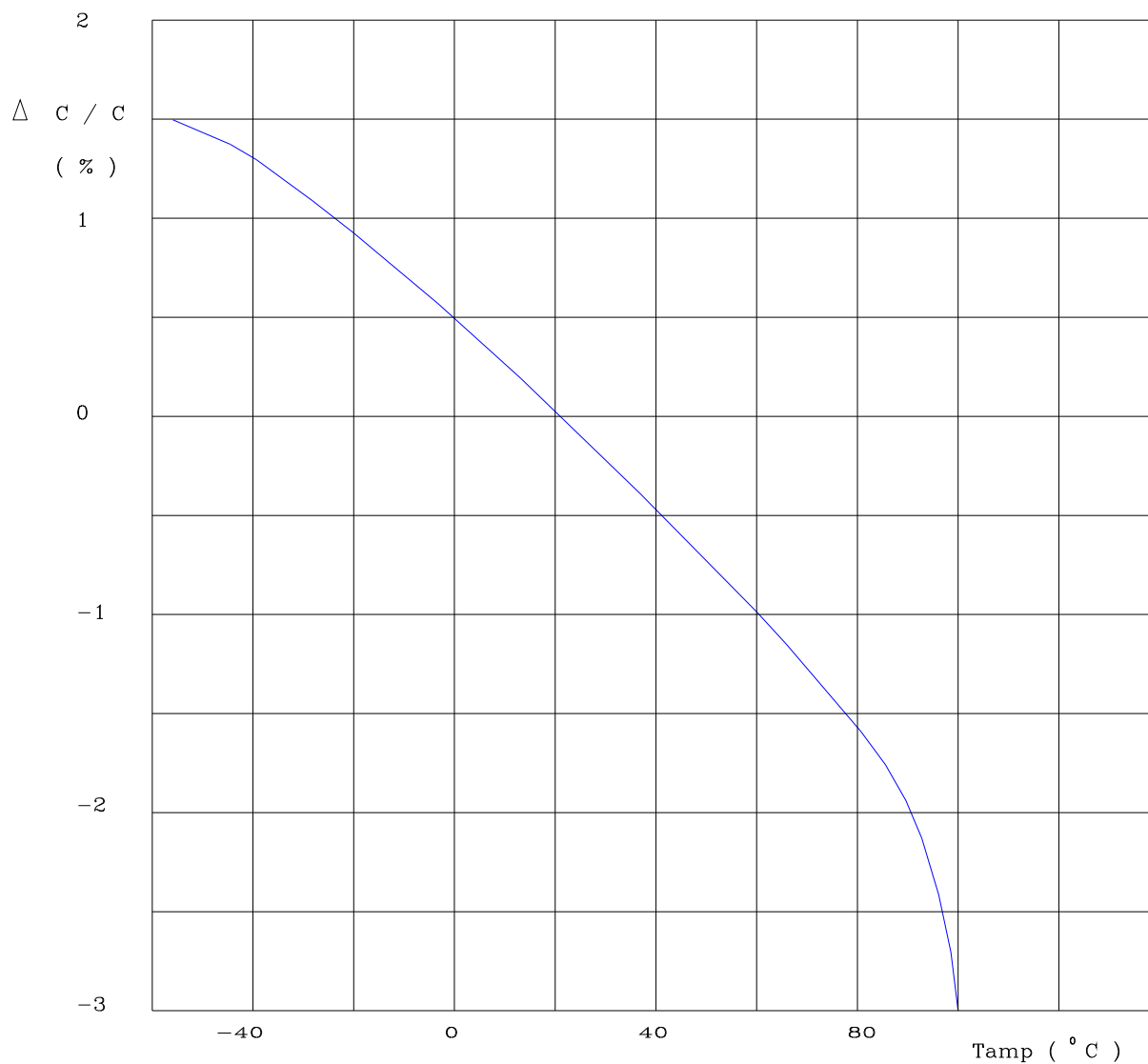
- a. Soldering iron tip temperature: $\leq 350^{\circ}\text{C}$
 - b. Soldering time: ≤ 3 sec
5. If re-work or dipping twice is necessary, it should be done after the capacitor returned to the normal temperature. Suggestion time is 24 hours.
6. Reflow solder
- Not suitable for reflow soldering.

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MKP Series, Metallized Polypropylene film capacitor

Capacitance as a function of ambient free air temperature : typical curve

CAPACITANCE



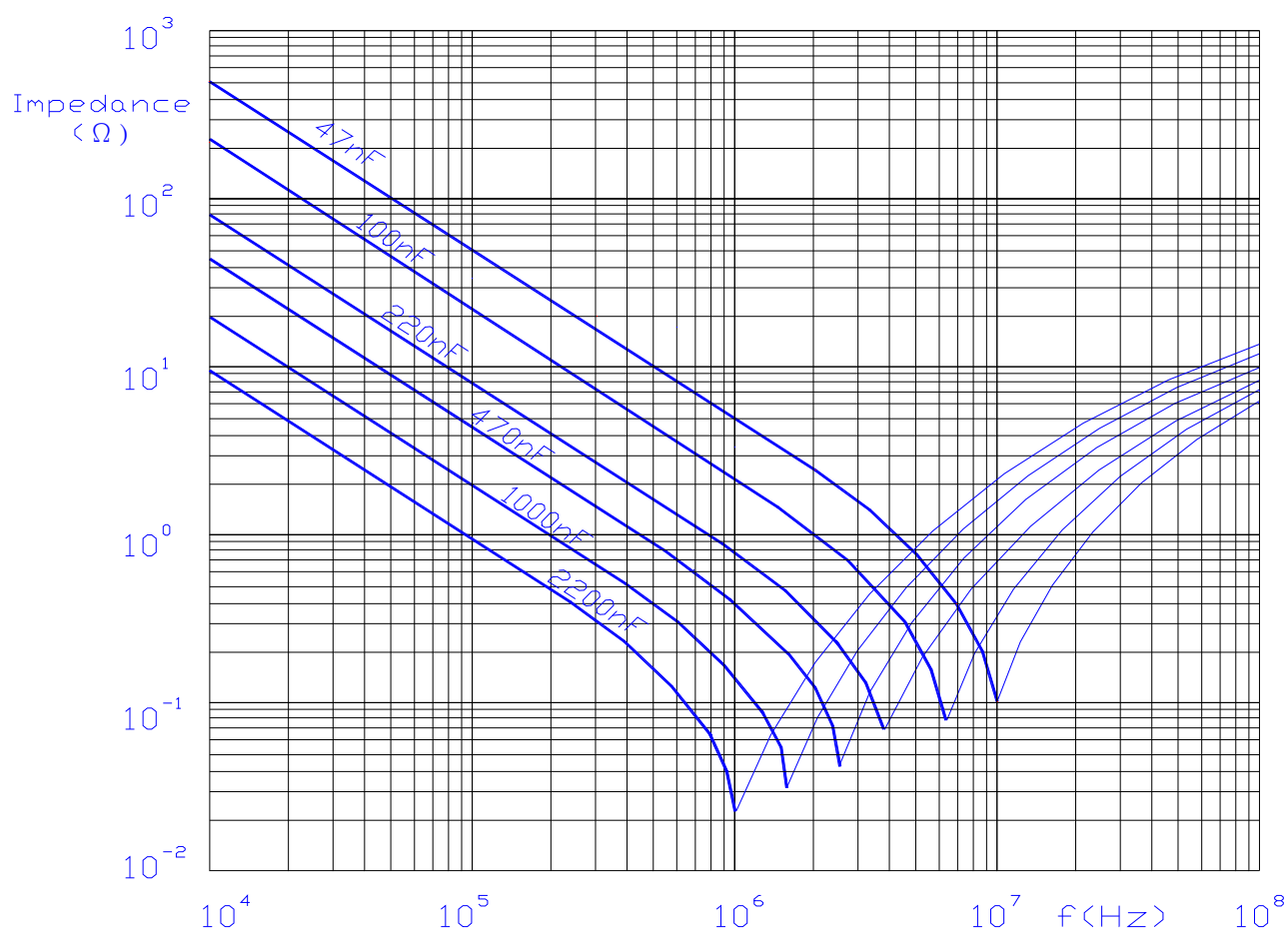
— All capacitance values are specified at 1 KHz .

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MKP Series, Metallized Polypropylene film capacitor

Impedance as a function of frequency:
typical curves

IMPEDANCE

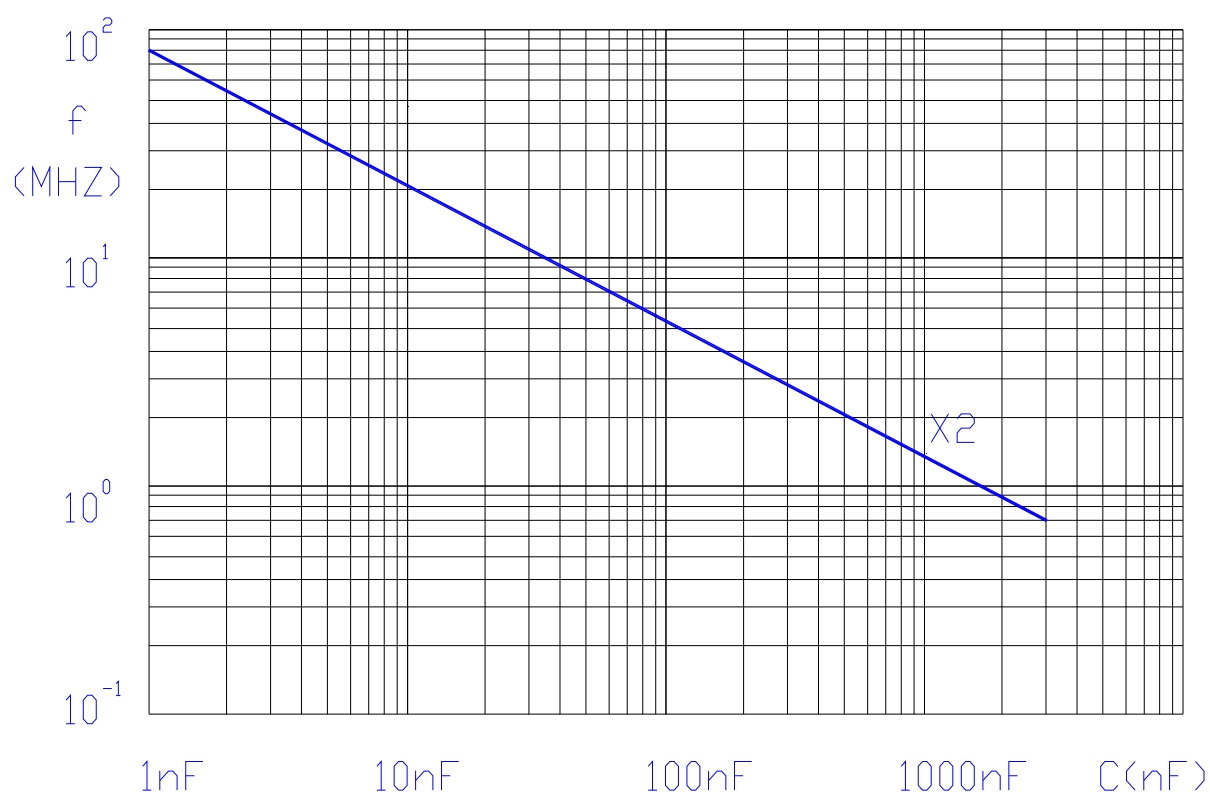


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MKP Series, Metallized Polypropylene film capacitor

Resonant frequency as function of capacitance : typical curves

RESONANT FREQUENCY



HUA JUNG COMPONENTS CO., LTD.

CERTIFICATE OF COMPLIANCE

Certificate Number 20120807-E149075
Report Reference E149075-20120803
Issue Date 2012-AUGUST-07

Issued to: HUA JUNG COMPONENTS CO LTD
37 FENG PING 1ST RD
TA LIAO
KAOHSIUNG HSIEN 831 TAIWAN

**This is to certify that
representative samples of**

COMPONENT - ACROSS-THE-LINE CAPACITORS,
ANTENNA-COUPLING COMPONENTS, LINE-BYPASS
COMPONENTS AND FIXED CAPACITORS FOR USE IN
ELECTRONIC EQUIPMENT

Class X2 Wound Film Type Capacitors, Models MKP series
with capacitance from 0.0047 μ F to 10 μ F with tolerance
suffix code J, K or M.

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety:

See Addendum Page

Additional Information:

See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Recognized Component Marks for the U.S. and Canada should be considered as being covered by UL's Recognition and Follow-Up Service and meeting the appropriate U.S. and Canadian requirements.

The UL Recognized Component Mark for the U.S. generally consists of the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark: , may be used in conjunction with the required Recognized Marks. The Recognized Component Mark is required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual recognitions. The UL Recognized Component Mark for Canada consists of the UL Recognized Mark for Canada:  and the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory.

The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Recognized Component Mark on the product.



William R. Carney, Director, North American Certification Programs

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at www.ul.com/contactus



CERTIFICATE OF COMPLIANCE

Certificate Number 20120807-E149075
Report Reference E149075-20120803
Issue Date 2012-AUGUST-07

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

UL 60384-14 Standard For Fixed Capacitors for Use in Electronic Equipment – Part 14: Sectional Specification: Fixed Capacitors for Electromagnetic Interference Suppression and Connection to the Supply Mains

CSA E60384-1:03 Standard For Fixed Capacitors for Use in Electronic Equipment - Part 1: Generic Specification

CSA E60384-14:09 Standard For Fixed Capacitors for Use in Electronic Equipment – Part 14: Sectional Specification: Fixed Capacitors for Electromagnetic Interference Suppression and Connection to the Supply Mains



William R. Carney, Director, North American Certification Programs
UL LLC

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Certificate of Compliance

Certificate: 2294211

Master Contract: 158927

Project: 70073917

Date Issued: May 18, 2016

Issued to: Hua Jung Components Co., Ltd.

5F No. 5 Ln. 60
Mingui St, Daliao Dist.
Kaoshiung City, 83146
Taiwan
Attention: Mr. CH KUO

The products listed below are eligible to bear the CSA Mark shown



Hisashi Morita

Issued by: Hisashi Morita

PRODUCTS

CLASS 2221 51 - AUDIO AND VIDEO EQUIPMENT - Accessories and Parts for Electronic Products

Class X-2 capacitors, Type MKP, rated 250/ 310Vac, 0.0047 μ F to 10 μ F, 40/110/56/B.

The subject components are certified for use in certified equipment where the combination may be subject to investigation by CSA International.

APPLICABLE REQUIREMENTS

CAN/CSA - E60384-14:09 - Fixed Capacitors for Use in Electronic Equipment - Part 14: Sectional Specification: Fixed Capacitors for Electromagnetic Interference Suppression and Connection to the Supply Mains.



Supplement to Certificate of Compliance

Certificate: 2294211

Master Contract: 158927

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
70073917	May 18, 2016	Add an enclosure material and voltage (275V & 305V) to MC no. 158927
2765170	Oct 17, 2014	Update to extended the range from 0.0047uF -0.1uF to 0.0047uF -10uF, included Voltage rating of 310V and added alternative dimensions for some values in the range.
2294211	Jun 14, 2010	Original Certification.



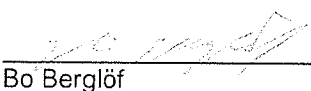
Licence for



CENELEC ENEC Agreement Licence Ref. No. SE/0252-5D

Product:	Capacitor for radio interference suppression
Type designation:	MKP
Test Report No.	CAP-4787002585-A-1 + CAP-4787002585-A-2 + 1707628STO-001
Licence holder:	Hua Jung Components Co., Ltd. 5th Fl, 5 Ln 60 Mingui St. Daliao District, Kaohsiung TAIWAN
The product complies with the standard(s):	EN 60384-14:2013+A1
Licence holder is authorized to use the mark with the following limitations:	-
Date of expiry:	29 March 2021

Additional information in Appendix

Certification Body	Intertek Semko AB, Product Certification	Place	Kista - Stockholm
Signed	 Bo Berglöv	Date	3 October 2017
Internal reference:	SUL		Page 1 of 14

This Licence is the result of testing a sample of the product submitted, in accordance with the provisions of the relevant specific standard. A copy of the Licence shall be filed in the place of manufacturing. The Licence has been established by a body which is a signatory to the ENEC Agreement ratified by CENELEC Marks Committee on 10 April 1992.



Intertek Testing Services Taiwan Ltd.#73CA
5F, No 423, Ruiguang Rd,
Neihu District
Taipei 114
TAIWAN

Handled by
Thomas Svensson
Direct telephone
+46 8 750 04 62
Reference
1707628
E-mail
thomas.svensson@intertek.com
Your reference
Stephanie Yeh

3 October 2017

Capacitor for radio interference suppression, type MKP

We have the pleasure to enclose the requested CENELEC ENEC Agreement Licence for the product (s) defined above.

Intertek Semko ensures that information on the product(s) covered by this licence will be published in the "Licensed products" list on www.eepca.eu. This means that the product(s) can be freely marketed in the participating countries without any further application procedures.

The currently participating signatories are located in the following countries:

Austria	Belgium
Czech Republic	Denmark
Finland	France
Germany	Great Britain
Greece	Hungary
Ireland	Italy
Luxemburg	Netherlands
Norway	Portugal
Slovenia	Spain
Sweden	Switzerland.

Yours sincerely

Intertek Semko AB
Product Certification



APPENDIX

CENELEC ENEC Agreement Licence Ref. No. SE/0252-5D

Test Report No.

CAP-4787002585-A-1 + CAP-4787002585-A-2 + 1707628STO-001

Technical data

Type designation

MKP

Rated Voltage

250 - 310VAC

Frequency

50/60HZ

Class and subclass

X2

Capacitance

0.0047-10uF

Tolerance

±5%, ±10%, ±20%

Climatic category

40/110/56/B

Trade mark



Intertek Semko AB

Torshamnsgatan 43, Box 1103, SE-164 22 Kista, Sweden

Telephone +46 8 750 00 00. Fax +46 8 750 60 30, www.sweden.intertek-ellsemko.com

Registered in Sweden: No SE556024059901, Registered office: As address

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

Product
Produit

Name and address of the applicant
Nom et adresse du demandeur

Name and address of the manufacturer
Nom et adresse du fabricant

Name and address of the factory
Nom et adresse de l'usine

Note: When more than one factory, please report on page 2
Note: Lorsque il y a plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

Trademark (if any)
Marque de fabrique (si elle existe)

Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais constructeur

Model / Type Ref.
Ref. De type

Additional information (if necessary may also be reported on page 2)
Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2^{ème} page

A sample of the product was tested and found to be in conformity with
Un échantillon de ce produit a été essayé et a été considéré conforme à la

As shown in the Test Report Ref. No. which forms part of this Certificate
Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat

CERTIFICAT D'ESSAI OC

Fixed Capacitors For Electromagnetic Interference Suppression
And Connection To The Supply Mains, Wound film Type

HUA JUNG COMPONENTS CO LTD
5th Fl
5 Ln 60 Mingui St
Daliao District
Kaohsiung, 83146 Taiwan

HUA JUNG COMPONENTS CO LTD
5th Fl
5 Ln 60 Mingui St
Daliao District
Kaohsiung, 83146 Taiwan

HUA JUNG ELECTRONICS (GUANGDONG) CO LTD
104 Ke Ji Dong Rd, Shijie Town, Dongguan, Guangdong
CHINA

☐ Additional Information on page 2

X2(Vac: 250/275/305/310), 50/60Hz; 0.0047~10µF, 40/110/56/B, tolerance J (±5%), K (±10%), M (±20%)



MKP series

☒ Additional Information on page 2

IEC 60384-14(ed.4)

CAP-4787002585-A-1 amendment 1 issued on 2016-05-03

This CB Test Certificate is issued by the National Certification Body

Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**



- ☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
- ☐ UL (Denko), Borupvang 5A DK-2750 Ballerup, DENMARK
- ☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
- ☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2016-05-09
Original Issue Date: 2016-02-04

Signature:

Jolanta M. Wroblewska



Ref. Certif. No.

US-26797-A1-UL

Additional Information:

Additionally evaluated to EN 60384-14:2013. National Differences specified in the CB Test Report. The original report was modified to include the following changes/additions: added addition case material and ratings.

Additional information (if necessary)

Information complémentaire (si nécessaire)



☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2016-05-09

Original Issue Date: 2016-02-04

Signature:

Jolanta M. Wroblewska



产品认证证书

证书编号: CQC11001064918

申请人名称及地址

华容股份有限公司
台湾高雄市大寮区民贵街60巷5号5楼

制造商名称及地址

华容股份有限公司
台湾高雄市大寮区民贵街60巷5号5楼

生产企业名称及地址

华容电子(广东)有限公司 (V001099)
东莞市石碣镇石碣区三村工业区

产品名称和系列、规格、型号

抑制电源电磁干扰用固定电容器

MKP-X2 305VAC, 0.0047 μ F~10.0 μ F, J($\pm 5\%$), 或 K($\pm 10\%$), 或 M($\pm 20\%$), 40/110/56/B

产品标准和技术要求

GB/T6346.14-2015

认证模式

产品型式试验+初次工厂检查+获证后监督

上述产品符合CQC11-471115-2016认证规则的要求, 特发此证。

发证日期: 2016年08月23日

证书有效期内本证书的有效性依据发证机构的定期监督获得保持。

本证书为变更证书, 证书首次颁发日期: 2011年12月06日

经中国合格评定国家认可委员会认可 CNAS C001-P

主任: _____



中国质量认证中心

中国·北京·南四环西路188号9区100070

<http://www.cqc.com.cn>

C 0085124



PRODUCT CERTIFICATE

No.: CQC11001064918

NAME AND ADDRESS OF THE APPLICANT

Hua Jung Components Co., Ltd.
5F., No.5, Ln. 60, Mingui St., Daliao District, Kaohsiung City 831, Taiwan

NAME AND ADDRESS OF THE MANUFACTURER

Hua Jung Components Co., Ltd.
5F., No.5, Ln. 60, Mingui St., Daliao District, Kaohsiung City 831, Taiwan

NAME AND ADDRESS OF THE FACTORY

Hua Jung Electronics (Guangdong)Co., Ltd. (V001099)
3 Village Industrial Area, Shijie Area, Shijie Town, Dongguan, Guangdong, China

NAME, MODEL AND SPECIFICATION

Fixed Capacitors for Electromagnetic Interference Suppression and Connection to the
Supply Mains

MKP-X2 305VAC, 0.0047 μ F $\sim$ 10.0 μ F, J($\pm$ 5%), or K($\pm$ 10%), or M($\pm$ 20%), 40/110/56/B

THE STANDARDS AND TECHNICAL REQUIREMENTS FOR THE PRODUCTS

GB/T6346.14-2015

CERTIFICATION MODEL

Type Testing of Product + Initial Factory Inspection + Follow up Factory Inspection

This is to certify that the above mentioned products have met the requirements of certification rules
CQC11-471115-2016.

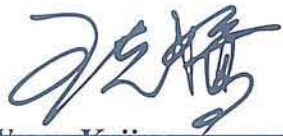
Date of issue: Aug.23,2016

Validity of this certificate is subject to positive result of the regular follow up inspection by issuing
certification body until the expiry date.

Date of original certification: Dec.06,2011

Accredited by China National Accreditation Service for Conformity Assessment CNAS C001-P

President:


Wang Kejiao



CHINA QUALITY CERTIFICATION CENTRE

Section 9, No.188, Nansihuan Xilu, Beijing 100070 P.R.China
<http://www.cqc.com.cn>


JUNG ELECTRONICS DONG GUAN CO.,LTD

Change History

[illegible]