

No. P02102170

Accredited Certificate (ref. NA-PROD 016)

Order No. **200243234**

Applicant Fairchild Semiconductor (Opto-electronics) Sdn. Bhd.,
No. 5 Jalan SS8/2,
Sungei Way Free Industr. Zone,
47300 Petaling Jaya, Selangor D.E.
MALAYSIA

Manufacturer Fairchild Semiconductor
3001 Orchard Parkway
San Jose, CA 95134
USA

Factory Fairchild Semiconductor (Opto-electronics) Sdn. Bhd.,
No. 5 Jalan SS8/2,
Sungei Way Free Industr. Zone,
47300 Petaling Jaya, Selangor D.E.
MALAYSIA

Group 66 91000 Other electronic appliances

Model/type HMA121.

Data -

Other specification Optoinsulator for bridging of reinforced insulation.
The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).


The above product is certified according to the following standard(s) Safety std.: EN60065 (1998), including possible listed national conditions/deviations for Norway.

Validity This certificate documents conformity with the standards shown, and also applies as license for use of Nemko's name and certification mark. The certificate and license is valid as long as the applicable conditions are complied with, and provided that any changes to the product are notified to Nemko for acceptance prior to implementation.
New standards or amendments to the standards may imply that the product design must be updated and/or that re-testing and re-certification is necessary.

Additional information Additional information on page 2
This certificate replaces certificate issued 31 October 2002, due to change in additional information on page 3.

Variants This Certificate also covers variants with Position No. from 001 to 007
See next page(s)

Date of issue 18 December 2002


signatureLars Hjerpseth
Head of section
signature

Hanne Yndestad

No. P02102170

Accredited Certificate (ref. NA-PROD 016)

Order No. 200243234

Group 66 91000
Position No
Model/type
Data
Other specification

Other electronic appliances

001

HMA124.

-

Optoinsulator for bridging of reinforced insulation.

The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).

Group 66 91000
Position No
Model/type
Data
Other specification

Other electronic appliances

002

HMA181.

-

Optoinsulator for bridging of reinforced insulation.

The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).

Group 66 91000
Position No
Model/type
Data
Other specification

Other electronic appliances

003

HMA2701.

-

Optoinsulator for bridging of reinforced insulation.

The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).

Group 66 91000
Position No
Model/type
Data
Other specification

Other electronic appliances

004

HMAA2705.

-

Optoinsulator for bridging of reinforced insulation.

The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).

Group 66 91000
Position No
Model/type
Data
Other specification

Other electronic appliances

005

HMHAA280.

-

Optoinsulator for bridging of reinforced insulation.

The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).

Group 66 91000
Position No
Model/type
Data
Other specification

Other electronic appliances

006

HMHA2801.

-

Optoinsulator for bridging of reinforced insulation.

The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).

Group 66 91000
Position No
Model/type
Data
Other specification

Other electronic appliances

007

HMHA281.

-

Optoinsulator for bridging of reinforced insulation.

The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).

Date of issue 18 December 2002



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Lars Hjerpseth

Head of section



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Hanne Yndestad

No. P02102170

Accredited Certificate (ref. NA-PROD 016)

Order No. 200243234

Additional Information:

The above certified equipment complies with current technical standard(s) in Norway regarding safety, as far as this can be checked. Compliance with requirements regarding building-in, protection against electric shock and Electromagnetic Compatibility (EMC) must be checked when the equipment is built-in a completed product or forms a part of a complete system. It should be noted that by marketing of equipment subject to official registration in Norway, the party responsible for the marketing shall be registered by the Norwegian Directorate for Product- and Electrical Safety.

The certification is based on Notification of Nordic Test Results from Semko, Certificate No. 202172. The design is presupposed to be identical to the sample tested.

General for all models:

- Creepage distance between input and output: >5mm.
- Distance through insulation: ≥ 0.5 mm.
- Humidity test: 48h. in 93% relative humidity. Electric strength test 3000V/1min.

After judgement from case to case, the opto-insulator can bridge basic, supplementary, double or reinforced insulation, provided that the ratings in data sheet are not exceeded in normal operation or under fault conditions in the appliance.

Date of issue 18 December 2002

A handwritten signature in blue ink, appearing to read 'Lars Hjerpseth'.

signature

Lars Hjerpseth

Head of section

A handwritten signature in blue ink, appearing to read 'Hanne Yndestad'.

signature

Hanne Yndestad

No. P02102177

Accredited Certificate (ref. NA-PROD 016)

Order No. 200241232

Applicant Fairchild Semiconductor (Opto-electronics) Sdn. Bhd.,
No. 5 Jalan SS8/2,
Sungei Way Free Industr. Zone,
47300 Petaling Jaya, Selangor D.E.
MALAYSIA

Manufacturer Fairchild Semiconductor
3001 Orchard Parkway
San Jose, CA 95134
USA

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No. 5 Jalan SS8/2,
Sungei Way Free Industr. Zone,
47300 Petaling Jaya, Selangor D.E.
MALAYSIA

Group 63 89000 Various data equipment, word processing appliances etc.

Model/type HMA121.

Data -

Other specification Optoinsulator for bridging of reinforced insulation.
The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).

The above product is certified according to the following standard(s) Safety std.: EN 60950 (2000), including possible listed national conditions/deviations for Norway.

Validity This certificate documents conformity with the standards shown, and also applies as license for use of Nemko's name and certification mark. The certificate and license is valid as long as the applicable conditions are complied with, and provided that any changes to the product are notified to Nemko for acceptance prior to implementation.
New standards or amendments to the standards may imply that the product design must be updated and/or that re-testing and re-certification is necessary.


Additional information Additional information on page 3

Variants This Certificate also covers variants with Position No. from 001 to 007
See next page(s)

Date of issue 31 October 2002



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 **Lars Hjerpseth**
Head of section

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Hanne Yndestad

No. P02102177

Accredited Certificate (ref. NA-PROD 016)


Order No. 200241232

Group 63 89000	Other electronic appliances
Position No	001
Model/type	HMA124.
Data	-
Other specification	Optoinsulator for bridging of reinforced insulation. The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).
Group 63 89000	Other electronic appliances
Position No	002
Model/type	HMA181.
Data	-
Other specification	Optoinsulator for bridging of reinforced insulation. The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).
Group 63 89000	Other electronic appliances
Position No	003
Model/type	HMA2701.
Data	-
Other specification	Optoinsulator for bridging of reinforced insulation. The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).
Group 63 89000	Other electronic appliances
Position No	004
Model/type	HMAA2705.
Data	-
Other specification	Optoinsulator for bridging of reinforced insulation. The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).
Group 63 89000	Other electronic appliances
Position No	005
Model/type	HMHAA280.
Data	-
Other specification	Optoinsulator for bridging of reinforced insulation. The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).
Group 63 89000	Other electronic appliances
Position No	006
Model/type	HMHA2801.
Data	-
Other specification	Optoinsulator for bridging of reinforced insulation. The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).
Group 63 89000	Other electronic appliances
Position No	007
Model/type	HMHA281.
Data	-
Other specification	Optoinsulator for bridging of reinforced insulation. The dot "." may be blank or any letter representing CTR (Current Transfer Ratio).

Date of issue 31 October 2002



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 **Lars Hjerpseth**
Head of section

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Hanne Yndestad

No. P02102177

Accredited Certificate (ref. NA-PROD 016)

Order No. 200241232

Additional Information:

The above certified equipment complies with current technical standard(s) in Norway regarding safety, as far as this can be checked. Compliance with requirements regarding building-in, protection against electric shock and Electromagnetic Compatibility (EMC) must be checked when the equipment is built-in a completed product or forms a part of a complete system. It should be noted that by marketing of equipment subject to official registration in Norway, the party responsible for the marketing shall be registered by the Norwegian Directorate for Product- and Electrical Safety.

The certification is based on Notification of Nordic Test Results from Semko, Certificate No. 202172. The design is presupposed to be identical to the sample tested.

General for all models:

- Creepage distance between input and output: >5mm.
- Distance through insulation: ≥ 0.5 mm.
- Humidity test: 48h. in 93% relative humidity. Electric strength test 3000V/1min.
- Internal creepage distance not measured, tests according to EN 60950 (1992) A1/A2/A3/A4/A11 clause 2.9.6 have been performed with positive result.

Special tests according to EN 60950:

- Thermal cycling test. 10 cycles. Each cycle: 68h. in 100°C, 1h. in 25°C, 2h. in 0°C and 1h. in 25°C. After the cycling test a humidity test for 48h. in 93% relative humidity. Electric strength test between input and output 4800V/1min.

After judgement from case to case, the opto-insulator can bridge basic, supplementary, double or reinforced insulation, provided that the ratings in data sheet are not exceeded in normal operation or under fault conditions in the appliance.

Date of issue, 31 October 2002



signature

Lars Hjerpseth
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Hanne Yndestad