Product Change Notice (PCN)

Subject: Addition of assembly site for Renesas SRAM TSOP products
Publication Date: 7/27/2022
Effective Date: 1/10/2023

Revision Description:
Initial Release

Description of Change:
Regarding assembly site for Renesas SRAM TSOP products, we add Greatek Electronics Inc. (hereinafter referred as GTK) to Amkor Technology Malaysia Sdn. Bhd. (hereinafter referred as ATM).
The assembly material of GTK products are GTK's standard material. Regarding Comparison outlines between ATM products and GTK products, please refer to page 2.
Regarding Comparison details for each Part name, please refer to the attachment (Appendix for CST-R2-AJ153).

Affected Product List:

R1LP5256ESA-5SI#B1	R1LP5256ESA-5SI#S1	R1LV5256ESA-5SI#B1	R1LV5256ESA-5SI#S1
R1LP0108ESA-5SI#B1	R1LP0108ESA-5SI#S1	R1LV0108ESA-5SI#B1	R1LV0108ESA-5SI#BJ
R1LV0108ESA-5SI#S1	R1LV0208BSA-5SI#B1	R1LV0208BSA-5SI#BK	R1LV0208BSA-5SI#S1
R1LV0208BSA-5SI#SK	RMLV0408EGSA-4S2#AA1	RMLV0408EGSA-4S2#KA1	R1LV0216BSB-5SI#B1
R1LV0216BSB-5SI#S1	R1RP0416DSB-0PI#D1	R1RP0416DSB-2LR#D1	R1RP0416DSB-2LR#S1
R1RP0416DSB-2PI#D1	R1RP0416DSB-2PR#D1	R1RP0416DSB-2PR#S1	R1RP0416DSB-2SR#D1
R1RW0416DSB-0PI#D1	R1RW0416DSB-0PI#S1	R1RW0416DSB-0PR#D1	R1RW0416DSB-0PR#S1
R1RW0416DSB-2LR#D1	R1RW0416DSB-2PI#D1	R1RW0416DSB-2PI#S1	R1RW0416DSB-2PR#D1
R1RW0416DSB-2PR#S1	R1RW0416DSB-2SR#D1	R1RW0416DSB-2UR#D1	RMLV0414EGSB-4S2#AA1
RMLV0414EGSB-4S2#HA1	RMLV0416EGSB-4S2#AA1	RMLV0416EGSB-4S2#HA1	RMLV0808BGSB-4S2#AA0
RMLV0808BGSB-4S2#HA0	RMLV0816BGSB-4S2#AA0	RMLV0816BGSB-4S2#HA0	RMLV0816BGSA-4S2#AA0
RMLV0816BGSA-4S2#KA0	RMLV1616AGSA-5S2#AA0	RMLV1616AGSA-5S2#KA0	RMLV3216AGSA-5S2#AA0
RMLV3216AGSA-5S2#KA0			

Reason for Change:
To increase assembly production capacity.

Impact on Fit, Form, Function, Quality & Reliability:
No impact

Product Identification:
Identifiable by the country of origin marked on the package.
Please refer to the attachment (Appendix for CST-R2-AJ153).

Qualification Status: Available from 9/12/2022 onward
Sample Availability Date: 8/22/2022
Device Material Declaration: Available from 9/12/2022 onward

Comparison table: Product of current source of assembly (ATM) vs Product of additional source of assembly (GTK)

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280µm	254µm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

Although there are differences in the inner lead pattern and die thickness, these do not affect the compatibility of electrical characteristics (DC/AC).

Shipping label specification:

- Label format itself is unchanged.
- Written specifications: “internal code” and “country of origin display” are changed. See below for example.

Product of current source of assembly (ATM)

Product of additional source of assembly (GTK)

Note:

1. Acknowledgement must be received by Renesas within 30 days or Renesas will consider the change as approved.

2. If timely acknowledgement is provided by Customer, then Customer shall have 90 days from the date of receipt of this PCN to make any objections to this PCN. If Customer fails to make objections to this PCN within 90 days of the receipt of the PCN then Renesas will consider the PCN changes as approved.

3. If customer cannot accept the PCN then customer must provide Renesas with a last time buy demand and purchase order.

For additional information regarding this notice, please contact your Renesas sales representative.

To: Valued Renesas Customer

Renesas Electronics Corporation
IoT and Infrastructure Business Unit,
Industrial Analog Division,
Standard Products

Rev. 1.0 : July 27, 2022

Appendix for CST-R2-AJ153

This appendix states the detailed information of PCN: CST-R2-AJ153;
Addition of assembly site for Renesas SRAM TSOP products.
In this document, we abbreviate the current source of assembly:
“Amkor Technology Malaysia Sdn. Bhd.” as “ATM”
and the additional source of assembly: “Greatek Electronics Inc.” as “GTK”.

Contents

1. Product List(1)

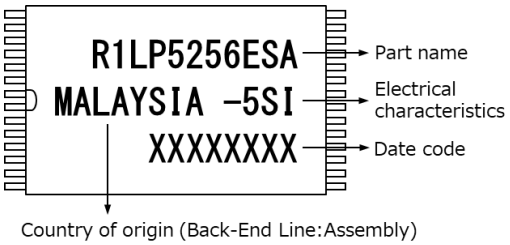
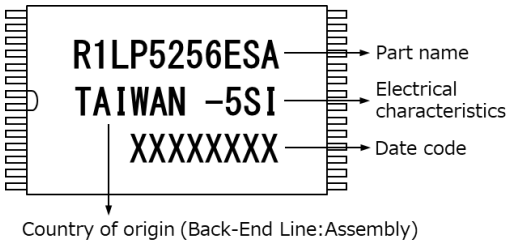
Package Type	Product Type (Density, Supply Voltage)	Organi-zation (bit)	Orderable Part Name		Packing Type	Page No. of Comparison Table
			Product of current source of assembly (ATM)	**Product of additional source of assembly (GTK)**		
28pin-TSOP(I)	256Kb 5V	x8	R1LP5256ESA-5SI#B1	←	Tray	p.4
			R1LP5256ESA-5SI#S1	←	Tape & Reel	
	256Kb 3V	x8	R1LV5256ESA-5SI#B1	←	Tray	p.5
			R1LV5256ESA-5SI#S1	←	Tape & Reel	
32pin-sTSOP(I)	1Mb 5V	x8	R1LP0108ESA-5SI#B1	←	Tray	p.6
			R1LP0108ESA-5SI#S1	←	Tape & Reel	
	1Mb 3V	x8	R1LV0108ESA-5SI#B1	←	Tray	p.7
			R1LV0108ESA-5SI#BJ	←	Tray	
			R1LV0108ESA-5SI#S1	←	Tape & Reel	
	2Mb 3V	x8	R1LV0208BSA-5SI#B1	←	Tray	p.8
			R1LV0208BSA-5SI#BK	←	Tray	
			R1LV0208BSA-5SI#S1	←	Tape & Reel	
			R1LV0208BSA-5SI#SK	←	Tape & Reel	
	4Mb 3V	x8	RMLV0408EGSA-4S2#AA1	←	Tray	p.9
			RMLV0408EGSA-4S2#KA1	←	Tape & Reel	
44pin-TSOP(II)	2Mb 3V	x16	R1LV0216BSB-5SI#B1	←	Tray	p.10
			R1LV0216BSB-5SI#S1	←	Tape & Reel	
	4Mb Fast 5V	x16	R1RP0416DSB-0PI#D1	←	Tray	p.11
			R1RP0416DSB-2LR#D1	←	Tray	
			R1RP0416DSB-2LR#S1	←	Tape & Reel	
			R1RP0416DSB-2PI#D1	←	Tray	
			R1RP0416DSB-2PR#D1	←	Tray	
			R1RP0416DSB-2PR#S1	←	Tape & Reel	
			R1RP0416DSB-2SR#D1	←	Tray	
	4Mb Fast 3.3V	x16	R1RW0416DSB-0PI#D1	←	Tray	p.12
			R1RW0416DSB-0PI#S1	←	Tape & Reel	
			R1RW0416DSB-0PR#D1	←	Tray	
			R1RW0416DSB-0PR#S1	←	Tape & Reel	
			R1RW0416DSB-2LR#D1	←	Tray	
			R1RW0416DSB-2PI#D1	←	Tray	
			R1RW0416DSB-2PI#S1	←	Tape & Reel	
			R1RW0416DSB-2PR#D1	←	Tray	
			R1RW0416DSB-2PR#S1	←	Tape & Reel	
			R1RW0416DSB-2SR#D1	←	Tray	
			R1RW0416DSB-2UR#D1	←	Tray	

1. Product List(2)

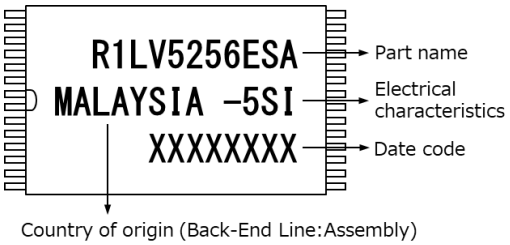
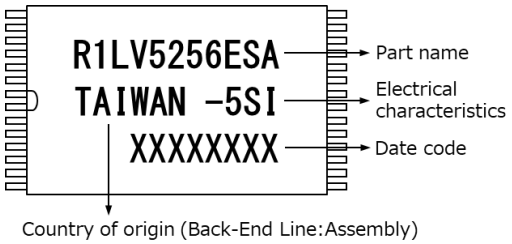
Package Type	Product Type (Density, Supply Voltage)	Organi-zation (bit)	Orderable Part Name		Packing Type	Page No. of Comparison Table
			Product of current source of assembly (ATM)	**Product of additional source of assembly (GTK)**		
44pin-TSOP(II)	4Mb 3V CS 1pin type	x16	RMLV0414EGSB-4S2#AA1	←	Tray	p.13
			RMLV0414EGSB-4S2#HA1	←	Tape & Reel	
	4Mb 3V CS 2pin type	x16	RMLV0416EGSB-4S2#AA1	←	Tray	p.14
			RMLV0416EGSB-4S2#HA1	←	Tape & Reel	
	8Mb 3V	x8	RMLV0808BGSB-4S2#AA0	←	Tray	p.15
			RMLV0808BGSB-4S2#HA0	←	Tape & Reel	
	8Mb 3V	x16	RMLV0816BGSB-4S2#AA0	←	Tray	p.16
			RMLV0816BGSB-4S2#HA0	←	Tape & Reel	
48pin-TSOP(I)	8Mb 3V	x16	RMLV0816BGSA-4S2#AA0	←	Tray	p.17
			RMLV0816BGSA-4S2#KA0	←	Tape & Reel	
	16Mb 3V	x16	RMLV1616AGSA-5S2#AA0	←	Tray	p.18
			RMLV1616AGSA-5S2#KA0	←	Tape & Reel	
	32Mb 3V	x16	RMLV3216AGSA-5S2#AA0	←	Tray	p.19
			RMLV3216AGSA-5S2#KA0	←	Tape & Reel	

2. Comparison table

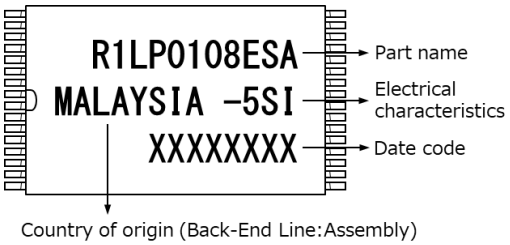
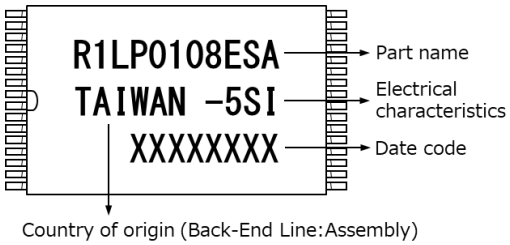
(1) 28pin-TSOP(I) 256Kb(5V) Part name : R1LP5256ESA-5SI

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		R1LP5256ESA-5SI#B1 (Tray packing)	←
		R1LP5256ESA-5SI#S1 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(1)28-8x11.8-0.55	←
Package marking specification			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280μm	254μm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

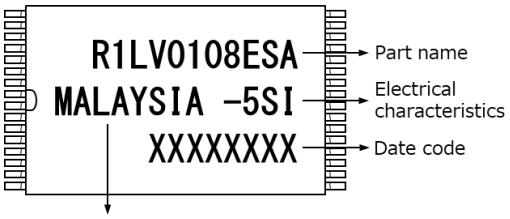
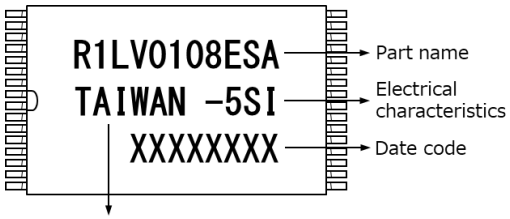
(2) 28pin-TSOP(I) 256Kb(3V) Part name : R1LV5256ESA-5SI

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		R1LV5256ESA-5SI#B1 (Tray packing)	←
		R1LV5256ESA-5SI#S1 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(1)28-8x11.8-0.55	←
Package marking specification			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280µm	254µm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

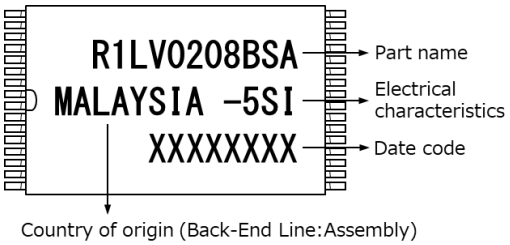
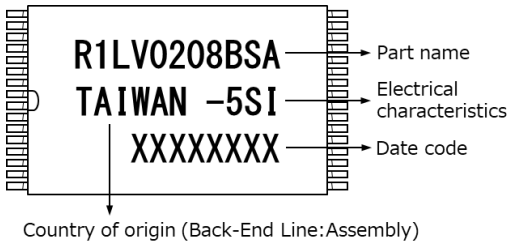
(3) 32pin-sTSOP(I) 1Mb(5V) Part name : R1LP0108ESA-5SI

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		R1LP0108ESA-5SI#B1 (Tray packing)	←
		R1LP0108ESA-5SI#S1 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(1)32-8x11.8-0.50	←
Package marking specification			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280µm	254µm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

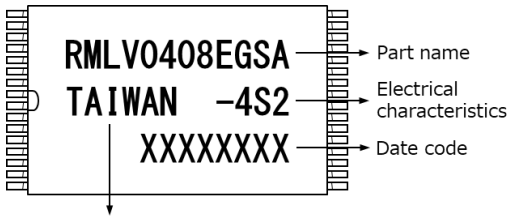
(4) 32pin-sTSOP(I) 1Mb(3V) Part name : R1LV0108ESA-5SI

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		R1LV0108ESA-5SI#B1/#BJ (Tray packing)	←
		R1LV0108ESA-5SI#S1 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(1)32-8x11.8-0.50	←
Package marking specification			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280µm	254µm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

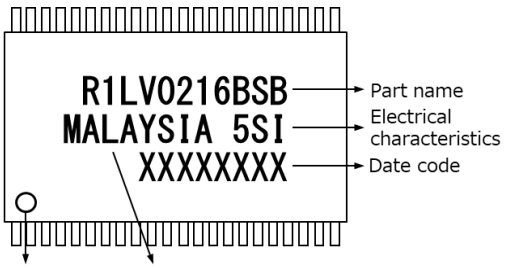
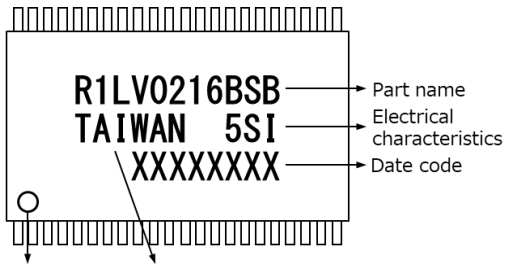
(5) 32pin-sTSOP(I) 2Mb(3V) Part name : R1LV0208BSA-5SI

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		R1LV0208BSA-5SI#B1/#BK (Tray packing)	←
		R1LV0208BSA-5SI#S1/#SK (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(1)32-8x11.8-0.50	←
Package marking specification			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280µm	254µm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

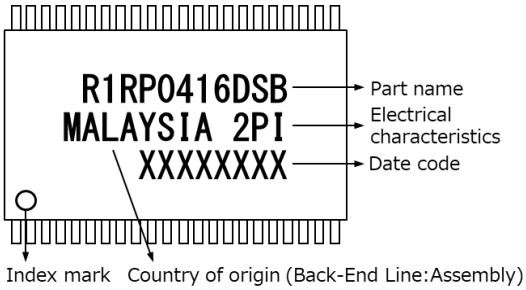
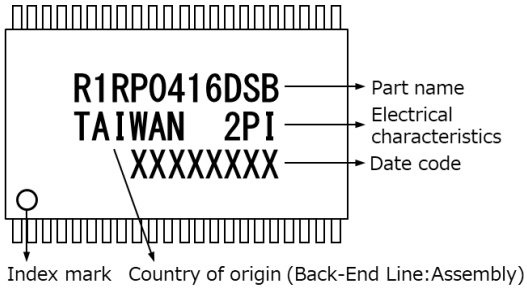
(6) 32pin-sTSOP(I) 4Mb(3V) Part name : RMLV0408EGSA-4S2

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		RMLV0408EGSA-4S2#AA1 (Tray packing)	←
		RMLV0408EGSA-4S2#KA1 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(1)32-8x11.8-0.50	←
Package marking specification			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280µm	254µm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

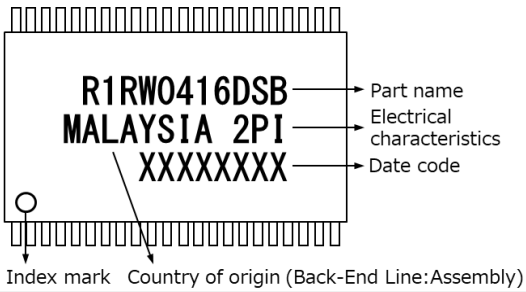
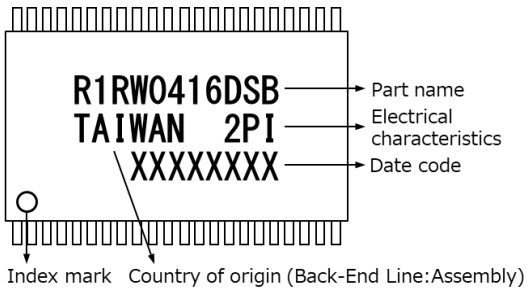
(7) 44pin-TSOP(II) 2Mb(3V) Part name : R1LV0216BSB-5SI

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		R1LV0216BSB-5SI#B1 (Tray packing)	←
		R1LV0216BSB-5SI#S1 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(2)44-10.16x18.41-0.80	←
Package marking specification			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280µm	254µm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

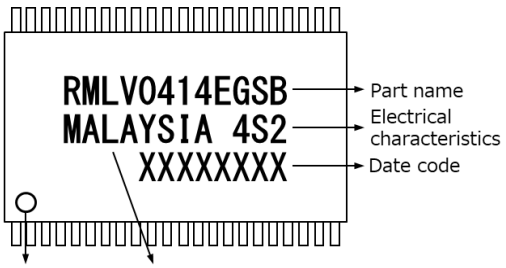
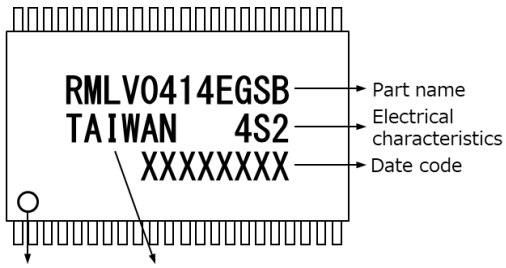
(8) 44pin-TSOP(II) 4Mb Fast 5V Part name : R1RP0416DSB-***

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		R1RP0416DSB -0PI/2LR/2PI/2PR/2SR#D1 (Tray packing)	←
		R1RP0416DSB-2LR/2PR#S1 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(2)44-10.16x18.41-0.80	←
Package marking specification (The Electrical characteristics is an example.)			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280µm	254µm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

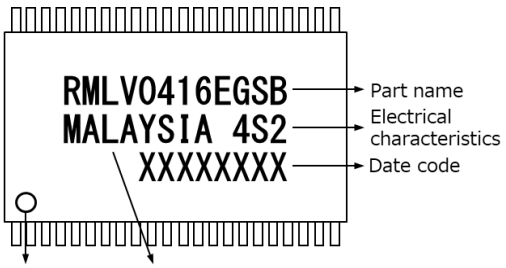
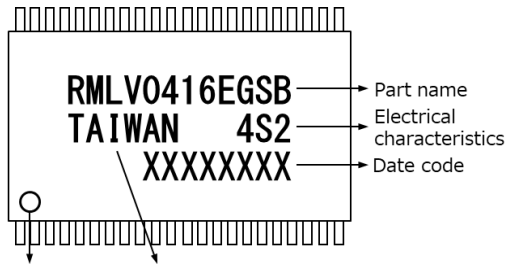
(9) 44pin-TSOP(II) 4Mb Fast 3.3V Part name : R1RW0416DSB-***

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		R1RW0416DSB -0PI/0PR/2LR/2PI/2PR/2SR/2UR#D1 (Tray packing)	←
		R1RW0416DSB -0PI/0PR/2PI/2PR#S1 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(2)44-10.16x18.41-0.80	←
Package marking specification (The Electrical characteristics is an example.)			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280μm	254μm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

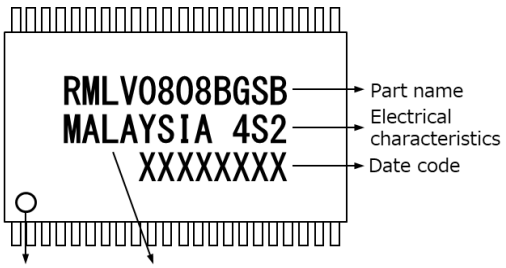
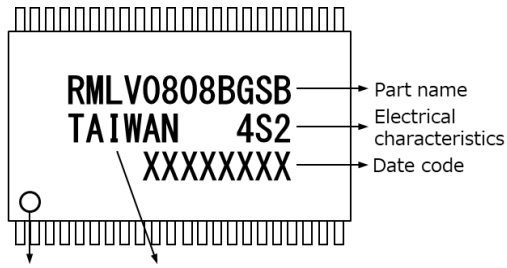
(10) 44pin-TSOP(II) 4Mb(3V) CS 1pin type Part name : RMLV0414EGSB-4S2

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		RMLV0414EGSB-4S2#AA1 (Tray packing)	←
		RMLV0414EGSB-4S2#HA1 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(2)44-10.16x18.41-0.80	←
Package marking specification			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280µm	254µm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

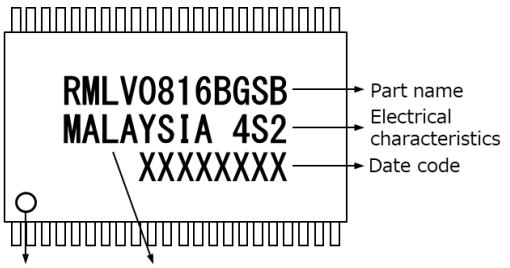
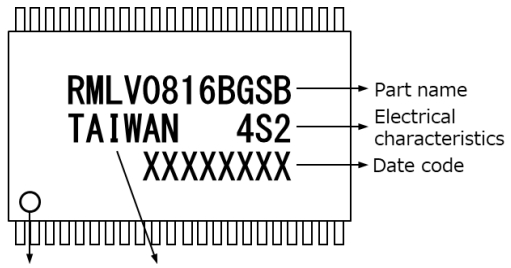
(11) 44pin-TSOP(II) 4Mb(3V) CS 2pin type　　Part name : RMLV0416EGSB-4S2

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		RMLV0416EGSB-4S2#AA1 (Tray packing)	←
		RMLV0416EGSB-4S2#HA1 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(2)44-10.16x18.41-0.80	←
Package marking specification			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280μm	254μm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

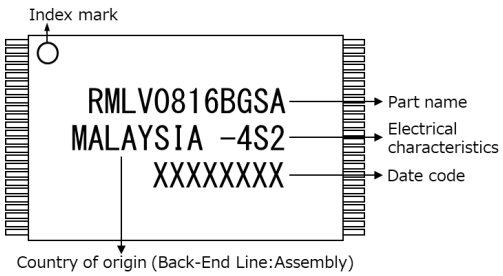
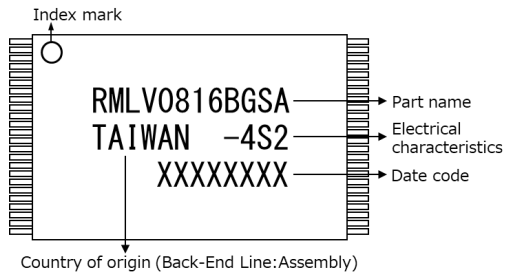
(12) 44pin-TSOP(II) 8Mb(3V) x8 Part name : RMLV0808BGSB-4S2

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		RMLV0808BGSB-4S2#AA0 (Tray packing)	←
		RMLV0808BGSB-4S2#HA0 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(2)44-10.16x18.41-0.80	←
Package marking specification			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280µm	254µm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

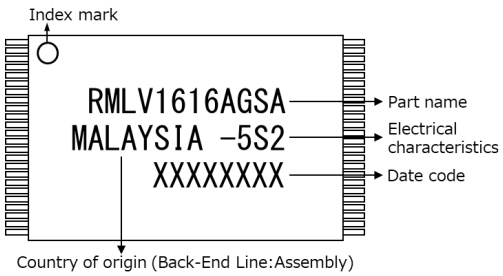
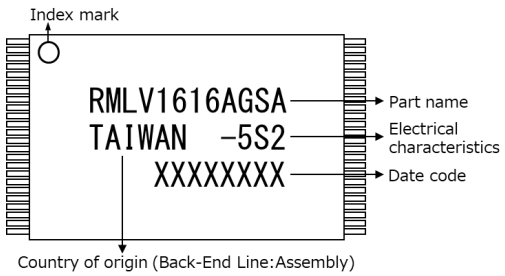
(13) 44pin-TSOP(II) 8Mb(3V) x16 Part name : RMLV0816BGSB-4S2

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		RMLV0816BGSB-4S2#AA0 (Tray packing)	←
		RMLV0816BGSB-4S2#HA0 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(2)44-10.16x18.41-0.80	←
Package marking specification			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280µm	254µm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

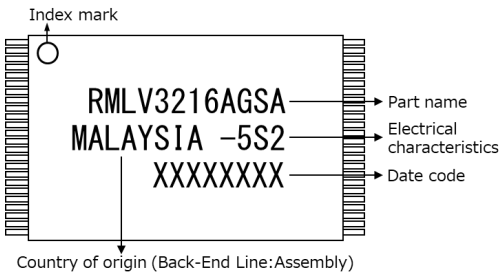
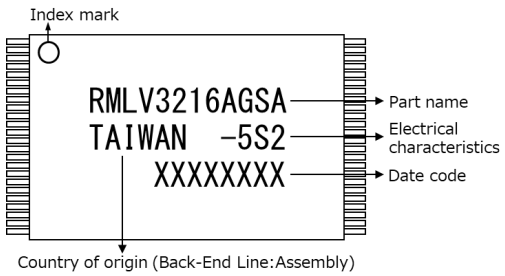
(14) 48pin-TSOP(I) 8Mb(3V) Part name : RMLV0816BGSA-4S2

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		RMLV0816BGSA-4S2#AA0 (Tray packing)	←
		RMLV0816BGSA-4S2#KA0 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(1)48-12x18.4-0.50	←
Package marking specification			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280μm	254μm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

(15) 48pin-TSOP(I) 16Mb(3V) Part name : RMLV1616AGSA-5S2

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		RMLV1616AGSA-5S2#AA0 (Tray packing)	←
		RMLV1616AGSA-5S2#KA0 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(1)48-12x18.4-0.50	←
Package marking specification			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280μm	254μm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

(16) 48pin-TSOP(I) 32Mb(3V) Part name : RMLV3216AGSA-5S2

Item		Product of current source of assembly (ATM)	Product of additional source of assembly (GTK)
Orderable part name		RMLV3216AGSA-5S2#AA0 (Tray packing)	←
		RMLV3216AGSA-5S2#KA0 (Tape & Reel packing)	←
Assembly line		Amkor Technology Malaysia Sdn. Bhd. (Malaysia)	Greatek Electronics Inc. (Taiwan)
Country of origin display		MALAYSIA	TAIWAN
JEITA Package Code		P-TSOP(1)48-12x18.4-0.50	←
Package marking specification			
Assembly Material	Lead frame material	Cu	Cu
	Inner lead pattern	Current pattern (ATM original pattern)	Different from ATM pattern (GTK original pattern)
	Outer lead pattern	Current pattern	Compatible with ATM pattern
	Lead plating	Sn (pure tin)	Sn (pure tin)
	Die bonding	Epoxy paste	Epoxy paste
	Wire bonding	Au	Au
	Mold	Epoxy resin (Halogen-free)	Epoxy resin (Halogen-free)
Die thickness		280μm	254μm
Final test line		Powertech Technology Inc. (Taiwan)	←
Packing specification		Current specification	←
Moisture-proof performance		MSL 3	←
Shipping label		Current specification	No change in format (Changes in internal code and country of origin)

Revision history	Appendix for CST-R2-AJ153

Rev.	Date	Outline of changed content
1.0	7/27/2022	Initial issue