

Safety Standard Certified Ceramic Capacitors
(安全規格認定セラミックコンデンサ)

Type MF

X1 : 250 Vac(r.m.s.) Y2 : 250 Vac(r.m.s.) X1Y2 : 1000Vdc(UL)

| Certification Body (認証機関) | Class (クラス) | Standard No. (規格番号) | Certificate No.* (認定番号) | Expiration date (有効期限) | Attached Page No. (添付ページ番号) |
|------------------------------|----------------|--------------------------|----------------------------|--------------------------------|-----------------------------------|
| UL/cUL | X1Y2 | UL60384-14/CSA E60384-14 | E37921 | No expiration date (有効期限無し) | 6 - 1 |
| ENEC(VDE) | X1Y2 | EN60384-14 | 40039447 | No expiration date (有効期限無し) | 6 - 2 |

* Above Certified No. may be changed on account of the revision of standards and the renewal of certification.

(* 認定番号は規格番号の改訂、取得範囲の変更により変わることがあります。)

Murata Mfg. Co.,Ltd.

株式会社 村田製作所

Fixed Capacitors for Use in Electronic Equipment - Component

COMPANY


MURATA MFG CO LTD

COMPONENT BUSINESS UNIT

1-10-1 HIGASIKOTARI

NAGAOKAKYO-SHI, Kyoto 617-8555 Japan

E37921

Marking: Company name or trademark , and model designation.

Note: For additional marking information, refer to the [Guide Information Page](#).

View model for additional information

Class X1 and Class Y2 Capacitors, Model(s): KJ may be followed by M for +/-20%, K for +/-10%.

Class X1/Y1 Capacitors, Model(s): EA may be followed by K ($\pm 10\%$) (for 10~47pF), K ($\pm 10\%$) or M ($\pm 20\%$) (for 100~680pF), M ($\pm 20\%$) (for 1000~2200pF).

Class X1/Y1 Capacitors, Model(s): KL may be followed by J ($\pm 5\%$), K ($\pm 10\%$) or M ($\pm 20\%$) for capacitance tolerance.

Class X1/Y1 Capacitors, Model(s): RA may be followed by J ($\pm 5\%$), K ($\pm 10\%$) or M ($\pm 20\%$) for capacitance tolerance.

Class X1/Y1 Capacitors, Model(s): RB may be followed by K ($\pm 10\%$) or M ($\pm 20\%$) for capacitance tolerance.

Class X1/Y1 Capacitors, Ceramic Disk Type, Model(s): KX may be followed by J for +/-5%. K for +/-10%. M for +/-20%.

Class X1/Y2 Capacitors, Model(s): IF may be followed by K ($\pm 10\%$).

Class X1/Y2 Capacitors, Model(s): SA may be followed by J ($\pm 5\%$), K ($\pm 10\%$) or M ($\pm 20\%$) for capacitance tolerance.

Class X1/Y2 Capacitors, Ceramic Disk Type, Model(s): KH may be followed by K for +/-10%. M for +/-20%.

Class X1/Y2 Capacitors, Ceramic Disk Type, Model(s): KY may be followed by J for +/-5%. K for +/-10%. M for +/-20%.

Class X1/Y2 Capacitors, Surface Mount Capacitors, Model(s): GF series for type GA342 may be followed by J ($\pm 5\%$) (for 10~82pF), K ($\pm 10\%$) (for 100~4700pF).

Class X1/Y2 Capacitors, Surface Mount Capacitors, Model(s): GF series for type GA352, GA355 may be followed by J ($\pm 5\%$) (for 10~82pF), K ($\pm 10\%$) (for 100~4700pF).

Class X1/Y2 Capacitors, Surface Mount Capacitors, Model(s): ME may be followed by K ($\pm 10\%$) (for 100~4700pF), M($\pm 20\%$) (for 5600~10000pF).

Class X2 Capacitors, Model(s): GB+GA35****GB****W*** (* may be space, 0 to 9, A to Z) with Capacitances of 10000, 15000, 22000, 33000, 47000, or 56000 pF with tolerance K.

Last Updated on 2024-04-27

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Fixed Capacitors for Use in Electronic Equipment Certified for Canada - Component

COMPANY

MURATA MFG CO LTD

COMPONENT BUSINESS UNIT

1-10-1 HIGASIKOTARI

NAGAOKAKYO-SHI, Kyoto 617-8555 Japan

E37921

Marking: Company name or trademark , model designation, and the Recognized Component Mark for Canada 

Note: For additional marking information, refer to the [Guide Information Page](#).

View model for additional information

Class X1 and Class Y2 Capacitors, Model(s): KJ may be followed by M for +/-20%, K for +/-10%.

Class X1/Y1 Capacitors, Model(s): EA may be followed by K ($\pm 10\%$) (for 10~47pF), K ($\pm 10\%$) or M ($\pm 20\%$) (for 100~680pF), M ($\pm 20\%$) (for 1000~2200pF).

Class X1/Y1 Capacitors, Model(s): RA may be followed by J ($\pm 5\%$), K ($\pm 10\%$) or M ($\pm 20\%$) for capacitance tolerance.

Class X1/Y1 Capacitors, Model(s): RB may be followed by K ($\pm 10\%$) or M ($\pm 20\%$) for capacitance tolerance.

Class X1/Y2 Capacitors, Model(s): IF may be followed by K ($\pm 10\%$).

Class X1/Y2 Capacitors, Model(s): SA may be followed by J ($\pm 5\%$), K ($\pm 10\%$) or M ($\pm 20\%$) for capacitance tolerance.

Class X1/Y2 Capacitors, Surface Mount Capacitors, Model(s): GF series for type GA342 may be followed by J ($\pm 5\%$) (for 10~82pF), K ($\pm 10\%$) (for 100~4700pF).

Class X1/Y2 Capacitors, Surface Mount Capacitors, Model(s): GF series for type GA352, GA355 may be followed by J ($\pm 5\%$) (for 10~82pF), K ($\pm 10\%$) (for 100~4700pF).

Class X1/Y2 Capacitors, Surface Mount Capacitors, Model(s): ME may be followed by K ($\pm 10\%$) (for 100~4700pF), M($\pm 20\%$) (for 5600~10000pF).

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Model MF

File Number: E37921

COMPANY

MURATA MFG CO LTD

COMPONENT BUSINESS UNIT

1-10-1 HIGASIKOTARI

NAGAOKAKYO-SHI, Kyoto 617-8555 Japan

MODEL INFO

MF may be followed by K ($\pm 10\%$) (for 100~4700pF), M($\pm 20\%$) (for 5600~10000pF).

Class X1/Y2 Capacitors, Surface Mount Capacitors

| GENERAL | | | | | | | | | | |
|-------------|-------------------|-----------------|-------------|----------|-------------|-----------------|---------------------------|------------------------|------------------------|------------------------------|
| US Standard | Canadian Standard | Capacitor Class | Voltage (V) | AC or DC | Capacitance | Tolerance (%) | Resistance for RC Devices | Lower Temperature (°C) | Upper Temperature (°C) | Additional Robustness Grades |
| -- | -- | X1/Y2 | 250 | AC | 100~10000pF | K($\pm 10\%$) | | -55 | 125 | |
| -- | -- | X1/Y2 | 1000 | DC | 100~10000pF | K($\pm 10\%$) | | -55 | 125 | |

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ZEICHENGENEHMIGUNG MARKS APPROVAL

Murata Mfg. Co., Ltd.
(Headquarters)
10-1 Higashikotari 1-Chome
NAGAOKAKYO-SHI, KYOTO 617-8555
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 Zeichen
für die ab Blatt 2 aufgeführten Typen zu benutzen /
the legally protected Marks as shown below for the types referred to on page 2 ff.



Geprüft und zertifiziert nach /
Tested and certified according to

DIN EN 60384-14 (VDE 0565-1-1):2014-04; EN 60384-14:2013-08

DIN EN 60384-14/A1 (VDE 0565-1-1/A1):2017-04; EN 60384-14:2013/A1:2016

Das Produkt erfüllt auch die Anforderungen nach /
The product also fulfills the requirements of

IEC 60384-14:2013

IEC 60384-14:2013/AMD1:2016



Aktenzeichen: 748200-4670-0061 / 289610

File ref.:

Ausweis-Nr. 40039447

Blatt 1

Certificate No.

Page

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

Offenbach, 2014-02-21

(letzte Änderung / updated 2022-03-21)

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

M. Tasotti

VDE Zertifikate sind nur gültig bei Veröffentlichung unter:
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<http://www.vde.com/certificate>

VDE Prüf- und Zertifizierungsinstitut Zeichengenehmigung

Ausweis-Nr. / Blatt /
Certificate No. / Page
40039447 2

Name und Sitz des Genehmigungs-Inhabers / *Name and registered seat of the Certificate holder*

Murata Mfg. Co., Ltd. (Headquarters), 10-1 Higashikotari 1-Chome, NAGAOKAKYO-SHI, KYOTO 617-8555,
JAPAN

Aktenzeichen / *File ref.*

748200-4670-0061 / 289610 / TL3 / KIL

letzte Änderung / *updated*

2022-03-21

Datum / *Date*

2014-02-21

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Zeichengenehmigungsausweises Nr. 40039447.

This supplement is only valid in conjunction with page 1 of the Certificate No. 40039447.

Festkondensator zur Unterdrückung elektromagnetischer Störungen, geeignet für Netzbetrieb

***Fixed capacitor for electromagnetic interference
suppression and connection to the supply mains***

Typ(en) / *Type(s)*

MF-Series

Warenzeicheninhaber
Trademark holder

Murata MFG. Co., Ltd.

Weitere Einzelheit(en)
Further details

Anlage Nr. 200, 600 und 700 vom 2019-08-29
Appendix no. 200, 600 and 700 dated 2019-08-29

VDE Prüf- und Zertifizierungsinstitut Zeichengenehmigung

Ausweis-Nr. / Beiblatt /
Certificate No. Supplement
40039447

Name und Sitz des Genehmigungs-Inhabers / *Name and registered seat of the Certificate holder*

Murata Mfg. Co., Ltd. (Headquarters), 10-1 Higashikotari 1-Chome, NAGAOKAKYO-SHI, KYOTO 617-8555,
JAPAN

Aktenzeichen / *File ref.*

748200-4670-0061 / 289610 / TL3 / KIL

letzte Änderung / *updated*

2022-03-21

Datum / *Date*

2014-02-21

Dieses Beiblatt ist Bestandteil des Zeichengenehmigungsausweises Nr. 40039447.

This supplement is part of the Certificate No. 40039447.

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

Referenz/*Reference*

30009300

Izumo Murata Mfg. Co., Ltd.

2308 Kaminaoe Hikawa-cho

IZUMO CITY, SHIMANE-KEN 699-0696

JAPAN

Referenz/*Reference*

30026727

Izumo Murata Manufacturing

Co., Ltd. Iwami plant (Hane)

800-4 Nishinosako, Hane-cho

OHDA-SHI 699-2211

JAPAN

VDE Prüf- und Zertifizierungsinstitut Zeichengenehmigung

Ausweis-Nr. / Infoblatt /
Certificate No. / Info sheet
40039447

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Murata Mfg. Co., Ltd. (Headquarters), 10-1 Higashikotari 1-Chome, NAGAOKAKYO-SHI, KYOTO 617-8555, JAPAN

Aktenzeichen / *File ref.*

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letzte Änderung / *updated*

2022-03-21

Datum / *Date*

2014-02-21

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Genehmigung zum Benutzen des auf Seite 1 abgebildeten markenrechtlich geschützten Zeichens des VDE:

Grundlage für die Benutzung sind die Allgemeinen Geschäftsbedingungen (AGB) der VDE Prüf- und Zertifizierungsinstitut GmbH (www.vde.com\AGB-Institut). Das Recht zur Benutzung erstreckt sich nur auf die bezeichnete Firma mit den genannten Fertigungsstätten und die oben aufgeführten Produkte mit den zugeordneten Bezeichnungen. Die Fertigungsstätte muss so eingerichtet sein, dass eine gleichmäßige Herstellung der geprüften und zertifizierten Ausführung gewährleistet ist.

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Der Gültigkeitszeitraum einer VDE-GS-Zeichengenehmigung kann auf Antrag verlängert werden. Bei gesetzlichen und / oder normativen Änderungen kann die VDE-GS-Zeichengenehmigung ihre Gültigkeit zu einem früheren als dem angegebenen Datum verlieren.

Produkte, die das Biozid Dimethylfumarat (DMF) enthalten, dürfen gemäß der Kommissionsentscheidung 2009/251/EG nicht mehr in den Verkehr gebracht oder auf dem Markt bereitgestellt werden.

Der VDE-Zeichengenehmigungsausweis wird ausschließlich auf der ersten Seite unterzeichnet.

Approval to use the legally protected Mark of the VDE as shown on the first page:

Basis for the use are the general terms and conditions of the VDE Testing and Certification Institute (www.vde.com\terms-institute). The right to use the mark is granted only to the mentioned company with the named places of manufacture and the listed products with the related type references. The place of manufacture shall be equipped in a way that a constant manufacturing of the certified construction is assured.

The approval is valid as long as the VDE specifications are in force, on which the certification is based on, unless it is withdrawn according to the VDE Testing and Certification Procedure (PM102E).

The validity period of a VDE-GS-Mark Approval may be prolonged on request. In case of changes in legal and / or normative requirements, the validity period of a VDE-GS-Mark Approval may be shortened.

Products containing the biocide dimethylfumarate (DMF) may not be marketed or made available on the EC market according to the Commission Decision 2009/251/EC.

The approval is solely signed on the first page.

VDE Prüf- und Zertifizierungsinstitut

Zeichengenehmigung

Name und Sitz des Genehmigungs-Inhabers / *Name and registered seat of the Certificate holder*

Murata Mfg. Co., Ltd., (Headquarters), 10-1 Higashikotari 1-Chome, NAGAOKAKYO-SHI, KYOTO 617-8555, Japan

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Zeichengenehmigungsausweises Nr. 40039447.
*This supplement is only valid in conjunction with page 1 of the Certificate No. 40039447*Rubrik / *Rubric*

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Ausweis-Nr. /
Certificate No.
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Appendix
200Aktenzeichen / *File ref.*748200-4670-
0061/261663/TL3/KILletzte Änderung / *updated*

2019-08-29

Datum / *Date*

2014-02-21

Festkondensator zur Unterdrückung elektromagnetischer Störungen, geeignet für Netzbetrieb

Fixed capacitor for electromagnetic interference suppression and connection to the supply mains

| | | |
|---|---|--|
| Typ(en) <i>Type(s)</i> | MF-Series | |
| Bemessungskapazität <i>Rated capacitance</i> | 100pF; 120pF; 150pF; 180pF; 220pF; 270pF; 330pF; 390pF; 470pF; 560pF; 680pF; 820pF; 1000pF; 1200pF; 1500pF; 1800pF; 2200pF; 2700pF; 3300pF; 3900pF; 4700pF; 5600pF; 6800pF; 8200pF; 10000pF | |
| Bemessungsspannung <i>Rated voltage</i> | AC 250 V | |
| Kondensatorklasse und -unterklasse <i>Capacitor class and subclass</i> | X1 / Y2 | |
| Grenzabweichung der Bemessungskapazität <i>Tolerance of rated capacitance</i> | ±10% (K) or/oder ±20% (M) | |
| Klimakategorie <i>Climatic category</i> | 55/125/21 | |
| Kategorie der passiven Entflammbarkeit <i>Passive flammability category</i> | C | |
| Keramikart <i>Type of ceramic</i> | U2J | |
| Genehmigung für Gleichspannungsanwendungen nach Anhang H <i>Approval for d.c. applications according to Annex H</i> | <input type="checkbox"/> | ja Bemessungsgleichspannung DC ____ V yes <i>d.c. rated voltage</i> |
| | <input checked="" type="checkbox"/> | nein no |
| Genehmigung für Feuchtebeständigkeitsklasse nach Anhang I <i>Approval for humidity robustness grade according to Annex I</i> | <input type="checkbox"/> | IA 21 Tage bei 40 °C / 93 % r.F. mit angelegter Bemessungsspannung <i>21 days at 40 °C / 93 % r.h. with rated voltage applied</i> |
| | <input type="checkbox"/> | IB 168 Stunden bei 85 °C / 85 % r.F. mit angelegter Bemessungsspannung <i>168 hours at 85 °C / 85 % r.h. with rated voltage applied</i> |
| | <input type="checkbox"/> | IIA 56 Tage bei 40 °C / 93 % r.F. mit angelegter Bemessungsspannung <i>56 days at 40 °C / 93 % r.h. with rated voltage applied</i> |
| | <input type="checkbox"/> | IIB 500 Stunden bei 85 °C / 85 % r.F. mit angelegter Bemessungsspannung <i>500 hours at 85 °C / 85 % r.h. with rated voltage applied</i> |
| | <input type="checkbox"/> | IIIA 56 Tage bei 60 °C / 93 % r.F. mit angelegter Bemessungsspannung <i>56 days at 60 °C / 93 % r.h. with rated voltage applied</i> |
| | <input type="checkbox"/> | IIIB 1.000 Stunden bei 85 °C / 85 % r.F. mit angelegter Bemessungsspannung <i>1.000 hours at 85 °C / 85 % r.h. with rated voltage applied</i> |
| | <input checked="" type="checkbox"/> | keine none |
| Warenzeicheninhaber <i>Trademark holder</i> | Murata MFG. Co., Ltd. | |

