Safety Standard Certificate for Photocouplers / Optical Coupled MOSFETs(Solid State Relay)

PS2701, PS2701A, PS2702, PS2703, PS2705, PS2705A, PS2706, PS2711, PS2715, PS2733, PS2761B, PS2801, PS2801A, PS2801C, PS2802, PS2805, PS2805A, PS2805C, PS2806, PS2811, PS2815, PS2833, PS2861, PS2861B, PS8101, PS9113, PS9117A, PS9121, PS9123, PS9124

## CSA Certificate

Certificate No 2115273(CA 101391)

This certification is approved as Renesas Electronics Corporation, but NEC logo is kept on the PKG marking and the label indication on the smallest packing for the time being.

Please contact sales agent or Renesas Electronics sales, regarding the date of change to Renesas Electronics indication.

本認定書はルネサスエレクトロニクス社にて取得していますが、当面 製品捺印及び 最小梱包のラベル表示はIBNECロゴにて出荷致します。 尚、実施時期については別途お問合せ下さい。

H.TAKAHASHI

Group Manager
Optical Device Engineering
Technical Marketing Department
Compound Semiconductor Devices Business Division
Analog & Power Devices Business Unit
Renesas Electronics Corporation



# **Certificate of Compliance**

**Certificate:** 2115273 (CA 101391) **Master Contract:** 191330

**Project:** 2421628 **Date Issued:** July 15, 2011

**Issued to:** Renesas Electronics Corporation

1753 Shimonumabe, Nakahara-ku Kawasaki-shi, Kanagawa, 211-8668

Japan

Attention: Kiyoshi Fukushima

The products listed below are eligible to bear the CSA Mark shown with adjacent indicator



Martin Buchanan

**Issued by:** Martin Buchanan, P. Eng.

## **PRODUCTS**

CLASS 9073 30 - ELECTRONIC COMPONENTS - Optoisolators

Component Acceptance of Optoisolators:

Part A:

Device	Ratings	Stds/Notices	Internal		External	
	(kV) (C)		Creep(mm) Di	stThru(mm)	Creep/Clear(mm)	
PS8101	3.75 100	CSA CA5A,	2.9	> 0.2	> 4.2	
PS9113	100	Basic Insulation				
PS9117A	100	60950-1-07				
PS9117	85	60065:03 AM1				
PS9121	85	IEC 60950-1, 2n	d Ed.			
PS9123	100	IEC 60065 7th E	d. AM1			
PS9124	110					

with optional suffixes -1 to -4, E3, E4, F3, F4 followed by V. Prefix PS may or may not be used.



**Project:** 2421628 **Date Issued:** July 15, 2011

Note: Basic insulation requirements of CSA 60950-1-07, 60065:03 Incl. AM1 and IEC60950-1, 2nd Ed. and IEC60065 7th Ed. Incl. AM1 have been addressed for 250Vrms.

These devices are Component Accepted as components for use in other equipment where the suitability of the combination may be determined by investigation in the final application.

Part B:

Device	Rati	ngs	Stds/Notices	Interna	al		External
	(kV)	(C)		Creep	(mm) D	istThru(mm)	Creep/Clear(mm)
PS2701A	3.75	100	CSA CA5A		3.2	> 0.3	> 5.0
PS2705A			Basic Insulation				
			for 300Vrms				
			60950-1-07				
			60065:03 AM1				

IEC 60950-1, 2nd Ed.

IEC 60065 7th Ed. AM1

PS2701	3.75	100	CSA CA5A	2.5	> 0.3	> 5.0
PS2702			Basic, S or F Insulation	1		
PS2703			for 250Vrms			
PS2705			60950-1-07			
PS2706			60065:03 AM1			
PS2707			IEC 60950-1, 2nd Ed.			
			IEC 60065 7th Ed. AM	1		
PS2732	2.5			2.5	> 0.3	> 5.0



PS2733

PS2741

PS2711 3.75 3.4 > 0.3 > 5.0

PS2715

PS2761B 3.75 110 CSA CA5A 3.2 > 0.45 > 5.0

Reinforced Insulation

for 250Vrms

60950-1-07

60065:03 AM1

IEC 60950-1, 2nd Ed.

IEC 60065 7th Ed. AM1

with optional suffixes -1 to -4, E3, E4, F3, F4 followed by V. Prefix PS may or may not be used.

### Notes:

- 1. The above components are suitable only for basic, supplementary, or functional insulation for 250Vrms or 300Vrms as indicated for CSA 60950-1-07, 60065:03 Incl. AM1 and IEC60950-1, 2nd Ed. and IEC 60065 7th Ed. Incl. AM 1.
- 2. PS2761B was evaluated by thermal cycling and is suitable for reinforced insulation for 250Vrms for CSA 60950-1-07, 60065:03 Incl. AM1 and IEC60950-1, 2nd Ed. and IEC 60065 7th Ed. Incl. AM 1.

These devices are Component Accepted as components for use in other equipment where the suitability of the combination may be determined by investigation in the final application.

#### Part C:

Opto-isolator, Types series PS2801, PS2801C, PS2802, PS2805, PS2805C, PS2806, PS2832, PS2833, PS2861 and PS2865 with optional suffixes -1 to -4, E3, E4, F3, F4 followed by V. Prefix PS may or may not be used.



Isolation voltage between input and output: 2.5kV ac rms.

Maximum operating temperature: +100 C

#### Notes:

- 1. Suffix -1 to -4 indicate the number of the devices set inside of the IC package. Other suffixes are for shipping packaging or other qualification.
- 2. These devices are Component Accepted as components for use in other Certified equipment where the suitability of the combination shall be determined by investigation in the final application.
- 3. The above components except for PS2861 and PS2865 are suitable only for use for the functional, basic or supplementary insulation for CSA 60065:03 Incl AM1, 60950-1-07 and IEC 60065 7th Ed Incl. AM1 and IEC 60950-1 2nd Ed where the operating or working voltage is 250Vrms or less.
- 4. PS2861 and PS2865 are suitable for reinforced insulation for CSA 60065:03 Incl AM1, 60950-1-07 and IEC 60065 7th Ed Incl. AM1 and IEC 60950-1 2nd Ed where the operating or working voltage is 125Vrms or less (for production units after July 1, 2005).

Part D:

Device Rating Stds/Notices Internal External

kV C Creep(mm) DistThru(mm) Creep/Clear(mm)

PS2801A-1 2.5 100 CSA CA5A, - - > 4.9

PS2801A-4 Basic requirements

PS2805A-1 60950-1-07,

PS2805A-4 IEC60950-1 2nd Ed.

with optional suffixes -1 to -4, E3, E4, F3, F4 followed by V. Prefix PS may or may not be used.

Notes: Reinforced Requirements of CSA 60950-1-07 and IEC60950-1, 2nd Ed. have been addressed for 125V.

These devices are Component Accepted as components for use in other equipment where the suitability of the combination may be determined by investigation in the final application.

Part E:



Device Rating Stds/Notices Internal External

kV C Creep(mm) DistThru(mm) Creep/Clear(mm)

PS2811-1 2.5 100 CSA CA5A, 3.0 > 0.1 > 4.5

PS2811-4 Basic requirements

PS2815-1 60950-1-07,

PS2815-4 60065:03 AM1,

IEC60950-1 2nd Ed.,

IEC60065 7th Ed. AM1

with optional suffixes -1 to -4, E3, E4, F3, F4 followed by V. Prefix PS may or may not be used.

Note: Basic insulation requirements of CSA 60950-1-07, 60065:03 Incl. AM1 and IEC60950-1, 2nd Ed. and IEC 60065 7th Ed. Incl. AM 1 have been addressed for 300Vrms.

These devices are Component Accepted as components for use in other equipment where the suitability of the combination may be determined by investigation in the final application.

Part F:

Device Rating Stds/Notices Internal External

(kV) C Creep(mm) DistThru(mm) Creep/Clear(mm)

PS2861B-1 3.75 110 CSA CA5A, > 3.2 > 0.4 > 5.0

60950-1-07,

60065-03+Amd.1,

IEC60950-1 2nd Ed.

60065 7th Ed+Amd.1

with optional suffixes -1 to -4, E3, E4, F3, F4 followed by V. Prefix PS may or may not be used.

Notes: Reinforced Requirements of CSA 60950-1-07, 60065:03 Incl. AM1 and IEC60950-1, 2nd Ed. and IEC 60065 7th Ed. Incl. AM 1 have been addressed for 150Vrms



These devices are Component Accepted as components for use in other equipment where the suitability of the combination may be determined by investigation in the final application.

# **APPLICABLE REQUIREMENTS**

Component Acceptance Notice 5A (CA 5A) - Announcement of Extension of the Component

Acceptance Service for Optocouplers and Related

Devices

In addition please see notes for specific models which may meet basic or reinforced requirements of the following standards:

CAN/CSA-C22.2 No. 60950-1-07 - Information Technology Equipment - Safety - Part 1:

General Requirements (Bi-national Standard, with UL

60950-1)

CAN/CSA C22.2 No. 60065:03 Incl. AM1 - Audio, Video and Similar Electronic Apparatus - Safety

Requirements

IEC 60950-1 2nd Ed. - Information Technology Equipment - Safety - Part 1:

General Requirements

IEC 60065 7th Ed. Incl. AM1 - Audio, Video and Similar Electronic Apparatus - Safety

Requirements