

Product Advisory (PA)

Subject: Correction to the Renesas HS*-5104A*, IS*-1009EH-Q, HS*-OP470A* Datasheets

Publication Date: 5/19/2021

Effective Date: 5/19/2021

Revision Description:

Initial Release

Description of Change:

There are no changes to the SMDs. This notice is to inform you of datasheet corrections as below;

1. Updates to Die Characterization section, Glassivation.
2. Updates to Die Characterization section, Top Metallization.
3. Updates to Die Characterization section, Substrate.

Corrections are reflected in Appendix A of the notice.

Products Impacted by the change;

Renesas Part Number	Ordering Number	Renesas Part Number	Ordering Number	Renesas Part Number	Ordering Number
HS0-5104AEH-Q	5962R9569002V9A	IS0-1009EH-Q	5962F0052302V9A	IS0-1009EH/SAMPLE	N/A
HS0-OP470AEH-Q	5962R9853302V9A	IS2-1009EH-Q	5962F0052302VXC	HS-OP470ARHEV1Z	N/A
HS1-5104AEH-Q	5962R9569002VCC	ISYE-1009EH-Q	5962F0052302VYC	HS0-OP470AEH/SAMPLE	N/A
HS9-5104AEH-Q	5962R9569002VXC	IS2-1009EH/PROTO	N/A	HS9-OP470AEH/PROTO	N/A
HS9-OP470AEH-Q	5962R9853302VXC	ISYE-1009EH/PROTO	N/A		

Reason for Change:

Change corrects the datasheet to reflect the actual product performance. Details regarding the change are contained within Appendix A, for an updated datasheet please contact your local sales or marketing representative. There is no change to SMD as they were always correct.

Impact on fit, form, function, quality & reliability:

The change will have no impact on the form, fit, function, quality, reliability and environmental compliance of the devices.

Product Identification:

There have been no changes to the product, this is a documentation correction only. There will be no change in the external marking of the packaged products.

Qualification status: Not Applicable, correction only

Sample availability: 5/19/2021

Device material declaration: Available upon request

Questions or requests pertaining to this change notice, including additional data or samples, must be sent to Intersil within 30 days of the publication date.

For additional information regarding this notice, please contact your regional change coordinator (below)

Americas: PCN-US@Renesas.COM

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Appendix A:

Datasheet changes for HS*-5104A*

FROM:

HS-5104ARH, HS-5104AEH

FN3025.5

Die Characteristics

DIE DIMENSIONS:

95 mils x 99 mils x 19 mils ± 1 mils
(2420 μ m x 2530 μ m x 483 μ m $\pm 25.4\mu$ m)

INTERFACE MATERIALS:

Glassivation:

Type: Nitride (Si₃N₄) over Silox (SiO₂, 5% Phos.)
Silox Thickness: 12kÅ ± 2 kÅ
Nitride Thickness: 3.5kÅ ± 1.5 kÅ

Top Metallization:

Type: Al, 1% Cu
Thickness: 16kÅ ± 2 kÅ

Substrate:

Bipolar Dielectric Isolation

Backside Finish:

Silicon

ASSEMBLY RELATED INFORMATION:

Substrate Potential (Powered Up):

Unbiased

ADDITIONAL INFORMATION:

Worst Case Current Density:

 $< 2.0 \times 10^{-5}$ A/cm²

Transistor Count:

175

TO:

HS-5104ARH, HS-5104AEH

Die Characteristics

DIE DIMENSIONS:

95 mils x 99 mils x 19 mils ± 1 mils
(2420 μ m x 2530 μ m x 483 μ m $\pm 25.4\mu$ m)

INTERFACE MATERIALS:

Glassivation:

Type: Silox (SiO₂) 1:6:1
Thickness: 8kÅ ± 0.8 kÅ (1kÅ undoped, 6kÅ doped, cap 1kÅ undoped)

Top Metallization:

Type: Al/Cu 16kÅ ± 2 kÅ

Substrate:

HFSTD: Single poly dielectrically isolated complementary bipolar.

Backside Finish:

Silicon

ASSEMBLY RELATED INFORMATION:

Substrate potential:

Insulator

Special assembly instructions:

None

ADDITIONAL INFORMATION:

Worst Case Current Density:

 $< 2.0 \times 10^{-5}$ A/cm²

Transistor Count:

175

Datasheet changes for IS*-1009EH-Q

FROM:

IS-1009RH, IS-1009EH

Die Characteristics

DIE DIMENSIONS

1270 μ m x 1778 μ m (50 mils x 70 mils)
Thickness: 356 μ m $\pm 25.4\mu$ m (14 mils ± 1 mil)

INTERFACE MATERIALS

Glassivation

Type: Nitride (Si₃N₄)
Nitride Thickness: 4.0kÅ ± 1.0 kÅ

Top Metallization

Type: AlSiCu
Thickness: 16.0kÅ ± 2 kÅ

Substrate

EBHF, Dielectric Isolation

Backside Finish

Silicon

ASSEMBLY RELATED INFORMATION

Substrate Potential

Unbiased (DI)

ADDITIONAL INFORMATION

Worst Case Current Density

 $< 1.0 \times 10^{-5}$ A/cm²

Transistor Count

26

TO:

IS-1009RH, IS-1009EH

Die Characteristics

DIE DIMENSIONS

1270 μ m x 1778 μ m (50 mils x 70 mils)
Thickness: 356 μ m $\pm$ 25.4 μ m (14 mils $\pm$ 1 mil)

INTERFACE MATERIALS

Glassivation

Type: Silox (SiO₂) 1:6:1
Thickness: 8k $\text{\AA}$ $\pm$ 0.8k $\text{\AA}$ (1k $\text{\AA}$ undoped, 6k $\text{\AA}$ doped, cap 1k $\text{\AA}$ undoped)

Top Metallization

Type: Al Si Cu
Thickness: 16.0k $\text{\AA}$ $\pm$ 2k $\text{\AA}$

Substrate

EFSTDB: Single-poly dielectrically isolated complementary bipolar

Backside Finish

Silicon

ASSEMBLY RELATED INFORMATION

Substrate Potential

Unbiased (DI)

ADDITIONAL INFORMATION

Worst Case Current Density

$<1.0 \times 10^5$ A/cm²

Transistor Count

26

Datasheet changes for HS*-OP470A*

FROM:

HS-OP470ARH, HS-OP470AEH

Die Characteristics

DIE DIMENSIONS:

95 mils x 99 mils x 19 mils $\pm$ 1 mil
(2420 μ m x 2530 μ m x 483 μ m $\pm$ 25.4 μ m)

METALLIZATION:

Type: Al, 1% Cu
Thickness: 16k $\text{\AA}$ $\pm$ 2k $\text{\AA}$

SUBSTRATE POTENTIAL (Powered Up):

Unbiased

BACKSIDE FINISH:

Silicon

PASSIVATION:

Type: Nitride (Si₃N₄) over Silox (SiO₂, 5% Phos.)
Silox Thickness: 12k $\text{\AA}$ $\pm$ 2k $\text{\AA}$
Nitride Thickness: 3.5k $\text{\AA}$ $\pm$ 1.5k $\text{\AA}$

WORST CASE CURRENT DENSITY:

$<2.0 \times 10^5$ A/cm²

TRANSISTOR COUNT:

175

PROCESS:

Bipolar Dielectric Isolation

TO:

HS-OP470ARH, HS-OP470AEH

Die Characteristics

DIE DIMENSIONS:

95 mils x 99 mils x 19 mils $\pm$ 1 mil
(2420 μ m x 2530 μ m x 483 μ m $\pm$ 25.4 μ m)

INTERFACE MATERIALS:

Glassivation:

Type: Silox (SiO₂) 1:6:1
Thickness: 8k $\text{\AA}$ $\pm$ 0.8k $\text{\AA}$ (1k $\text{\AA}$ undoped, 6k $\text{\AA}$ doped, cap 1k $\text{\AA}$ undoped)

Top Metallization:

Type: Al/Cu 16k $\text{\AA}$ $\pm$ 2k $\text{\AA}$

Substrate:

Dielectrically Isolated (DI)

Backside Finish:

Silicon

ASSEMBLY RELATED INFORMATION:

Substrate potential:

Unbiased

Special assembly instructions: None

None

ADDITIONAL INFORMATION:

Worst Case Current Density:

$<2.0 \times 10^5$ A/cm²

Transistor Count:

175