

EUNSUNG

AC Capacitors Capacitor for electrical apparatus

www.eunsungcap.com



EUNSUNG

AC Capacitors

Capacitor for electrical apparatus

ES EUNSUNG IND. CO., LTD.

Head office / Factory

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website: <http://www.eunsungcap.com> / e-mail: webmaster@eunsungcap.com

Thailand Factory

add: 44 MOO 4 T.MAENAMKOO A. PLUAKDAENG RAYONG 21140 THAILAND
TEL: 66-38-60637~9(Rep.) / FAX: 66-38-606541 / e-mail: esth@eunsungcap.com

ES EUNSUNG IND. CO., LTD.

Company Overview



Head office / Factory | **Eunsung Industrial Co., Ltd.**
Date of incorporation | July 1th, 1977
Main business | Capacitor for electric Apparatus, low-voltage power capacitor, metallized film for capacitors
Address | 96-22, Maso-ro, Shindun-myeon, Icheon-si, Gyeonggi-do, 17304, Korea
Telephone | 82-31-638-7321, / Fax | 82-31-638-1547
Website | www.eunsungcap.com / E-mail | webmaster@eunsungcap.com



Thailand Factory | **Eunsung Industrial (Thailand) Co., Ltd.**
Date of incorporation | February 5th, 2003
Main business | Capacitor for electric Apparatus, ESC, ARCP/ARCN, EDCN/EDCP, EOC Series
Address | 44 Moo 4, Tambon Maenamkoo, Amphur Pluakdaeng, Rayong, 21140 Thailand
Telephone | 66-38-60637~9 / Fax | 66-38-606541
Website | www.eunsungcap.com / E-mail | esth@eunsungcap.com

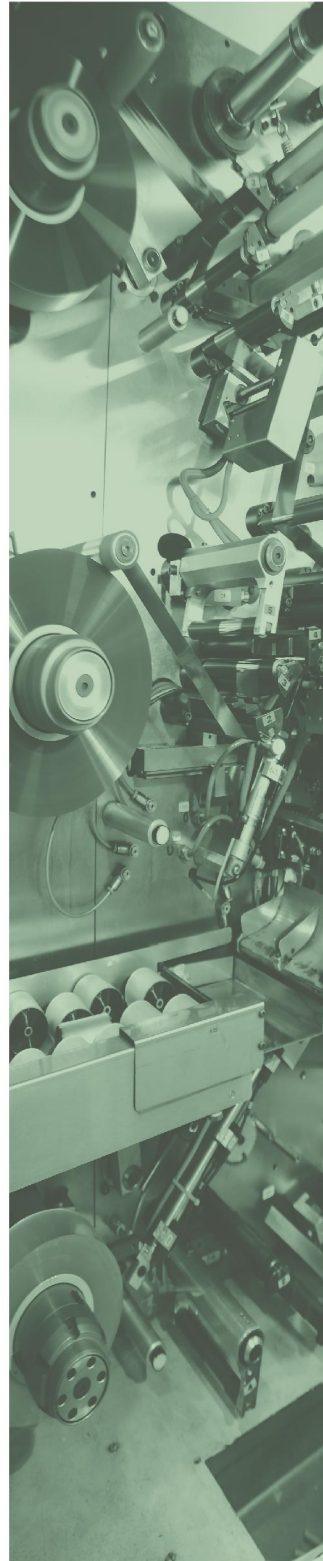


EUNSUNG

We, Eunsung Industrial Co., Ltd. will be renovated to be No. 1 company for best quality in practice of customer-principle

We wish to be a leading company who can provide a rapid change by maximum internal ability from a result of **40 years** experience and best quality management system.

Company History



2003 ~ 2017

- 2017** | Acquired TUV certification for A.C power system capacitor
- 2016** | Acquired TUV certification for Low-Voltage power capacitor
- 2012** | Acquired CQC 10002049548 certification.
- 2006** | Acquired KSA 14001/ISO 14001 certification.
- 2004** | Registered the utility model no. 0355760 (capacitor cover)
- 2003** | Established a factory in Thailand.
- 2003** | Acquired KSA 9001/ISO 9001 certification.

1996 ~ 2001

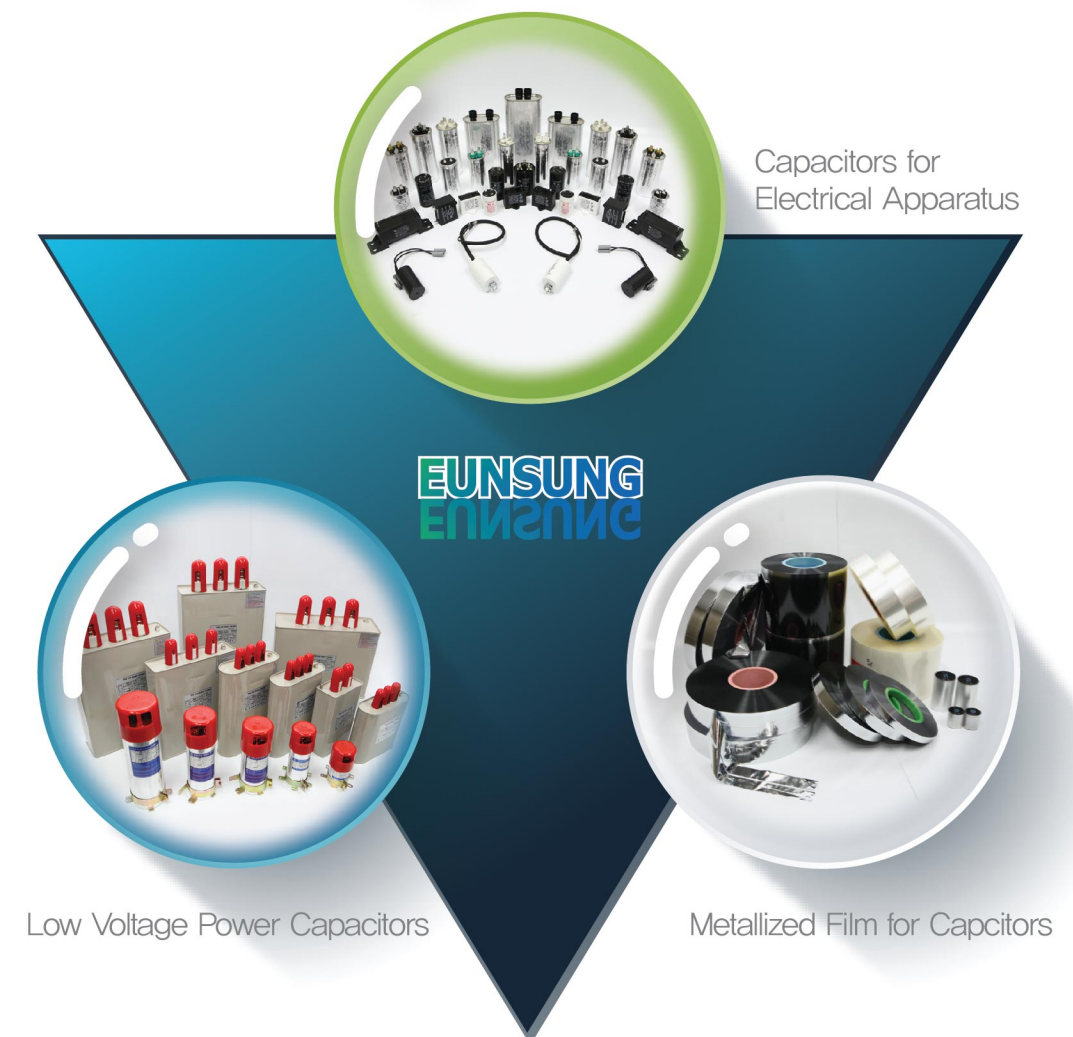
- 2001** | Acquired VDE certification for capacitor for electric apparatus.
- 1998** | Acquired TUV certification for capacitor for electric apparatus.
- 1997** | Acquired KSA 9002/ISO 9002 certification.
- 1996** | Acquired UL certification for capacitor for electric apparatus.

1977 ~ 1984

- 1984** | Acquired KS certification (capacitor for electric apparatus, low-voltage Power capacitor).
- 1983** | Started of the production for low-voltage power capacitor. Started of the production capacitor for electrica apparatus.
- 1982** | Produced the first metallized film for capacitors in Korea.
- 1977** | Produced the first metallized paper for capacitors in Korea. Established Eunsung Industrial Co., Ltd in Korea.

Introduction Products

We think first for best quality and customer, are manufacturing capacitor for electrical apparatus, low voltage power factor capacitor and metallized film. We wish to be renovated company who knows value of customer and also be respected in this market.



Introduction Products Line

We are first company who has been produced metallized paper for capacitor in 1977 in Korea, have build up own know-how and technology which is well accepted in the market, so growing and jump up too.
We will do our best for customer prosperous with development of new technology.



Production Machine

Production Line

Test

Office & Design

Certification

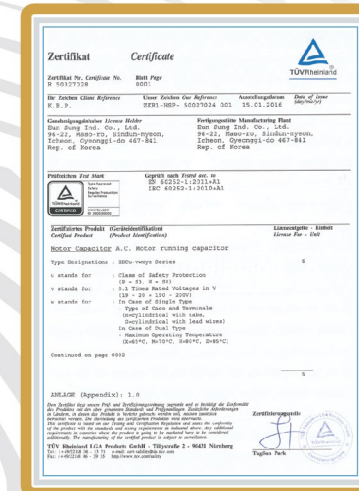
It will open for the future with professional Know-how of the capacitor industry in 40 years.



ISO 9001/14001 인증서



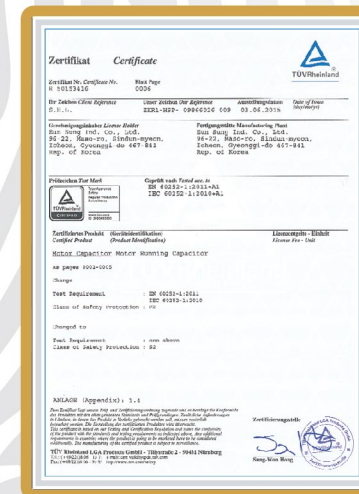
Korean Industrial Standard



TUV 1 Certification



TUV 2 Certification



TUV 3 Certification



VDE Certification

AC Capacitor

Capacitor for electrical apparatus



Series/type : ESC, EOC, EDCP

Date : September 2016

Version : 1

Film Capacitors - AC Capacitors

Capacitor for electrial apparatus - Dual

ESC series

Construction

- Metallized polypropylene film
- Aluminum can
- Filling material : Polyurethane resin

Features

- Self healing properites
- Low dissipation factor
- Overpressure disconnection safety device
- S2 safety class as per IEC 60252-1
- High insulation resistance

Typical applications

- For general sine wave application, mainly as motor run

Terminals

- 2+3+4 fast-on terminal #250 style, others on request

Mounting Parts (Optional)

- Threaded stud at bottom of can (M8, Max torque=5Nm for 50mm diameter)

Technical data and specifications	
Reference standards	BS EN 60252-1:2011+A1:2013, IEC 60252-1 (ed 2) UL 810
Safety class to IEC 60252-1 2013	S2
Life expectancy to IEC 60252-1 2013	250V, 330V, 400V, 450V : 30,000h (Class A) 250V, 330V, 400V, 450V : 10,000h (Class B)
Rated capacitance	1.5 ~ 15μF (C1), 7 ~ 50μF (C2) (Class A) 1.5 ~ 15μF (C1), 50 ~ 60μF (C2) (Class B)
Tolerance	±5%
Minimum permissible temperature	-25°C
Maximum permissible temperature	85°C
Rated voltage	250V, 330V, 400V, 450V, others on request
Rated frequency	50/60Hz

Maximum ratings	
Maximum permissible voltage	1.1 X Rated voltage
Maximum permissible current	1.3 X Rated current

Film Capacitors - AC Capacitors

Capacitor for electrial apparatus - Dual

ESC series

Test data	
AC test voltage terminal to terminal	2.0 X Rated voltage, 2s
Insulation voltage terminal to case	3,000V AC, 2s
Insulation resistance at 20°C	More than 2,000MΩ, 500V DC, 1m
Dissipation factor tanδ at 20°C	Less than 0.1% by AC schering bridge

Climatic data	
Climatic category	25/85/21 to IEC 60068-1
Low category temperature (Minimum)	-25°C
Upper category temperature (Maxmum)	85°C
Damp heat test	21days

Mechanical and thermal properties of terminal insulator material	
UL 94 V0 compatible	Self-extinguishing within 2 seconds of withdrawing
Glow wire test to IEC 60695-2-10	glow wire without igniting wrapping tissue of GWT
Test temperature 650°C	

Compatibility to RoHS	
Compliance to directive 2011/65/EU	RoHS

Approvals : See table for approved ratings	
 UL File E181728	Approved component 10000 AFC
 TUV EN 60252-1	Approved 1.5 ~ 15μF (C1), 7 ~ 50μF (C2), 450V / 85°C : 30,000h (Class A) Approved 1.5 ~ 15μF (C1), 50 ~ 60μF (C2), 450V / 85°C : 10,000h (Class B)

Film Capacitors - AC Capacitors

Capacitor for electrial apparatus - Single

ESC series

Construction

- Metallized polypropylene film
- Aluminum can
- Filling material : Polyurethane resin

Features

- Self healing properites
- Low dissipation factor
- Overpressure disconnection safety device
- S2 safety class as per IEC 60252-1
- High insulation resistance

Typical applications

- For general sine wave application, mainly as motor run

Terminals

- 2+4 fast-on terminal #250 style, others on request

Mounting Parts (Optional)

- Threaded stud at bottom of can (M8, Max torque=5Nm for 50mm diameter)



Technical data and specifications

Reference standards	BS EN 60252-1:2011+A1:2013, IEC 60252-1 (ed 2) UL 810, GB/T3667.1
Safety class to IEC 60252-1 2013	S2
Life expectancy to IEC 60252-1 2013	250V, 330V, 400V, 450V : 30,000h (Class A) 250V, 330V, 400V, 450V : 10,000h (Class B)
Rated capacitance	Up to 70μF (Class A) 71 ~ 120μF (Class B)
Tolerance	±5%
Minimum permissible temperature	-25°C
Maximum permissible temperature	85°C
Rated voltage	250V, 330V, 400V, 450V, others on request
Rated frequency	50/60Hz

Maximum ratings

Maximum permissible voltage	1.1 X Rated voltage
Maximum permissible current	1.3 X Rated current

Film Capacitors - AC Capacitors

Capacitor for electrial apparatus - Single

ESC series

Test data

AC test voltage terminal to terminal	2.0 X Rated voltage, 2s
Insulation voltage terminal to case	3,000V AC, 2s
Insulation resistance at 20°C	More than 2,000MΩ, 500V DC, 1m
Dissipation factor tanδ at 20°C	Less than 0.1% by AC schering bridge

Climatic data

Climatic category	25/85/21 to IEC 60068-1
Low category temperature (Minimum)	-25°C
Upper category temperature (Maxmum)	85°C
Damp heat test	21days

Mechanical and thermal properties of terminal insulator material

UL 94 V0 compatible	Self-extinguishing within 2 seconds of withdrawing
Glow wire test to IEC 60695-2-10	glow wire without igniting wrapping tissue of GWT
Test temperature 650°C	

Compatibility to RoHS

Compliance to directive 2011/65/EU

RoHS

Approvals : See table for approved ratings

 UL File E181728	Approved component 10000 AFC
 VDE EN 60252-1	Approved up to 70μF, 450V / 80°C : 10,000h (Class B)
 TUV EN 60252-1	Approved up to 70μF, 450V / 85°C : 30,000h (Class A) Approved up to 120μF, 450V / 85°C : 10,000h (Class B)
 CQC GB/T3667.1	Approved up to 30μF, 450V / 80°C : 10,000h (Class B)



Film Capacitors - AC Capacitors
Capacitor for electrial apparatus

EOC series

Construction

- Metallized polypropylene film
- Aluminum can
- Filling material : Polyurethane resin

Features

- Self healing properites
- Low dissipation factor
- Overpressure disconnection safety device
- S2 safety class as per IEC 60252-1
- High insulation resistance

Typical applications

- For general sine wave application, mainly as motor run

Terminals

- 4+4 fast-on terminal #250 style, others on request

Technical data and specifications	
Reference standards	BS EN 60252-1:2011+A1:2013, IEC 60252-1 (ed 2) UL 810
Safety class to IEC 60252-1 2013	S2
Life expectancy to IEC 60252-1 2013	250V, 350V, 400V, 450V : 10,000h (Class B)
Rated capacitance	Up to 80µF (Class B)
Tolerance	±5%
Minimum permissible temperature	-25°C
Maximum permissible temperature	85°C
Rated voltage	250V, 350V, 400V, 450V, others on request
Rated frequency	50/60Hz

Maximum ratings	
Maximum permissible voltage	1.1 X Rated voltage
Maximum permissible current	1.3 X Rated current



Film Capacitors - AC Capacitors
Capacitor for electrial apparatus

EOC series

Test data

AC test voltage terminal to terminal	2.0 X Rated voltage, 2s
Insulation voltage terminal to case	3,000V AC, 2s
Insulation resistance at 20°C	More than 2,000MΩ, 500V DC, 1m
Dissipation factor tanδ at 20°C	Less than 0.1% by AC schering bridge

Climatic data

Climatic category	25/85/21 to IEC 60068-1
Low category temperature (Minimum)	-25°C
Upper category temperature (Maximum)	85°C
Damp heat test	21days

Mechanical and thermal properties of terminal insulator material

UL 94 V0 compatible	Self-extinguishing within 2 seconds of withdrawing
Glow wire test to IEC 60695-2-10	glow wire without igniting wrapping tissue of GWT
Test temperature 650°C	

Compatibility to RoHS

Compliance to directive 2011/65/EU

RoHS

Approvals : See table for approved ratings

 UL File E181728	Approved component 10000 AFC
 TUV EN 60252-1	Approved up to 80µF, 450V / 85°C : 10,000h (Class B)

Film Capacitors - AC Capacitors

Capacitor for electrial apparatus

EDCPseries

Construction

- Metallized polypropylene film
- Plastic ABS/PBT
- Filling material : Epoxy resin

Features

- Self healing properites
- Low dissipation factor
- S3 safety class as per IEC 60252-1
- High insulation resistance

Typical applications

- For general sine wave application, mainly as motor run

Terminals

- 1+1 fast-on terminal #187 style also Lead wire style, others on request



Technical data and specifications

Reference standards	BS EN 60252-1:2011+A1:2013, IEC 60252-1 (ed 2) UL 810
Safety class to IEC 60252-1 2013	S3
Life expectancy to IEC 60252-1 2013	200V, 250V, 300V, 370V, 400V, 450V : 10,000h (Class B)
Rated capacitance	Up to 18μF (Class B)
Tolerance	±5%
Minimum permissible temperature	-25°C
Maximum permissible temperature	85°C
Rated voltage	200V, 250V, 300V, 370V, 400V, 450V, others on request
Rated frequency	50/60Hz

Maximum ratings

Maximum permissible voltage	1.1 X Rated voltage
Maximum permissible current	1.3 X Rated current

Film Capacitors - AC Capacitors

Capacitor for electrial apparatus

EDCPseries

Test data

AC test voltage terminal to terminal	2.0 X Rated voltage, 2s
Insulation voltage terminal to case	3,000V AC, 2s
Insulation resistance at 20°C	More than 2,000MΩ, 500V DC, 1m
Dissipation factor tanδ at 20°C	Less than 0.1% by AC schering bridge

Climatic data

Climatic category	25/85/21 to IEC 60068-1
Low category temperature (Minimum)	-25°C
Upper category temperature (Maxmum)	85°C
Damp heat test	21days

Mechanical and thermal properties of terminal insulator material

UL 94 V0 compatible	Self-extinguishing within 2 seconds of withdrawing
Glow wire test to IEC 60695-2-10	glow wire without igniting wrapping tissue of GWT
Test temperature 650°C	

Compatibility to RoHS

Compliance to directive 2011/65/EU

RoHS

Approvals : See table for approved ratings

 C22.2 NO. 190 UL File E181728	Approved component 10000 AFC
 TUV EN 60252-1	Approved up to 18μF, 450V / 85°C : 10,000h (Class B)

Film Capacitors - AC Capacitors

Capacitor for electrial apparatus

EDCPseries

Construction

- Metallized polypropylene film
- Plastic ABS/PBT
- Filling material : Epoxy resin

Features

- Self healing properites
- Low dissipation factor
- S3 safety class as per IEC 60252-1
- High insulation resistance

Typical applications

- For general sine wave application, mainly as motor run

Terminals

- 1+1 fast-on terminal #187 style also Lead wire style, others on request

Mounting Parts (Optional)

- Threaded stud at bottom of plastic (M8, Max torque=2Nm)



Technical data and specifications

Reference standards	BS EN 60252-1:2011+A1:2013, IEC 60252-1 (ed 2) UL 810
Safety class to IEC 60252-1 2013	S3
Life expectancy to IEC 60252-1 2013	200V, 250V, 300V, 370V, 400V, 450V : 10,000h (Class B)
Rated capacitance	Up to 35μF (Class B)
Tolerance	±5%
Minimum permissible temperature	-25°C
Maximum permissible temperature	85°C
Rated voltage	200V, 250V, 300V, 370V, 400V, 450V, others on request
Rated frequency	50/60Hz

Maximum ratings

Maximum permissible voltage	1.1 X Rated voltage
Maximum permissible current	1.3 X Rated current

Film Capacitors - AC Capacitors

Capacitor for electrial apparatus

EDCPseries

Test data

AC test voltage terminal to terminal	2.0 X Rated voltage, 2s
Insulation voltage terminal to case	3,000V AC, 2s
Insulation resistance at 20°C	More than 2,000MΩ, 500V DC, 1m
Dissipation factor tanδ at 20°C	Less than 0.1% by AC schering bridge

Climatic data

Climatic category	25/85/21 to IEC 60068-1
Low category temperature (Minimum)	-25°C
Upper category temperature (Maxmum)	85°C
Damp heat test	21days

Mechanical and thermal properties of terminal insulator material

UL 94 V0 compatible	Self-extinguishing within 2 seconds of withdrawing
Glow wire test to IEC 60695-2-10	glow wire without igniting wrapping tissue of GWT
Test temperature 650°C	

Compatibility to RoHS

Compliance to directive 2011/65/EU	RoHS
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Approvals : See table for approved ratings

 UL File E181728	Approved component 10000 AFC
 TUV EN 60252-1	Approved up to 35μF, 450V / 85°C : 10,000h (Class B)