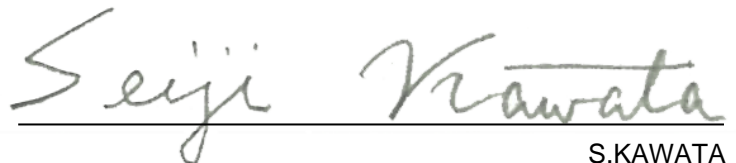


**PS2381-1, PS2533, PS2561, PS2561A,
PS2561B, PS2561D, PS2562, PS2565,
PS2571, PS2581L, PS2581AL, PS2761B-1,
PS2861B-1, PS7341-1A, PS7342-1A,
PS7360-1A, PS8302, PS8501, PS8502,
PS8551L4, PS8551AL4, PS9305, PS9306,
PS9307, PS9307A, PS9308, PS9309, PS9313,
PS9317, PS9324, PS9331, PS9332, PS9505,
PS9506, PS9513, PS9531, PS9551L4,
PS9551AL4, PS9552, PS9587, PS9905, PS9924**

● SEMKO Certificate

Standard EN 60065, IEC 60065
 EN 60950-1, IEC 60950-1

Reference No. 1513091


S.KAWATA

Expert
General Purpose Analog and Power Solution Department 1
General Purpose Analog and Power Business Division
2nd Solution Business Unit
Renesas Electronics Corporation

Certificate



for European Product Safety

Reference No. 1513091

Optoinsulator for bridging of reinforced insulation

Type designation PS2381-1, PS25****-*, PS2761B-1, PS2861B-1, PS73***-1A, PS8302**, PS85****, PS93****, PS9451A, PS95****, PS99**

Certificate holder **Renesas Electronics Corporation**
General Purpose Analog and Power Solution Department 1
111, Nishiyokote-machi
Takasaki-shi, Gunma-ken, 370-0021
JAPAN

The product complies with the standard(s) EN 60065:2014
EN 60950-1:2006 and A11+A1+A12+A2
IEC 60065:2014
IEC 60950-1:2005+A1+A2

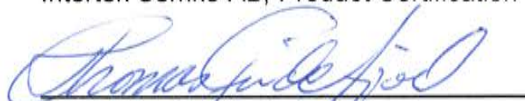
Date of expiry 5 September 2018

Additional information in Appendix.

Certification Body Intertek Semko AB, Product Certification

Place Kista - Stockholm

Signed


Thomas Grindefjord

Date 2 July 2015
Page 1 of 4

This certificate is issued in accordance with the terms and conditions set out in the Appendix.



**Intertek
Appendix**

Reference No. 1513091

Technical data

Type designation

PS2381-1, PS25****-*, PS2761B-1, PS2861B-1,
PS73***-1A, PS8302**, PS85****, PS93****,
PS9451A, PS95****, PS99**

Types marked with one or more *: Following types is included: PS2533-1, PS2533L-1, PS2561-1, PS2561L-1, PS2561L1-1, PS2561L2-1, PS2561A-1, PS2561AL-1, PS2561AL1-1, PS2561AL2-1, PS2561B-1, PS2561BL-1, PS2561BL1-1, PS2561BL2-1, PS2561D-1, PS2561DL-1, PS2561DL1-1, PS2561DL2-1, PS2562-1, PS2562L-1, PS2562L1-1, PS2562L2-1, PS2565-1, PS2565L-1, PS2565L1-1, PS2565L2-1, PS2566-1, PS2566L-1, PS2566L1-1, PS2566L2-1, PS2571-1, PS2571L1-1, PS2581L1, PS2581L2, PS2581AL1, PS2581AL2.

PS7341-1A, PS7341L-1A, PS7342-1A, PS7342L-1A, PS7360-1A, PS7360L-1A
PS8302L, PS8302L2, PS8501, PS8501L1, PS8501L2, PS8501L3, PS8502, PS8502L1, PS8502L2, PS8502L3, PS8551L4, PS8551AL4, PS9305L, PS9305L2, PS9306L, PS9306L2, PS9307L, PS9307L2, PS9307AL, PS9307AL2, PS9308L, PS9308L2, PS9309L, PS9309L2, PS9313L, PS9313L2, PS9317L, PS9317L2, PS9324L, PS9324L2, PS9331L, PS9331L2, PS9332L, PS9332L2, PS9451A, PS9505, PS9505L1, PS9505L2, PS9505L3, PS9506, PS9506L1, PS9506L2, PS9506L3, PS9513, PS9513L1, PS9513L2, PS9513L3, PS9531, PS9531L1, PS9531L2, PS9531L3, PS9551L4, PS9551AL4, PS9552, PS9552L1, PS9552L2, PS9552L3, PS9587, PS9587L1, PS9587L2, PS9587L3, PS9905, PS9924

Max operating temperature: 125°C for type PS9307L*, PS9307AL*, PS9331L*, PS9332L*, PS9531**, 115°C for type PS2381-1, 110°C for type PS2561B**-1, PS2561D**-1, PS2761B-1, PS2861B-1, PS8302L*, PS930*L, PS9313L*, PS9324L*, PS950***, PS9905, PS9924, 105°C for type PS8551AL4, PS9551AL4, 100°C for type PS25****-* (except mentioned types), PS850***, PS9513**, PS9552**, 85°C for type PS73***-1A, PS9317L*, PS9451A, PS9587**, PS8551L4, PS9551L4.

For a RMS working voltage up to 250V for samples with >5mm, 350V for samples with >7mm, 450V for samples with >8mm and 725V for samples with >14.5mm creepage distance between input and output. Pollution degree 2 and material group IIIa or IIIb,

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The following tests have been performed with positive results:

General

- Creepage distance between input and output : Type PS2761B-1, PS2861B-1: >5 mm, Type PS2381-1, PS2561DL1-1, PS2561DL2-1, PS2581L*, PS2581AL*, PS****L1, PS****L2, PS*****L4, PS73***-1A: >8mm, Type PS25*****-(except mentioned), PS****, PS****L, PS****L3: >7mm, Type PS9905, PS9924: >14.5mm
- Distance through insulation : >0.4 mm
- Humidity test: 48h. in 93% relative humidity. Electric strength test 3000 V/1 min.
- Internal creepage distance not measured, tests according to EN 60950 2.10.11 have been performed with positive result.

Special tests according to EN 60950-1

- Thermal cycling test. 10 cycles. Each cycle: 68 h in 125°C for type PS9307L*, PS9307AL*, PS9331L*, PS9332L*, PS9531**, 115°C for type PS2381-1, 110°C for type PS2561B**-1, PS2561D**-1, PS2761B-1, PS2861B-1, PS8302L*, PS930*L*, PS9313L*, PS9324L*, PS950***, PS9905, PS9924, 105°C for type PS8551AL4, PS9551AL4, 100°C for type PS2533*-1, PS2561**-1, PS2561A**-1, PS2562**-1, PS2565**-1, PS2566**-1, PS2571**-1, PS2581***, PS73***-1A, PS850***, PS9513**, PS9552**, 85°C for type PS8551L4, PS9317L*, PS9451A, PS9551L4, PS9587**, 1 h in 25°C, 2 h in 0°C and 1 h in 25°C. After the cycling test a humidity test for 48 h in 93% relative humidity.
Electric strength test between input and output: 5000 V/1 minute

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.

This certificate replaces previously issued ref. No. 1308848 dated 5 September 2013. A new certificate has been issued on account of the upgrade of standards.

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**Intertek
Appendix**

Reference No. 1513091

Manufacturing site(s)

Microwave & Optical Semiconductors Taiwan Co., Ltd.
587, Gao Shu Road
Gao Shan Li, Yangmei
Taoyuan
TAIWAN


Kyushu Denshi Co., Ltd.
89, Nagasaki Shiranui-machi
Uki-shi Kumamoto
869-0562
JAPAN

Certification Body

Intertek Semko AB, Product Certification

Place Kista - Stockholm

Signed


Thomas Grindefjord

Date 2 July 2015

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