

To:

御中

No. : NA0006

Date : Sep. 28. 2005

## Ceramic Disc Capacitor Type NS-A Safety Approval Sheet

### 安全規格認定セラミックコンデンサ タイプ NS-A 安全規格認定書

Related Standards and Certification Numbers 認定規格及び認定番号一覧

Certification body 認定機関	Related Standard 認定規格	Certificate No. 認定書番号	Details of Certification 認定内容		
			Sub-Class サブクラス	Rated Voltage 定格電圧	Operating Temp. Range 使用温度範囲
UL	UL1414	E62674		250VAC	-25 to 85
CSA	CSA C22.2 No.1	LR58064		250VAC	-25 to 85
BSI	BSEN60065 and BSEN 132 400	226319	Y1	250VAC	-25 to 125
			X1	440VAC	
VDE	EN 132 400: 1994	087472	Y1	250VAC	-25 to 125
			X1	440VAC	
SEV	EN 132 400: 1994	05.0123	Y1	250VAC	-25 to 125
			X1	440VAC	
SEMKO	EN 132 400: 1994	9918234/01-02	Y1	250VAC	-25 to 125
			X1	440VAC	
FIMKO	EN 132 400: 1994	FI 13556	Y1	250VAC	-25 to 125
			X1	440VAC	
NEMKO	EN 132 400: 1994	P99101676	Y1	250VAC	-25 to 125
			X1	440VAC	
DEMKO	EN 132 400: 1994	DK99-02495	Y1	250VAC	-25 to 125
			X1	440VAC	
KTL	K60384-14	SU03012-3002	Y1	250VAC	-25 to 125
			X1	440VAC	

Note : This information is furnished as of Sep. 28,2005. Above certificate number may be changed on account of the revision of standards and the renewal of certificate.

備考: 本書の認定番号は 2005 年 9 月 28 日時点のものです。

認定番号は、規格の変更、認定期限の更新などにより変更になる場合があります。

Circuit Components Business Unit  
Panasonic Electronic Devices Co.,Ltd.  
パナソニック エレクトロニックデバイス株式会社  
回路部品ビジネスユニット  
〒910-8502 福井県福井市定正町 401 番地  
電話(代表) 0776-56-8010

Panasonic Communications Miyazaki Co., Ltd.  
パナソニックCC宮崎株式会社  
〒880-0298 宮崎県宮崎郡佐土原町下田島 7826-28  
電話(代表) 0985-73-1311

Northbrook, Illinois • (847) 272-8800  
 Melville, New York • (516) 271-6200  
 Santa Clara, California • (408) 985-2400  
 Research Triangle Park,  
 North Carolina • (919) 549-1400  
 Camas, Washington • (360) 817-5500



MATSUSHITA ELECTRIC CORP OF AMERICA  
 PRODUCT SAFETY & COMPLIANCE DIV  
 MR V LEE  
 1 PANASONIC WAY 4B-8  
 SECAUCUS NJ 07094

Your most recent listing is shown below. Please review this information and report any inaccuracies to the UL Engineering staff member who handled your UL project.

FOWX2 January 10, 1997  
 Component - Across-The-Line Capacitors, Antenna Coupling and Line-By-Pass Components

MATSUSHITA ELECTRIC INDUSTRIAL CO LTD MATSUSHITA			E62674 (N)	
ELECTRIC CORP OF AMERICA			(D - cont. from C card)	
Type NS+,	125 ac	100 pf to 0.022 uf	—	—
Type NS-B	250 ac	100 pf to 4700 pf	—	—
Type NS-A	250 vac	100 to 4700 pf	—	—
Type RS	125 ac	33 pf to 10000 pf	—	—
Type TS	250 ac	100 to 10000 pf	—	—
Type WS	250 ac	100 to 4700 pf	—	—
Type X1	125 ac	100 to 1000 pf	0.24-5.2m	2.0mm
Type X2	125 ac	120 to 1000 pf	1.00-5.2m	2.0mm

Reports: October 18, 1983; January 18, 1996; January 18, 1996; October 6, 1987; January 8, 1997; November 13, 1987; June 22, 1977; October 26, 1981.

Replaces E62674D dated March 11, 1996. (Cont. on E card)  
 691996001 N3040 Underwriters Laboratories Inc.® D11/0150420  
 101

For information on placing an order for UL Listing Cards in a 3 x 5 inch card format, please refer to the enclosed ordering information.

UNDERWRITERS LABORATORIES INC.

A not-for-profit organization  
 dedicated to public safety and  
 committed to quality service

File E62674 Vol. 3 Sec. 14 Page 1  
Vol. 9 Sec. 14  
Vol. 13 Sec. 14  
\*Vol. 17 Sec. 2  
and Report

Issued: 1-18-96  
Revised: 8-8-97

#### DESCRIPTION

#### PRODUCT COVERED:

Antenna-Coupling capacitor, Types NS-A, NS-B.

#### ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE'S USE):

The components covered by this Report are intended for use as antenna-coupling and line-by-pass components for connection between a part involving shock hazard and (a) a terminal provided for the connection of an external antenna, or (b) exposed dead-metal.

The capacitors covered by this Report are also intended for connection directly across a nominal 250 V, 60 Hz supply circuit.

They are intended solely as factory-installed components where their acceptability is to be determined by Underwriters' Laboratories, Inc.

#### MODEL DIFFERENCES:

Types NS-A and NS-B are identical except for the lead pitch. Lead pitch for capacitance value (100-3300 pF) can be 7.5 or 10 mm for NS-B. Lead pitch for capacitance value 3900 and 4700 pF are identical to NS-A which is 10 mm.

#### CONDITIONS OF ACCEPTABILITY:

1. These capacitors have been investigated and are intended for use in radio and television receiving appliances and similar equipment.
2. The capacitor enclosure has been found to be a suitable insulator in radio and television receiving appliances and similar equipment without further investigation.
3. These capacitors are intended for use in nominal 250 V, 60 Hz circuits only.
4. The acceptability of these components, when used in an end use product is to be determined by Underwriters laboratories Inc.



# Certificate of Compliance

Certificate Number: LR 58064-11

Revision: LR 58064-22

Date Issued: September 14, 1999

Issued To: MATSUSHITA ELECTRONIC COMPONENTS CO., LTD  
Ceramic Division  
1006, Kadoma, Osaka  
571, Japan

*The products listed below are eligible to bear the CSA Mark.*

Issued By: Brij P. Aggarwal, P. Eng.  
*For:* Vancouver, BC Canada

Signature

## PRODUCTS

CLASS 2221 01 - ACCESSORIES AND PARTS FOR ELECTRONIC PRODUCTS

Across-the-Line, Line-to-Chassis and Antenna-Isolating Capacitor;

Part A: Type NS, rated 125V ac, 60Hz, 100pF through 0.022uF.  
Type NS-A, rated 250V ac, 60Hz, 100pF through 4700pF.  
Type NS-B, rated 125V ac, 60Hz, 100pF through 4700pF.

Part B: Type GL, rated 125V ac, 60Hz, 100pF through 10000pF.

Part C: Type RS, rated 125V ac, 60Hz, 100pF through 10000pF.

Part D: Type WS, rated 125V ac, 60Hz, 100pF through 10000pF.



## Certificate of Compliance

Certificate Number: LR 58064-11

Revision: LR 58064-22

Date Issued: September 14, 1999

### Notes:

1. These capacitors are certified for use only as components of other certified equipment where the suitability of the combination is determined by CSA International.
2. These capacitors are for use with 120V ac supply only except for Type NS-A was evaluated to rated 125V ac and 250V ac.

### APPLICABLE STANDARDS

CSA Std. C22.2 No 1-94 - Audio, Video and Similar Electronic Equipment.

# Test Certificate

Electronic components



Product Services

Certificate No 226319

This is to certify that Isolating capacitors type as listed in the schedule to this certificate

Submitted by Panasonic Services Europe  
A Division of Panasonic Marketing Europe GmbH  
Panasonic Testing Centre  
Winsbergring 15  
22525 Hamburg  
Germany

have been tested as detailed in the schedule to this certificate.

Details of the scope of this certification are given in  
BSI Report No 090862 and any addenda thereto.

Signed

Issue date 30 March 2005

Expiry date 29 March 2007

Attention is drawn to the conditions under which this certificate is issued, namely:

1. The general conditions relating to acceptance of testing (PS082) and the specific conditions (Test Leaflet No TL5 or TL22 as stated above) apply in all respects.
2. This certificate may not be published except in full including any schedule unless permission for the publication of an approved extract has been obtained in writing from the Managing Director of BSI Product Services.
3. This certificate is valid until the expiry date shown above. It shall then be considered cancelled and withdrawn and shall not be used in any way whatsoever.
4. If BSI is satisfied that the manufacturer is marketing what is purporting to be the same model of component but which has been altered or modified or is in any material aspect different from the item tested or is satisfied in respect of evidence discovered by or submitted to it that components purported to be identical to that originally certified are no longer meeting any part of the requirements of the original examination and tests then the certificate will be immediately withdrawn and shall not be used in any way whatsoever.



Schedule to Test Certificate No  
 Schedule issue date  
 Test Certificate expiry date

226319  
 30 March 2005  
 29 March 2007

Isolating capacitors type NS-A and NS-B series:

Capacitance		Tolerance ± %	Ceramic	Temperature Characteristics
Code	(pF)			
101(K or M)	100	± 10 or ± 20	NS-A and NS-B	2B4
151(K or M)	150	± 10 or ± 20	NS-A and NS-B	2B4
221(K or M)	220	± 10 or ± 20	NS-A and NS-B	2B4
331(K or M)	330	± 10 or ± 20	NS-A and NS-B	2B4
471(K or M)	470	± 10 or ± 20	NS-A and NS-B	2B4
681(K or M)	680	± 10 or ± 20	NS-A only	2B4
102(K or M)	1000	± 10 or ± 20	NS-A and NS-B	2B4
102(M)	1000	± 20	NS-A and NS-B	2E4
152(M)	1500	± 20	NS-A and NS-B	2E4
222(M)	2200	± 20	NS-A and NS-B	2E4
332(M)	3300	± 20	NS-A and NS-B	2E4
392(M)	3900	± 20	NS-A and NS-B	2E4
472(M)	4700	± 20	NS-A and NS-B	2E4

Rated as follows:

Type	Sub-class	Rated voltage	Climatic category
NS-A	X1	250 V a.c.	25/125/21/B
		440 V a.c.	
	Y1	250 V a.c.	25/125/21/B
NS-B	Y2	250 V a.c.	25/85/21/C

Tested and certified by BSI in accordance with Test Leaflets 1 and 22 to:

BS EN 60065:1998(BS 415:1998) and IEC 60065:1998 Sixth edition  
 Sub-clauses 8.8 (coating thickness ≥ 0.4 mm) and 14.2.

IEC 60384-14:1993 2nd Edition plus Amendment 1:1995  
 sub-clauses as listed in Table II of that standard.

BS EN 132400: 1995 (EN 132400: 1994) plus Amendment 1:1999  
 sub-clauses as listed in Table 3 of that standard.

This series of capacitors is also certified under BSI Kitemark No KM 54111 for which regular inspections are made at the manufacturing plants to assess the continuing operation of the engineering aspects of the quality control system.

This schedule must be read in conjunction with the test certificate identified above and may not be published except in full including the certificate.

ZEICHENGENEHMIGUNG  
MARKS LICENCE

Matsushita Electric Ind. Co. Ltd.  
1006 Kadoma  
KADOMA-SHI OSAKA 571-0050  
Japan

ist berechtigt, für ihr Produkt /  
*is authorized to use for their product*

**Festkondensator zur Unterdrückung elektromagnetischer Störungen,  
geeignet für Netzbetrieb**  
*Fixed capacitor for electromagnetic interference suppression and  
connection to the supply mains*

die hier abgebildeten markenrechtlich geschützten Prüfzeichen für die  
ab Blatt 2 aufgeführten Typen zu benutzen /  
*the legally protected Certification Marks as shown below for the types referred to on page 2 ff.*



Gepüft und zertifiziert nach /  
*Tested and certified according to*

DIN EN 132400 (VDE 0565 Teil 1-1):1995-03 EN 132400:1994  
DIN EN 132400 (VDE 0565 Teil 1-1):1995-03 EN 132400:1994-06 + Tabelle 3 + A1:1996 + prA2:1996  
IEC 60384-14:1993-07, Table II + A1:1995-06

VDE Prüf- und Zertifizierungsinstitut  
VDE Testing and Certification Institute  
Zertifizierungsstelle  
Certification

Aktenzeichen: 4811.6-4670-0111 / 31CD8 F35 / BT  
File ref.:

Ausweis-Nr.: 087472

Licence No.:

Blatt 1  
page

Weitere Bedingungen siehe Rückseite und Folgeblätter /  
*further conditions see overleaf and following pages*

Offenbach, 1995-05-01

(letzte Änderung/updated 1999-08-20)



# VDE Prüf- und Zertifizierungsinstitut

## Zeichengenehmigung

Ausweis-Nr. /  
Licence No. 087472  
Blatt /  
page 2

Name und Sitz des Zeichengenehmigungs-Inhabers / Name and registered seat of the Marks Licence holder

Matsushita Electric Ind. Co. Ltd., 1006 Kadoma  
KADOMA-SHI OSAKA 571-0050, Japan

Aktenzeichen / File ref.

4811.6-4670-0111 / 31CD8 F35 / BT

letzte Änderung / updated

1999-08-20

Datum / Date

1995-05-01

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Zeichengenehmigungsausweises Nr. 087472.  
*This supplement is only valid in conjunction with page 1 of the Marks Licence No. 087472.*

Jahresgebühren-Einheiten /  
Annual fee units

**Festkondensator zur Unterdrückung elektromagnetischer Störungen, geeignet für Netzbetrieb**  
**Fixed capacitor for electromagnetic interference suppression and connection to the supply**  
**mains**

28,83

Typ(en) / Type(s):

**NS-A**

Bemessungsspannung  
Rated voltage

a) AC 440 V  
b) AC 250 V

Nennwerte der Kapazität  
Rated capacitance

100pF, 150pF, 220pF, 330pF, 470pF, 680pF,  
1000pF, 1500pF, 2200pF, 3300pF, 3900pF, 4700pF

5,04

Kapazitätsklasse und -  
unterklasse  
Capacitor Class and sub-class

a) X1  
b) Y1

Klimakat. und Kat. der passiven  
Entflammbarkeit  
Climatic category + letter for  
pass. flammability

25/125/21/B

Temperaturcharakteristik  
Temperature characteristic

2B4 (100pF to 1000pF)  
2E4 (1000pF to 4700pF)

Grenzabweichung vom  
Nennkapazitätswert  
Tolerance on rated capacitance

± 10 % (K) und/and ± 20 % (M)  
(temperature characteristic 2B4)  
± 20 % (M) (temperature characteristic 2E4)

Fortsetzung siehe Blatt 3 /  
continued on page 3

# VDE Prüf- und Zertifizierungsinstitut

## Zeichengenehmigung

Ausweis-Nr. /  
Licence No.

Blatt /  
page

087472

3

Name und Sitz des Zeichengenehmigungs-Inhabers / Name and registered seat of the Marks Licence holder

Matsushita Electric Ind. Co. Ltd., 1006 Kadoma  
KADOMA-SHI OSAKA 571-0050, Japan

Aktenzeichen / File ref.

letzte Änderung / updated

Datum / Date

4811.6-4670-0111 / 31CD8 F35 / BT

1999-08-20

1995-05-01

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Zeichengenehmigungsausweises Nr. 087472.  
*This supplement is only valid in conjunction with page 1 of the Marks Licence No. 087472.*

Jahresgebühren-Einheiten /  
Annual fee units

Anmerkung  
Remark 1

Bei den auf Blatt 2 aufgeführten  
Festkondensatoren Typ NS-A wird die  
Dicke der Umhüllung (verstärkte  
Isolierung) von mindestens 0,4 mm  
eingehalten.

Die Aufrechterhaltung dieser  
Zeichengenehmigung ist mit der  
Durchführung der laufenden  
Prozesskontrolle zur Sicherstellung  
einer minimalen Dicke der Isolierung  
von 0,4 mm verbunden.

*For the mentioned on page 2 fixed  
capacitors type NS-A the minimum  
thickness of coating (reinforced  
insulation) of 0,4 mm was kept.*

*This marks licence is given under  
condition that the regular process  
control is performed to secure the  
minimum insulation thickness of 0,4 mm.*

Weitere Einzelheiten  
For further details

Anlage Nr. 1 bis 4  
Enclosure No. 1 to 4

Summe der Jahresgebühren-Einheiten  
Sum of annual fee units

33,87

=====

VDE Prüf- und Zertifizierungsinstitut  
VDE Testing and Certification Institute  
Fachgebiet F35  
Section F35



# VDE Prüf- und Zertifizierungsinstitut

## Zeichengenehmigung

Ausweis-Nr. /  
Licence No.

Beiblatt /  
Supplement

087472

Name und Sitz des Zeichengenehmigungs-Inhabers / Name and registered seat of the Marks Licence holder

Matsushita Electric Ind. Co. Ltd., 1006 Kadoma  
KADOMA-SHI OSAKA 571-0050, Japan

Aktenzeichen / File ref.

4811.6-4670-0111 / 31CD8 F35 / BT

letzte Änderung / updated

1999-08-20

Datum / Date

1995-05-01

Dieses Beiblatt ist Bestandteil des Zeichengenehmigungsausweises Nr. 087472.  
*This supplement is part of the Marks Licence No. 087472.*

**Festkondensator zur Unterdrückung elektromagnetischer Störungen, geeignet für Netzbetrieb**  
**Fixed capacitor for electromagnetic interference suppression and connection to the supply mains**

**Fertigungsstätte(n)**  
**Place(s) of manufacture**

CK Nakao Sangyo Co. Ltd., 2033-1 Miyata Minashiro Shintomi-cho, KOYU-GUN MIYAZAKI-KEN 899-1402, Japan

VDE Prüf- und Zertifizierungsinstitut  
VDE Testing and Certification Institute  
Fachgebiet F35  
Section F35

Bert

Reinhold




**John Lay Electronics AG**  
**Littauerboden 1**  
**6014 Littau**

Kundennummer	Ihr Zeichen	Unser Zeichen	Datum
4664	W.Lueders	Mi	03.02.2005

## Bewilligung

Nummer: **05.0123**  
gültig bis: **31.08.2009**

Kennzeichnung:  LL 2

Aufgrund der Unterlagen im Dossier Nr. **00-BS-0120** erteilt das Eidgenössische Starkstrominspektorat der oben genannten Firma das Recht, nachstehende(s) Erzeugnis(se) mit dem Sicherheitszeichen gekennzeichnet, gemäss NEV, in Verkehr zu bringen.

Erzeugnis: **Störschutzkondensatoren**  
Handelsmarken: **Matsushita**  
**M**

Typenbezeichnung      Nenndaten

**NS-A**                      250 V~ 25/125/21/B Y1  
**NS-A**                      440 V~ 25/125/21/B X1

100, 150, 220, 330, 470, 680, 1000,  
1500, 2200, 3300, 3900 und 4700 pF

Schutzklasse:

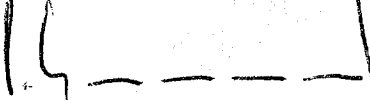
Schutzgrad:

Grundlagen:              CB / DE / 1-7486 vom 25.08.1999

Bemerkung:              Eine weitere Verlängerung der Bewilligung ist über die Aktualisierung des Prüfzertifikates möglich!

Prüfnormen:              IEC 60384-14 Table II Ed.2:1993

**Eidgenössisches Starkstrominspektorat**  
**Bewilligung Sicherheitszeichen**



P. Schoch  
Leiter

# CERTIFICATE

## *Product Safety*

*Reference No./pos* 9918234/01-02

*Product* Capacitor for radio interference suppression

*Certificate holder/  
manufacturer* MATSUSHITA ELECTRONIC  
COMPONENTS CO., LTD.  
Ceramic Division  
1006, Kadoma,  
Osaka, 571-8506  
JAPAN

*Type designations* NS-A

*Technical data* See Enclosure 1

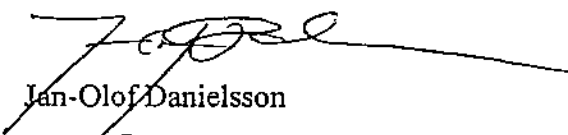
*The product complies  
with the standard(s)* EN 132 400:1994/A2:1998/  
IEC 60384-14, Second edition:1993/A1:1995

*Date of expiry* 31 December 2009

*Terms and additional information overleaf and in Appendix 1.*

Stockholm  
24 June 1999

SEMKO AB  
Product Certification

  
Jan-Olof Danielsson



*SEMKO is part of the global network of*

**ITS** Intertek Testing Services

**Additional Information and manufacturing site**

Item No. 01 Type designation: NS-A

Technical data

100, 150, 220, 330, 470, 680, 1000, 1500, 2200, 3300, 3900  
and 4700pF X1. AC 440V. 25/125/21/B.

Item No. 02 Type designation: NS-A

Technical data

100, 150, 220, 330, 470, 680, 1000, 1500, 2200, 3300, 3900  
and 4700pF Y1. AC 250V. 25/125/21/B.

Temp. char. 2B4: 100-1000 pF

2E4: 1000-4700 pF

Manufacturing site:

NAKAO SANGYO CO., LTD.

2033-1, Miyata Minasiro

Shintomi-cho, Koyo-gun

Miyszaki-ken, 889-1402

JAPAN

However, the certificate is valid only after the following provisos have been attended to:

The capacitors shall be marked also with the class X1 and rated voltage 440 V~.


The package marking shall be marked with climatic category and passive flammability category 25/125/21/B.

# CERTIFICATE

Our Ref. 208598

FI 13556



<b>Product</b>	Capacitor for electromagnetic interference suppression
<b>Type</b>	NS-A
<b>Trade mark</b>	Matsushita
<b>Certificate Holder</b>	Matsushita Electronic Components Ceramic Division, 1006, Kadoma, OSAKA 571-8506, JAPAN
<b>Manufacturer</b>	Matsushita Electronic Components Co., Ltd. Ceramic Division, 1006, Kadoma, OSAKA 571-8506, JAPAN
<b>Technical information</b>	440V a.c., X1, 100pF, 150pF, 220pF, 330pF, 470pF, 680pF, 1000pF, 1500pF, 2200pF, 3300pF, 3900pF and 4700pF. 250V a.c., Y1, 100pF, 150pF, 220pF, 330pF, 470pF, 680pF, 1000pF, 1500pF, 2200pF, 3300pF, 3900pF and 4700pF.
<b>Other information</b>	25/125/21/B
<b>The product is certified according to the following standard(s)</b>	EN 132 400:1994/A2:1998 and IEC 60 384-14, 2nd. edition:1993/A1:1995
<b>Validity</b>	This certificate is valid up to 31 December 2009 and it includes the right to use the FI mark under the condition that the conditions of the framework contract for testing and certification activities are fulfilled and that changes (if any) will be reported to FIMKO before they have been carried out.
<b>Date of issue</b>	21 July 1999  FIMKO LTD
<b>Signature</b>	 Mika Mustonen Quality Development Manager

This certificate has 1 appendix

**FIMKO** 

FIMKO OY, Särkiniementie 3, FIN-00210 Helsinki, Finland  
Puhelin (09) 696 361, telekopio (09) 692 5474, telephone int. +358 9 696 361, telefax int. +358 9 692 5474



**Manufacturing sites**

Nakao Sangyo Co.,Ltd, 2033-1, Miyata Minasiro, Shintomi-cho, Koyo-gun  
MIYSZAKI-KEN, 889-1402, JAPAN

Matsushita Electronic Components (M) Sdn. Bhd., No.1 Jalan Peloga 16/13  
MY-4000 Shah Alam Selangor DARUL EHSAN, MALAYSIA

Sinwa Seisakusho Co.,Ltd, 6467-7, Asahigaoka, 3-chome Nobeoka Shi  
MIYAZAKI-KEN, 889-0507, JAPAN

**Additional Information**

The product has certificate 9918234/01-02, 9918239/01-02 and 9918240/01-01  
in accordance with the Nordic Certification Service system.

Temp. Char. 2B4 : 100-1000pF  
2E4 : 1000-4700pF

However, the certificate is valid only after the following provisos have been  
attended to :

The capacitors shall be marked also with the Class X! and rated voltage  
440V-.

The package marking shall be marked with climatic category and passive  
flammability.

**Is based on test**

208598

No. P99101676

Order No. 199927176

Applicant Panasonic Testing Centre (Europe) GmbH,  
c/o Semko AB  
Box 1103, SE-164 22 Kista  
SWEDEN

Manufacturer Matsushita Electronic Components Co. Ltd., Ceramic Division  
1006, Kadoma, Osaka, 571-8506  
JAPAN

Factory Nakao Sangyo Co., Ltd.  
2033-1, Miyata Minasiro  
Shintomi-cho, Koyo-gun  
Miyazaki-ken, 889-1402  
JAPAN

Group 13 11000 Radio interference suppressors

Model/type NS-A

Data 440V AC, 100-4700pF, X1

Other specification Tails, 25/125/21/B

The above product is certified according to the flwg. standard(s) Safety std.: EN 132400:94/A2:98 / IEC 60384-14, second edition:93/A1:95

Validity The certificate is valid until 31 December 2009, provided that all signed certification conditions are complied with, and that possible changes to the product are notified to Nemko for acceptance prior to implementation. The validity time may be reduced in case new standards are made applicable. The certificate also applies as licence for use of Nemko's name and certification mark.

Additional information Capacitance values:  
100, 150, 220, 330, 470, 680, 1000, 1500, 2200, 3300, 3900 and 4700pF  
Temp. char.: 2B4: 100-1000pF, 2E4: 1000-4700pF

Variants This Certificate also covers variants with Position No. from 001 to 001  
See next page(s)

Date of issue 27 July 1999

*Berit Bieker*  
signature

*for* Berit Bieker  
Head of section

*Arne R. Mikkelsen*  
signature

Arne R. Mikkelsen

No. P99101676

Order No. 199927176

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Group 13 11000	Radio interference suppressors
Position No	001
Model/type	NS-A
Data	250V AC, 100-4700pF, Y1
Other specification	Tails, 25/125/21/B



Certificate No DK 99-02495

# DEMKO CERTIFICATE

**Product:** Capacitor for Radio Interference Suppression

**Manufacturer:** Matsushita Electronic Components Co., Ltd.  
Ceramic Division,  
1006, Kadoma, Osaka, 571-8506, Japan

**Production site:** Nakao Sangyo Co., Ltd.  
2033-1, Miyata Minasiro, Shintomi-cho, Koyo-gun  
Miyazaki-ken, 889-1402, Japan

**Certified by request of:** same as manufacturer

**Trademark:** Matsushita (logo)

**Model/Type ref.:** 01) NS-A, X1, 02) NS-A, Y1

**Rated current or power:** -

**Rated voltage:** 01) 440 V AC, 02) 250 V AC

**Insulation Class:** -

**Degree of protection:** -

**Additional information:** 100, 150, 220, 330, 470, 680, 1000, 1500, 2200, 3300, 3900 and 4700 pF  
25/125/21/B.

A sample of the product has been tested and found in conformity with EN 132 400:1994 + A2:1998/IEC 60384-14, sec. edt.:1993/A1:1995.

The certificate has been issued on the basis of Nordic Certification Service, certificate no. 9918234, issued by SEMKO, dated 1999-06-24.

Date of expiry: 2009-12-31.

*The manufacturer complies with the Production Surveillance Requirements.*

*DEMKO A/S is a body notified to the Member States and Commission of the European Communities according to the provisions of Article 8 of the Low Voltage Directive.*

*Products included in this certificate are allowed to carry the registered approval marks of DEMKO A/S, © or for cables <DEMKO>. The name of DEMKO can be used in the marketing of the products as well.*

*This certificate is only valid for products, which are identical to the certified product, and manufactured at the above mentioned production site(s). DEMKO A/S has to be informed in writing about any changes, in accordance with the "DEMKO A/S Standard Terms and Conditions" for DEMKO services.*

Herlev, 1999-07-08




*Ulli Joch*  
Steen Lumby  
Section Manager

Notified body:

DEMKO A/S • PO Box 514 • Lyskaer 8 • DK-2730 Herlev • Tel: +45 44856565 • Fax: +45 44856500

**DEMKO**

 A Subsidiary of  
Underwriters  
Laboratories Inc. •

# CERTIFICATE

OF SAFETY FOR ELECTRICAL APPLIANCES

Certification Number : SU03012-3002

Ref. No. : 03-920-2133

Manufacturer's Name : Nakao Sangyo Co., Ltd.  
& Address : 2033-1 Miyata Minashiro Shintomi-cho, Koyu-Gun,  
Miyazaki 889-1402, Japan

Factory Address : Same as Manufacturer's

Certified Product

1. Product	: Ceramic Capacitor
2. Basic Model	: NS-A
3. Rating	: X1 : 440V, Y1 : 250V
4. Derivative Model	: Not Applicable

Applied Standard : K60384-14

Attached Supplement : 1. General Description of Certified Products

*This is to certify that the product shown above is complied with the safety standards under the Electrical Appliance Safety Control Law, paragraph 2 of Article 5 and is manufactured by a scheme that follows continuous obligations of safety. The product listed above is eligible to bear the Korean Safety Mark.*

Date of Issue: July: 11, 2003.



CERTIFICATION BODY

KOREA TESTING LABORATORY

Seon-Beom Heo / Certification Director

- 별첨 1: 파생모델구분 및 특기사항  
General description of Certified Products

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
Not Applicable	
제품특기사항 및 시험조건 Remarks & Test conditions	
<p>1. Review Report No. : 03-920-2133 (2003.7.7.) Test Report Ref. No. : 4811.6-4670-0111/31CD8 (JET)</p> <p>2. Product description</p> <ul style="list-style-type: none"> <li>- Type of test object: Fixed Capacitors for Electronic Interference Suppression and Connection to the Supply Mains</li> <li>- Capacitor class: Class X1, Class Y1</li> <li>- Rated Capacitance: 100, 150, 220, 330, 470, 680, 1000, 1500, 2200, 3300, 3900 and 4700pF (See attached sheet (2) )</li> </ul>	
<p><input type="checkbox"/> 본 제품의 시험내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 시험담당자 : 전기전자그룹(본부), 신뢰성평가팀, 모성희 / (02)860-1478</p> <p><input type="checkbox"/> If you have any question on product testing, please contact the person below : Job holder : Electrotechnical Center, Reliability Assessment Team, S.H.MO. /+82 2 8601-478</p>	

FP511-09-00