

## Product Change Notice (PCN)

**Subject:** Bond wire material change for RL78/F12, F13, F14 Series SSOP package products

**Publication Date:** 12/25/2024

**Effective Date:** 5/16/2025

**Revision Description:** Initial Release

**Description of Change:**

Applicable Assembly Factory: Renesas Semiconductor KL Sdn. Bhd.

The Bonding wire material will be changed to copper. The following materials are also changed according to the bonding wire change. See below for details.

[Details of change]

No	Item	New [Cu wire]	Current [Au wire]
1	Bonding wire material change	Cu, $\phi$ 23um	Au, $\phi$ 20um
2	Lead frame change	Common lead frame	Individual lead frames
3	Die attach material change	Renesas standard material	Existing material
4	Mold resin material change	Resin for Cu wire	Resin for Au wire
5	Exterior plating material specification change	F12, F13, F14: Pure Sn	F12 :Pure Sn F13,F14 :PPF
6	Package outline	F12,F13,F14 : Pure Sn Specification drawing	F12: Pure Sn Specification drawing F13, F14: PPF Specification drawing

**Affected Product List:**

Refer to "Product List" in "Appendix".

**Reason for Change:**

For stable supply of products

**Impact on Fit, Form, Function, Quality & Reliability:**

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

Package Outline: Please refer to the "Appendix".

**Product Identification:**

Our production history data can be queried by using the trace code of the product.

Refer to "Product List" in "Appendix".

**Qualification Status:**

Refer to "Q100 Qualification Test Results" in "Appendix".

**Sample Availability Date:**

4/21/2025

**Device Material Declaration:**

Available upon request.

## Note:

1. Acknowledgement must be received by Renesas within 30 days or Renesas will consider the changes as approved./
2. If timely acknowledgement is provided by customers, then customers shall have 90 days from the date of receipt of this PCN to make any objections to this PCN. If customers fail 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 customers must provide Renesas with the last order quantity and purchase order.

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

## Appendix 1

### ■Part number specification

The code "C" representing Cu wire is inserted in part number of Cu wire products for distinguishing from Au wire products.

Cu wire products and Au wire products have different suffixes.

product	RL78/F12		RL78/F13, F14	
	New [Cu wire]	Current [Au wire]	New [Cu wire]	Current [Au wire]
Tray (Full Carton)	10Q	H0Q	15Q	G5Q
Tray	30Q	V0Q	35Q	U5Q
Tape&Reel	50Q	X0Q	55Q	W5Q

Ex)

Cu wire: R5F10968CJSP#10Q

Au wire: R5F10968JSP#H0Q,

### ■Marking specification

The first stage will be changed as follows.

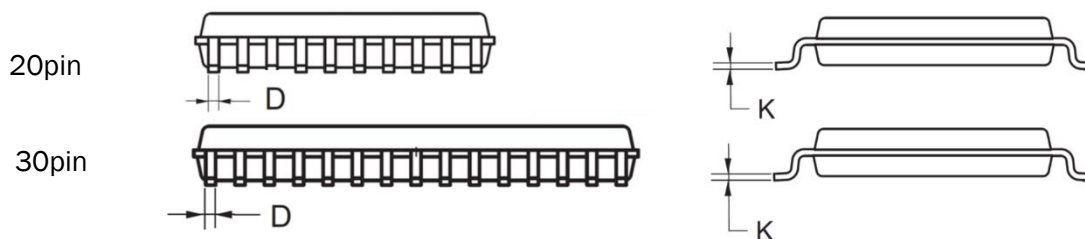
Mark example



1st line Product name

2nd line: Trace Code

### ■Package Outline



After the change, the Cu wire product will be a pure Sn specification drawing.

The dimensions of "D" (lead width), "K" (lead thickness), MIN, and MAX are the same, and the TYP values are different.

Appendix 2

RL78/F12 series:

Before (Au wire)	After (Cu wire)	Nickname	PKG outline	Packing
R5F10968JSP#H0	R5F10968CJSP#10	F12	SSOP 20pin	Full Carton (Tray)
R5F10968JSP#H0G	R5F10968CJSP#10G	F12	SSOP 20pin	Full Carton (Tray)
R5F10968JSP#H0Q	R5F10968CJSP#10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F10968JSP#V0G	R5F10968CJSP#30G	F12	SSOP 20pin	Bulk (Tray)
R5F10968JSP#X0	R5F10968CJSP#50	F12	SSOP 20pin	Tape&Reel
R5F10968JSP#X0G	R5F10968CJSP#50G	F12	SSOP 20pin	Tape&Reel
R5F10968JSP#X0Q	R5F10968CJSP#50Q	F12	SSOP 20pin	Tape&Reel
R5F10968J***SPH0	R5F10968CJ***SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F10968J***SPH0G	R5F10968CJ***SP10G	F12	SSOP 20pin	Full Carton (Tray)
R5F10968J***SPH0Q	R5F10968CJ***SP10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F10968J***SPV0G	R5F10968CJ***SP30G	F12	SSOP 20pin	Bulk (Tray)
R5F10968J***SPX0	R5F10968CJ***SP50	F12	SSOP 20pin	Tape&Reel
R5F10968J***SPX0G	R5F10968CJ***SP50G	F12	SSOP 20pin	Tape&Reel
R5F10968J***SPX0Q	R5F10968CJ***SP50Q	F12	SSOP 20pin	Tape&Reel
R5F10968KSP#H0	R5F10968CKSP#10	F12	SSOP 20pin	Full Carton (Tray)
R5F10968KSP#H0G	R5F10968CKSP#10G	F12	SSOP 20pin	Full Carton (Tray)
R5F10968KSP#H0Q	R5F10968CKSP#10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F10968KSP#V0G	R5F10968CKSP#30G	F12	SSOP 20pin	Bulk (Tray)
R5F10968KSP#X0	R5F10968CKSP#50	F12	SSOP 20pin	Tape&Reel
R5F10968KSP#X0G	R5F10968CKSP#50G	F12	SSOP 20pin	Tape&Reel
R5F10968KSP#X0Q	R5F10968CKSP#50Q	F12	SSOP 20pin	Tape&Reel
R5F10968K***SPH0	R5F10968CK***SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F10968K***SPH0G	R5F10968CK***SP10G	F12	SSOP 20pin	Full Carton (Tray)
R5F10968K***SPH0Q	R5F10968CK***SP10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F10968K***SPV0G	R5F10968CK***SP30G	F12	SSOP 20pin	Bulk (Tray)
R5F10968K***SPX0	R5F10968CK***SP50	F12	SSOP 20pin	Tape&Reel
R5F10968K***SPX0G	R5F10968CK***SP50G	F12	SSOP 20pin	Tape&Reel
R5F10968K***SPX0Q	R5F10968CK***SP50Q	F12	SSOP 20pin	Tape&Reel
R5F1096AJSP#H0	R5F1096ACJSP#10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096AJSP#H0G	R5F1096ACJSP#10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096AJSP#H0Q	R5F1096ACJSP#10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096AJSP#V0G	R5F1096ACJSP#30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096AJSP#X0	R5F1096ACJSP#50	F12	SSOP 20pin	Tape&Reel
R5F1096AJSP#X0G	R5F1096ACJSP#50G	F12	SSOP 20pin	Tape&Reel
R5F1096AJSP#X0Q	R5F1096ACJSP#50Q	F12	SSOP 20pin	Tape&Reel
R5F1096AJ***SPH0	R5F1096ACJ***SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096AJ***SPH0G	R5F1096ACJ***SP10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096AJ***SPH0Q	R5F1096ACJ***SP10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096AJ***SPV0G	R5F1096ACJ***SP30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096AJ***SPX0	R5F1096ACJ***SP50	F12	SSOP 20pin	Tape&Reel
R5F1096AJ***SPX0G	R5F1096ACJ***SP50G	F12	SSOP 20pin	Tape&Reel
R5F1096AJ***SPX0Q	R5F1096ACJ***SP50Q	F12	SSOP 20pin	Tape&Reel
R5F1096AKSP#H0	R5F1096ACKSP#10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096AKSP#H0G	R5F1096ACKSP#10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096AKSP#H0Q	R5F1096ACKSP#10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096AKSP#V0G	R5F1096ACKSP#30G	F12	SSOP 20pin	Bulk (Tray)

R5F1096AKSP#X0	R5F1096ACKSP#50	F12	SSOP 20pin	Tape&Reel
R5F1096AKSP#X0G	R5F1096ACKSP#50G	F12	SSOP 20pin	Tape&Reel
R5F1096AKSP#X0Q	R5F1096ACKSP#50Q	F12	SSOP 20pin	Tape&Reel
R5F1096AK***SPH0	R5F1096ACK***SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096AK***SPH0G	R5F1096ACK***SP10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096AK***SPH0Q	R5F1096ACK***SP10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096AK***SPV0G	R5F1096ACK***SP30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096AK***SPX0	R5F1096ACK***SP50	F12	SSOP 20pin	Tape&Reel
R5F1096AK***SPX0G	R5F1096ACK***SP50G	F12	SSOP 20pin	Tape&Reel
R5F1096AK***SPX0Q	R5F1096ACK***SP50Q	F12	SSOP 20pin	Tape&Reel
R5F1096BJSP#H0	R5F1096BCJSP#10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096BJSP#H0G	R5F1096BCJSP#10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096BJSP#H0Q	R5F1096BCJSP#10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096BJSP#V0G	R5F1096BCJSP#30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096BJSP#X0	R5F1096BCJSP#50	F12	SSOP 20pin	Tape&Reel
R5F1096BJSP#X0G	R5F1096BCJSP#50G	F12	SSOP 20pin	Tape&Reel
R5F1096BJSP#X0Q	R5F1096BCJSP#50Q	F12	SSOP 20pin	Tape&Reel
R5F1096BJ***SPH0	R5F1096BCJ***SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096BJ***SPH0G	R5F1096BCJ***SP10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096BJ***SPH0Q	R5F1096BCJ***SP10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096BJ***SPV0G	R5F1096BCJ***SP30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096BJ***SPX0	R5F1096BCJ***SP50	F12	SSOP 20pin	Tape&Reel
R5F1096BJ***SPX0G	R5F1096BCJ***SP50G	F12	SSOP 20pin	Tape&Reel
R5F1096BJ***SPX0Q	R5F1096BCJ***SP50Q	F12	SSOP 20pin	Tape&Reel
R5F1096BKSP#H0	R5F1096BCKSP#10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096BKSP#H0G	R5F1096BCKSP#10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096BKSP#H0Q	R5F1096BCKSP#10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096BKSP#V0G	R5F1096BCKSP#30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096BKSP#X0	R5F1096BCKSP#50	F12	SSOP 20pin	Tape&Reel
R5F1096BKSP#X0G	R5F1096BCKSP#50G	F12	SSOP 20pin	Tape&Reel
R5F1096BKSP#X0Q	R5F1096BCKSP#50Q	F12	SSOP 20pin	Tape&Reel
R5F1096BK***SPH0	R5F1096BCK***SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096BK***SPH0G	R5F1096BCK***SP10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096BK***SPH0Q	R5F1096BCK***SP10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096BK***SPV0G	R5F1096BCK***SP30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096BK***SPX0	R5F1096BCK***SP50	F12	SSOP 20pin	Tape&Reel
R5F1096BK***SPX0G	R5F1096BCK***SP50G	F12	SSOP 20pin	Tape&Reel
R5F1096BK***SPX0Q	R5F1096BCK***SP50Q	F12	SSOP 20pin	Tape&Reel
R5F1096CJSP#H0	R5F1096CCJSP#10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096CJSP#H0G	R5F1096CCJSP#10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096CJSP#H0Q	R5F1096CCJSP#10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096CJSP#V0G	R5F1096CCJSP#30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096CJSP#X0	R5F1096CCJSP#50	F12	SSOP 20pin	Tape&Reel
R5F1096CJSP#X0G	R5F1096CCJSP#50G	F12	SSOP 20pin	Tape&Reel
R5F1096CJSP#X0Q	R5F1096CCJSP#50Q	F12	SSOP 20pin	Tape&Reel
R5F1096CJ***SPH0	R5F1096CCJ***SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096CJ***SPH0G	R5F1096CCJ***SP10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096CJ***SPH0Q	R5F1096CCJ***SP10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096CJ***SPV0G	R5F1096CCJ***SP30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096CJ***SPX0	R5F1096CCJ***SP50	F12	SSOP 20pin	Tape&Reel
R5F1096CJ***SPX0G	R5F1096CCJ***SP50G	F12	SSOP 20pin	Tape&Reel
R5F1096CJ***SPX0Q	R5F1096CCJ***SP50Q	F12	SSOP 20pin	Tape&Reel

R5F1096CKSP#H0	R5F1096CCKSP#10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096CKSP#H0G	R5F1096CCKSP#10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096CKSP#H0Q	R5F1096CCKSP#10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096CKSP#V0G	R5F1096CCKSP#30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096CKSP#X0	R5F1096CCKSP#50	F12	SSOP 20pin	Tape&Reel
R5F1096CKSP#X0G	R5F1096CCKSP#50G	F12	SSOP 20pin	Tape&Reel
R5F1096CKSP#X0Q	R5F1096CCKSP#50Q	F12	SSOP 20pin	Tape&Reel
R5F1096CK***SPH0	R5F1096CCK***SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096CK***SPH0G	R5F1096CCK***SP10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096CK***SPH0Q	R5F1096CCK***SP10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096CK***SPV0G	R5F1096CCK***SP30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096CK***SPX0	R5F1096CCK***SP50	F12	SSOP 20pin	Tape&Reel
R5F1096CK***SPX0G	R5F1096CCK***SP50G	F12	SSOP 20pin	Tape&Reel
R5F1096CK***SPX0Q	R5F1096CCK***SP50Q	F12	SSOP 20pin	Tape&Reel
R5F1096DJSP#H0	R5F1096DCJSP#10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096DJSP#H0G	R5F1096DCJSP#10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096DJSP#H0Q	R5F1096DCJSP#10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096DJSP#V0G	R5F1096DCJSP#30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096DJSP#X0	R5F1096DCJSP#50	F12	SSOP 20pin	Tape&Reel
R5F1096DJSP#X0G	R5F1096DCJSP#50G	F12	SSOP 20pin	Tape&Reel
R5F1096DJSP#X0Q	R5F1096DCJSP#50Q	F12	SSOP 20pin	Tape&Reel
R5F1096DJ***SPH0	R5F1096DCJ***SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096DJ***SPH0G	R5F1096DCJ***SP10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096DJ***SPH0Q	R5F1096DCJ***SP10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096DJ***SPV0G	R5F1096DCJ***SP30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096DJ***SPX0	R5F1096DCJ***SP50	F12	SSOP 20pin	Tape&Reel
R5F1096DJ***SPX0G	R5F1096DCJ***SP50G	F12	SSOP 20pin	Tape&Reel
R5F1096DJ***SPX0Q	R5F1096DCJ***SP50Q	F12	SSOP 20pin	Tape&Reel
R5F1096DKSP#H0	R5F1096DCKSP#10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096DKSP#H0G	R5F1096DCKSP#10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096DKSP#H0Q	R5F1096DCKSP#10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096DKSP#V0G	R5F1096DCKSP#30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096DKSP#X0	R5F1096DCKSP#50	F12	SSOP 20pin	Tape&Reel
R5F1096DKSP#X0G	R5F1096DCKSP#50G	F12	SSOP 20pin	Tape&Reel
R5F1096DKSP#X0Q	R5F1096DCKSP#50Q	F12	SSOP 20pin	Tape&Reel
R5F1096DK***SPH0	R5F1096DCK***SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096DK***SPH0G	R5F1096DCK***SP10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096DK***SPH0Q	R5F1096DCK***SP10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096DK***SPV0G	R5F1096DCK***SP30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096DK***SPX0	R5F1096DCK***SP50	F12	SSOP 20pin	Tape&Reel
R5F1096DK***SPX0G	R5F1096DCK***SP50G	F12	SSOP 20pin	Tape&Reel
R5F1096DK***SPX0Q	R5F1096DCK***SP50Q	F12	SSOP 20pin	Tape&Reel
R5F1096EJSP#H0	R5F1096ECJSP#10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096EJSP#H0G	R5F1096ECJSP#10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096EJSP#H0Q	R5F1096ECJSP#10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096EJSP#V0G	R5F1096ECJSP#30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096EJSP#X0	R5F1096ECJSP#50	F12	SSOP 20pin	Tape&Reel
R5F1096EJSP#X0G	R5F1096ECJSP#50G	F12	SSOP 20pin	Tape&Reel
R5F1096EJSP#X0Q	R5F1096ECJSP#50Q	F12	SSOP 20pin	Tape&Reel
R5F1096EJ***SPH0	R5F1096ECJ***SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096EJ***SPH0G	R5F1096ECJ***SP10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096EJ***SPH0Q	R5F1096ECJ***SP10Q	F12	SSOP 20pin	Full Carton (Tray)

R5F1096EJ***SPV0G	R5F1096ECJ***SP30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096EJ***SPX0	R5F1096ECJ***SP50	F12	SSOP 20pin	Tape&Reel
R5F1096EJ***SPX0G	R5F1096ECJ***SP50G	F12	SSOP 20pin	Tape&Reel
R5F1096EJ***SPX0Q	R5F1096ECJ***SP50Q	F12	SSOP 20pin	Tape&Reel
R5F1096EKSP#H0	R5F1096ECKSP#10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096EKSP#H0G	R5F1096ECKSP#10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096EKSP#H0Q	R5F1096ECKSP#10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096EKSP#V0G	R5F1096ECKSP#30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096EKSP#X0	R5F1096ECKSP#50	F12	SSOP 20pin	Tape&Reel
R5F1096EKSP#X0G	R5F1096ECKSP#50G	F12	SSOP 20pin	Tape&Reel
R5F1096EKSP#X0Q	R5F1096ECKSP#50Q	F12	SSOP 20pin	Tape&Reel
R5F1096EK***SPH0	R5F1096ECK***SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096EK***SPH0G	R5F1096ECK***SP10G	F12	SSOP 20pin	Full Carton (Tray)
R5F1096EK***SPH0Q	R5F1096ECK***SP10Q	F12	SSOP 20pin	Full Carton (Tray)
R5F1096EK***SPV0G	R5F1096ECK***SP30G	F12	SSOP 20pin	Bulk (Tray)
R5F1096EK***SPX0	R5F1096ECK***SP50	F12	SSOP 20pin	Tape&Reel
R5F1096EK***SPX0G	R5F1096ECK***SP50G	F12	SSOP 20pin	Tape&Reel
R5F1096EK***SPX0Q	R5F1096ECK***SP50Q	F12	SSOP 20pin	Tape&Reel
R5F109AAJSP#H0	R5F109AACJSP#10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAJSP#H0G	R5F109AACJSP#10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAJSP#H0Q	R5F109AACJSP#10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAJSP#V0G	R5F109AACJSP#30G	F12	SSOP 30pin	Bulk (Tray)
R5F109AAJSP#X0	R5F109AACJSP#50	F12	SSOP 30pin	Tape&Reel
R5F109AAJSP#X0G	R5F109AACJSP#50G	F12	SSOP 30pin	Tape&Reel
R5F109AAJSP#X0Q	R5F109AACJSP#50Q	F12	SSOP 30pin	Tape&Reel
R5F109AAJ***SPH0	R5F109AACJ***SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAJ***SPH0G	R5F109AACJ***SP10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAJ***SPH0Q	R5F109AACJ***SP10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAJ***SPV0G	R5F109AACJ***SP30G	F12	SSOP 30pin	Bulk (Tray)
R5F109AAJ***SPX0	R5F109AACJ***SP50	F12	SSOP 30pin	Tape&Reel
R5F109AAJ***SPX0G	R5F109AACJ***SP50G	F12	SSOP 30pin	Tape&Reel
R5F109AAJ***SPX0Q	R5F109AACJ***SP50Q	F12	SSOP 30pin	Tape&Reel
R5F109AAKSP#H0	R5F109AACKSP#10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKSP#H0G	R5F109AACKSP#10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKSP#H0Q	R5F109AACKSP#10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKSP#V0G	R5F109AACKSP#30G	F12	SSOP 30pin	Bulk (Tray)
R5F109AAKSP#X0	R5F109AACKSP#50	F12	SSOP 30pin	Tape&Reel
R5F109AAKSP#X0G	R5F109AACKSP#50G	F12	SSOP 30pin	Tape&Reel
R5F109AAKSP#X0Q	R5F109AACKSP#50Q	F12	SSOP 30pin	Tape&Reel
R5F109AAK***SPH0	R5F109AACK***SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAK***SPH0G	R5F109AACK***SP10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAK***SPH0Q	R5F109AACK***SP10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAK***SPV0G	R5F109AACK***SP30G	F12	SSOP 30pin	Bulk (Tray)
R5F109AAK***SPX0	R5F109AACK***SP50	F12	SSOP 30pin	Tape&Reel
R5F109AAK***SPX0G	R5F109AACK***SP50G	F12	SSOP 30pin	Tape&Reel
R5F109AAK***SPX0Q	R5F109AACK***SP50Q	F12	SSOP 30pin	Tape&Reel
R5F109ABJSP#H0	R5F109ABCJSP#10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABJSP#H0G	R5F109ABCJSP#10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABJSP#H0Q	R5F109ABCJSP#10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABJSP#V0G	R5F109ABCJSP#30G	F12	SSOP 30pin	Bulk (Tray)
R5F109ABJSP#X0	R5F109ABCJSP#50	F12	SSOP 30pin	Tape&Reel
R5F109ABJSP#X0G	R5F109ABCJSP#50G	F12	SSOP 30pin	Tape&Reel

R5F109ABJSP#X0Q	R5F109ABCJSP#50Q	F12	SSOP 30pin	Tape&Reel
R5F109ABJ***SPH0	R5F109ABCJ***SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABJ***SPH0G	R5F109ABCJ***SP10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABJ***SPH0Q	R5F109ABCJ***SP10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABJ***SPV0G	R5F109ABCJ***SP30G	F12	SSOP 30pin	Bulk (Tray)
R5F109ABJ***SPX0	R5F109ABCJ***SP50	F12	SSOP 30pin	Tape&Reel
R5F109ABJ***SPX0G	R5F109ABCJ***SP50G	F12	SSOP 30pin	Tape&Reel
R5F109ABJ***SPX0Q	R5F109ABCJ***SP50Q	F12	SSOP 30pin	Tape&Reel
R5F109ABKSP#H0	R5F109ABCKSP#10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABKSP#H0G	R5F109ABCKSP#10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABKSP#H0Q	R5F109ABCKSP#10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABKSP#V0G	R5F109ABCKSP#30G	F12	SSOP 30pin	Bulk (Tray)
R5F109ABKSP#X0	R5F109ABCKSP#50	F12	SSOP 30pin	Tape&Reel
R5F109ABKSP#X0G	R5F109ABCKSP#50G	F12	SSOP 30pin	Tape&Reel
R5F109ABKSP#X0Q	R5F109ABCKSP#50Q	F12	SSOP 30pin	Tape&Reel
R5F109ABK***SPH0	R5F109ABCK***SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABK***SPH0G	R5F109ABCK***SP10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABK***SPH0Q	R5F109ABCK***SP10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABK***SPV0G	R5F109ABCK***SP30G	F12	SSOP 30pin	Bulk (Tray)
R5F109ABK***SPX0	R5F109ABCK***SP50	F12	SSOP 30pin	Tape&Reel
R5F109ABK***SPX0G	R5F109ABCK***SP50G	F12	SSOP 30pin	Tape&Reel
R5F109ABK***SPX0Q	R5F109ABCK***SP50Q	F12	SSOP 30pin	Tape&Reel
R5F109ACJSP#H0	R5F109ACCJSP#10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ACJSP#H0G	R5F109ACCJSP#10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109ACJSP#H0Q	R5F109ACCJSP#10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109ACJSP#V0G	R5F109ACCJSP#30G	F12	SSOP 30pin	Bulk (Tray)
R5F109ACJSP#X0	R5F109ACCJSP#50	F12	SSOP 30pin	Tape&Reel
R5F109ACJSP#X0G	R5F109ACCJSP#50G	F12	SSOP 30pin	Tape&Reel
R5F109ACJSP#X0Q	R5F109ACCJSP#50Q	F12	SSOP 30pin	Tape&Reel
R5F109ACJ***SPH0	R5F109ACCJ***SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ACJ***SPH0G	R5F109ACCJ***SP10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109ACJ***SPH0Q	R5F109ACCJ***SP10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109ACJ***SPV0G	R5F109ACCJ***SP30G	F12	SSOP 30pin	Bulk (Tray)
R5F109ACJ***SPX0	R5F109ACCJ***SP50	F12	SSOP 30pin	Tape&Reel
R5F109ACJ***SPX0G	R5F109ACCJ***SP50G	F12	SSOP 30pin	Tape&Reel
R5F109ACJ***SPX0Q	R5F109ACCJ***SP50Q	F12	SSOP 30pin	Tape&Reel
R5F109ACKSP#H0	R5F109ACCKSP#10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ACKSP#H0G	R5F109ACCKSP#10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109ACKSP#H0Q	R5F109ACCKSP#10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109ACKSP#V0G	R5F109ACCKSP#30G	F12	SSOP 30pin	Bulk (Tray)
R5F109ACKSP#X0	R5F109ACCKSP#50	F12	SSOP 30pin	Tape&Reel
R5F109ACKSP#X0G	R5F109ACCKSP#50G	F12	SSOP 30pin	Tape&Reel
R5F109ACKSP#X0Q	R5F109ACCKSP#50Q	F12	SSOP 30pin	Tape&Reel
R5F109ACK***SPH0	R5F109ACCK***SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ACK***SPH0G	R5F109ACCK***SP10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109ACK***SPH0Q	R5F109ACCK***SP10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109ACK***SPV0G	R5F109ACCK***SP30G	F12	SSOP 30pin	Bulk (Tray)
R5F109ACK***SPX0	R5F109ACCK***SP50	F12	SSOP 30pin	Tape&Reel
R5F109ACK***SPX0G	R5F109ACCK***SP50G	F12	SSOP 30pin	Tape&Reel
R5F109ACK***SPX0Q	R5F109ACCK***SP50Q	F12	SSOP 30pin	Tape&Reel
R5F109ADJSP#H0	R5F109ADCJSP#10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ADJSP#H0G	R5F109ADCJSP#10G	F12	SSOP 30pin	Full Carton (Tray)



R5F109ADJSP#H0Q	R5F109ADCJSP#10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109ADJSP#VOG	R5F109ADCJSP#30G	F12	SSOP 30pin	Bulk (Tray)
R5F109ADJSP#X0	R5F109ADCJSP#50	F12	SSOP 30pin	Tape&Reel
R5F109ADJSP#X0G	R5F109ADCJSP#50G	F12	SSOP 30pin	Tape&Reel
R5F109ADJSP#X0Q	R5F109ADCJSP#50Q	F12	SSOP 30pin	Tape&Reel
R5F109ADJ***SPH0	R5F109ADCJ***SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ADJ***SPH0G	R5F109ADCJ***SP10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109ADJ***SPH0Q	R5F109ADCJ***SP10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109ADJ***SPV0G	R5F109ADCJ***SP30G	F12	SSOP 30pin	Bulk (Tray)
R5F109ADJ***SPX0	R5F109ADCJ***SP50	F12	SSOP 30pin	Tape&Reel
R5F109ADJ***SPX0G	R5F109ADCJ***SP50G	F12	SSOP 30pin	Tape&Reel
R5F109ADJ***SPX0Q	R5F109ADCJ***SP50Q	F12	SSOP 30pin	Tape&Reel
R5F109ADKSP#H0	R5F109ADCKSP#10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ADKSP#H0G	R5F109ADCKSP#10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109ADKSP#H0Q	R5F109ADCKSP#10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109ADKSP#VOG	R5F109ADCKSP#30G	F12	SSOP 30pin	Bulk (Tray)
R5F109ADKSP#X0	R5F109ADCKSP#50	F12	SSOP 30pin	Tape&Reel
R5F109ADKSP#X0G	R5F109ADCKSP#50G	F12	SSOP 30pin	Tape&Reel
R5F109ADKSP#X0Q	R5F109ADCKSP#50Q	F12	SSOP 30pin	Tape&Reel
R5F109ADK***SPH0	R5F109ADCK***SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ADK***SPH0G	R5F109ADCK***SP10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109ADK***SPH0Q	R5F109ADCK***SP10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109ADK***SPV0G	R5F109ADCK***SP30G	F12	SSOP 30pin	Bulk (Tray)
R5F109ADK***SPX0	R5F109ADCK***SP50	F12	SSOP 30pin	Tape&Reel
R5F109ADK***SPX0G	R5F109ADCK***SP50G	F12	SSOP 30pin	Tape&Reel
R5F109ADK***SPX0Q	R5F109ADCK***SP50Q	F12	SSOP 30pin	Tape&Reel
R5F109AEJSP#H0	R5F109AECJSP#10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AEJSP#H0G	R5F109AECJSP#10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109AEJSP#H0Q	R5F109AECJSP#10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109AEJSP#VOG	R5F109AECJSP#30G	F12	SSOP 30pin	Bulk (Tray)
R5F109AEJSP#X0	R5F109AECJSP#50	F12	SSOP 30pin	Tape&Reel
R5F109AEJSP#X0G	R5F109AECJSP#50G	F12	SSOP 30pin	Tape&Reel
R5F109AEJSP#X0Q	R5F109AECJSP#50Q	F12	SSOP 30pin	Tape&Reel
R5F109AEJ***SPH0	R5F109AECJ***SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AEJ***SPH0G	R5F109AECJ***SP10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109AEJ***SPH0Q	R5F109AECJ***SP10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109AEJ***SPV0G	R5F109AECJ***SP30G	F12	SSOP 30pin	Bulk (Tray)
R5F109AEJ***SPX0	R5F109AECJ***SP50	F12	SSOP 30pin	Tape&Reel
R5F109AEJ***SPX0G	R5F109AECJ***SP50G	F12	SSOP 30pin	Tape&Reel
R5F109AEJ***SPX0Q	R5F109AECJ***SP50Q	F12	SSOP 30pin	Tape&Reel
R5F109AEKSP#H0	R5F109AECKSP#10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AEKSP#H0G	R5F109AECKSP#10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109AEKSP#H0Q	R5F109AECKSP#10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109AEKSP#VOG	R5F109AECKSP#30G	F12	SSOP 30pin	Bulk (Tray)
R5F109AEKSP#X0	R5F109AECKSP#50	F12	SSOP 30pin	Tape&Reel
R5F109AEKSP#X0G	R5F109AECKSP#50G	F12	SSOP 30pin	Tape&Reel
R5F109AEKSP#X0Q	R5F109AECKSP#50Q	F12	SSOP 30pin	Tape&Reel
R5F109AEK***SPH0	R5F109AECK***SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AEK***SPH0G	R5F109AECK***SP10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109AEK***SPH0Q	R5F109AECK***SP10Q	F12	SSOP 30pin	Full Carton (Tray)
R5F109AEK***SPV0G	R5F109AECK***SP30G	F12	SSOP 30pin	Bulk (Tray)
R5F109AEK***SPX0	R5F109AECK***SP50	F12	SSOP 30pin	Tape&Reel

R5F109AEK***SPX0G	R5F109AECK***SP50G	F12	SSOP 30pin	Tape&Reel
R5F109AEK***SPX0Q	R5F109AECK***SP50Q	F12	SSOP 30pin	Tape&Reel
R5F10968JJ00SP#X0Q	R5F10968CJJ00SP50Q	F12	SSOP 20pin	Tape&Reel
R5F10968JJ01SP#H0	R5F10968CJJ01SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F10968JJ02SP#H0	R5F10968CJJ02SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F10968KK00SP#V0	R5F10968CKK00SP30	F12	SSOP 20pin	Bulk (Tray)
R5F10968KK02SP#H0	R5F10968CKK02SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096BKK02SP#X0	R5F1096BCKK02SP50	F12	SSOP 20pin	Tape&Reel
R5F1096BKK03SP#X0	R5F1096BCKK03SP50	F12	SSOP 20pin	Tape&Reel
R5F1096BKK04SP#X0	R5F1096BCKK04SP50	F12	SSOP 20pin	Tape&Reel
R5F1096CKK01SP#H0	R5F1096CCKK01SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096CKK02SP#H0	R5F1096CCKK02SP10	F12	SSOP 20pin	Full Carton (Tray)
R5F1096EKK01SP#X0G	R5F1096ECKK01SP50G	F12	SSOP 20pin	Tape&Reel
R5F1096EKK02SP#X0G	R5F1096ECKK02SP50G	F12	SSOP 20pin	Tape&Reel
R5F109AAJJ01SP#X0	R5F109AACJJ01SP50	F12	SSOP 30pin	Tape&Reel
R5F109AAJJ02SP#X0Q	R5F109AACJJ02SP50Q	F12	SSOP 30pin	Tape&Reel
R5F109AAKK00SP#X0	R5F109AACKK00SP50	F12	SSOP 30pin	Tape&Reel
R5F109AAKK01SP#H0G	R5F109AACKK01SP10G	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKK01SP#V0G	R5F109AACKK01SP30G	F12	SSOP 30pin	Bulk (Tray)
R5F109AAKK02SP#X0G	R5F109AACKK02SP50G	F12	SSOP 30pin	Tape&Reel
R5F109AAKK03SP#H0	R5F109AACKK03SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKK03SP#V0	R5F109AACKK03SP30	F12	SSOP 30pin	Bulk (Tray)
R5F109AAKK04SP#H0	R5F109AACKK04SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKK04SP#V0	R5F109AACKK04SP30	F12	SSOP 30pin	Bulk (Tray)
R5F109AAKK05SP#H0	R5F109AACKK05SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKK05SP#V0	R5F109AACKK05SP30	F12	SSOP 30pin	Bulk (Tray)
R5F109AAKK07SP#H0	R5F109AACKK07SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKK07SP#V0	R5F109AACKK07SP30	F12	SSOP 30pin	Bulk (Tray)
R5F109AAKK08SP#V0G	R5F109AACKK08SP30G	F12	SSOP 30pin	Bulk (Tray)
R5F109AAKK09SP#V0G	R5F109AACKK09SP30G	F12	SSOP 30pin	Bulk (Tray)
R5F109AAKK10SP#H0	R5F109AACKK10SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKK11SP#H0	R5F109AACKK11SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKK12SP#H0	R5F109AACKK12SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKK13SP#H0	R5F109AACKK13SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKK14SP#H0	R5F109AACKK14SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKK15SP#H0	R5F109AACKK15SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKK17SP#X0Q	R5F109AACKK17SP50Q	F12	SSOP 30pin	Tape&Reel
R5F109AAKK18SP#H0	R5F109AACKK18SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109AAKK19SP#H0	R5F109AACKK19SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABKK00SP#H0	R5F109ABCKK00SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABKK00SP#V0	R5F109ABCKK00SP30	F12	SSOP 30pin	Bulk (Tray)
R5F109ABKK01SP#H0	R5F109ABCKK01SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ABKK01SP#V0	R5F109ABCKK01SP30	F12	SSOP 30pin	Bulk (Tray)
R5F109ACKK00SP#H0	R5F109ACCKK00SP10	F12	SSOP 30pin	Full Carton (Tray)
R5F109ACKK00SP#V0	R5F109ACCKK00SP30	F12	SSOP 30pin	Bulk (Tray)
R5F109AEJJ00SP#X0Q	R5F109AECJJ00SP50Q	F12	SSOP 30pin	Tape&Reel
R5F109AEJJ01SP#X0Q	R5F109AECJJ01SP50Q	F12	SSOP 30pin	Tape&Reel

\*\*\* means ROM code

## RL78/F13(LIN) series:

Before (Au wire)	After (Cu wire)	Nickname	PKG outline	Packing
R5F10A6AKK01SP#G5	R5F10A6ACKK01SP15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6AKK02SP#W5	R5F10A6ACKK02SP55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6AKSP#G5	R5F10A6ACKSP#15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6AKSP#G5Q	R5F10A6ACKSP#15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6AKSP#U5	R5F10A6ACKSP#35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6AKSP#W5	R5F10A6ACKSP#55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6AKSP#W5Q	R5F10A6ACKSP#55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6AK***SPG5	R5F10A6ACK***SP15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6AK***SPG5Q	R5F10A6ACK***SP15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6AK***SPU5	R5F10A6ACK***SP35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6AK***SPW5	R5F10A6ACK***SP55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6AK***SPW5Q	R5F10A6ACK***SP55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6ALSP#G5	R5F10A6ACLSP#15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6ALSP#G5Q	R5F10A6ACLSP#15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6ALSP#U5	R5F10A6ACLSP#35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6ALSP#W5	R5F10A6ACLSP#55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6ALSP#W5Q	R5F10A6ACLSP#55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6AL***SPG5	R5F10A6ACL***SP15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6AL***SPG5Q	R5F10A6ACL***SP15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6AL***SPU5	R5F10A6ACL***SP35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6AL***SPW5	R5F10A6ACL***SP55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6AL***SPW5Q	R5F10A6ACL***SP55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6AYSP#G5	R5F10A6ACYSP#15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6AYSP#G5Q	R5F10A6ACYSP#15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6AYSP#U5	R5F10A6ACYSP#35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6AYSP#W5	R5F10A6ACYSP#55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6AYSP#W5Q	R5F10A6ACYSP#55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6AY***SPG5	R5F10A6ACY***SP15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6AY***SPG5Q	R5F10A6ACY***SP15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6AY***SPU5	R5F10A6ACY***SP35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6AY***SPW5	R5F10A6ACY***SP55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6AY***SPW5Q	R5F10A6ACY***SP55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6CKSP#G5	R5F10A6CCKSP#15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6CKSP#G5Q	R5F10A6CCKSP#15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6CKSP#U5	R5F10A6CCKSP#35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6CKSP#W5	R5F10A6CCKSP#55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6CKSP#W5Q	R5F10A6CCKSP#55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6CK***SPG5	R5F10A6CCK***SP15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6CK***SPG5Q	R5F10A6CCK***SP15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6CK***SPU5	R5F10A6CCK***SP35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6CK***SPW5	R5F10A6CCK***SP55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6CK***SPW5Q	R5F10A6CCK***SP55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6CLSP#G5	R5F10A6CCLSP#15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6CLSP#G5Q	R5F10A6CCLSP#15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6CLSP#U5	R5F10A6CCLSP#35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6CLSP#W5	R5F10A6CCLSP#55	F13(LIN)	SSOP 20pin	Tape&Reel

R5F10A6CLSP#W5Q	R5F10A6CCLSP#55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6CL***SPG5	R5F10A6CCL***SP15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6CL***SPG5Q	R5F10A6CCL***SP15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6CL***SPU5	R5F10A6CCL***SP35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6CL***SPW5	R5F10A6CCL***SP55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6CL***SPW5Q	R5F10A6CCL***SP55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6CYSP#G5	R5F10A6CCYSP#15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6CYSP#G5Q	R5F10A6CCYSP#15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6CYSP#U5	R5F10A6CCYSP#35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6CYSP#W5	R5F10A6CCYSP#55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6CYSP#W5Q	R5F10A6CCYSP#55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6CY***SPG5	R5F10A6CCY***SP15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6CY***SPG5Q	R5F10A6CCY***SP15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6CY***SPU5	R5F10A6CCY***SP35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6CY***SPW5	R5F10A6CCY***SP55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6CY***SPW5Q	R5F10A6CCY***SP55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6DKSP#G5	R5F10A6DCKSP#15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6DKSP#G5Q	R5F10A6DCKSP#15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6DKSP#U5	R5F10A6DCKSP#35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6DKSP#W5	R5F10A6DCKSP#55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6DKSP#W5Q	R5F10A6DCKSP#55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6DK***SPG5	R5F10A6DCK***SP15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6DK***SPG5Q	R5F10A6DCK***SP15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6DK***SPU5	R5F10A6DCK***SP35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6DK***SPW5	R5F10A6DCK***SP55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6DK***SPW5Q	R5F10A6DCK***SP55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6DLSP#G5	R5F10A6DCLSP#15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6DLSP#G5Q	R5F10A6DCLSP#15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6DLSP#U5	R5F10A6DCLSP#35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6DLSP#W5	R5F10A6DCLSP#55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6DLSP#W5Q	R5F10A6DCLSP#55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6DL***SPG5	R5F10A6DCL***SP15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6DL***SPG5Q	R5F10A6DCL***SP15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6DL***SPU5	R5F10A6DCL***SP35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6DL***SPW5	R5F10A6DCL***SP55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6DL***SPW5Q	R5F10A6DCL***SP55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6DYSP#G5	R5F10A6DCYSP#15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6DYSP#G5Q	R5F10A6DCYSP#15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6DYSP#U5	R5F10A6DCYSP#35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6DYSP#W5	R5F10A6DCYSP#55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6DYSP#W5Q	R5F10A6DCYSP#55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6DY***SPG5	R5F10A6DCY***SP15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6DY***SPG5Q	R5F10A6DCY***SP15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6DY***SPU5	R5F10A6DCY***SP35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6DY***SPW5	R5F10A6DCY***SP55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6DY***SPW5Q	R5F10A6DCY***SP55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6EKSP#G5	R5F10A6ECKSP#15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6EKSP#G5Q	R5F10A6ECKSP#15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6EKSP#U5	R5F10A6ECKSP#35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6EKSP#W5	R5F10A6ECKSP#55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6EKSP#W5Q	R5F10A6ECKSP#55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6EK***SPG5	R5F10A6ECK***SP15	F13(LIN)	SSOP 20pin	Full Carton (Tray)

R5F10A6EK***SPG5Q	R5F10A6ECK***SP15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6EK***SPU5	R5F10A6ECK***SP35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6EK***SPW5	R5F10A6ECK***SP55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6EK***SPW5Q	R5F10A6ECK***SP55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6ELSP#G5	R5F10A6ECLSP#15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6ELSP#G5Q	R5F10A6ECLSP#15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6ELSP#U5	R5F10A6ECLSP#35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6ELSP#W5	R5F10A6ECLSP#55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6ELSP#W5Q	R5F10A6ECLSP#55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6EL***SPG5	R5F10A6ECL***SP15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6EL***SPG5Q	R5F10A6ECL***SP15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6EL***SPU5	R5F10A6ECL***SP35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6EL***SPW5	R5F10A6ECL***SP55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6EL***SPW5Q	R5F10A6ECL***SP55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6EYSP#G5	R5F10A6ECYSP#15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6EYSP#G5Q	R5F10A6ECYSP#15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6EYSP#U5	R5F10A6ECYSP#35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6EYSP#W5	R5F10A6ECYSP#55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6EYSP#W5Q	R5F10A6ECYSP#55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6EY***SPG5	R5F10A6ECY***SP15	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6EY***SPG5Q	R5F10A6ECY***SP15Q	F13(LIN)	SSOP 20pin	Full Carton (Tray)
R5F10A6EY***SPU5	R5F10A6ECY***SP35	F13(LIN)	SSOP 20pin	Bulk (Tray)
R5F10A6EY***SPW5	R5F10A6ECY***SP55	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10A6EY***SPW5Q	R5F10A6ECY***SP55Q	F13(LIN)	SSOP 20pin	Tape&Reel
R5F10AAAKK01SP#G5	R5F10AAACKK01SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAAKK01SP#U5	R5F10AAACKK01SP35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AAAKSP#G5	R5F10AAACKSP#15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAAKSP#G5Q	R5F10AAACKSP#15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAAKSP#U5	R5F10AAACKSP#35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AAAKSP#W5	R5F10AAACKSP#55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAAKSP#W5Q	R5F10AAACKSP#55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAAK***SPG5	R5F10AAACK***SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAAK***SPG5Q	R5F10AAACK***SP15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAAK***SPU5	R5F10AAACK***SP35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AAAK***SPW5	R5F10AAACK***SP55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAAK***SPW5Q	R5F10AAACK***SP55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAALSP#G5	R5F10AAACLSP#15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAALSP#G5Q	R5F10AAACLSP#15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAALSP#U5	R5F10AAACLSP#35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AAALSP#W5	R5F10AAACLSP#55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAALSP#W5Q	R5F10AAACLSP#55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAAL***SPG5	R5F10AAACL***SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAAL***SPG5Q	R5F10AAACL***SP15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAAL***SPU5	R5F10AAACL***SP35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AAAL***SPW5	R5F10AAACL***SP55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAAL***SPW5Q	R5F10AAACL***SP55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAAYSP#G5	R5F10AAACYSP#15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAAYSP#G5Q	R5F10AAACYSP#15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAAYSP#U5	R5F10AAACYSP#35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AAAYSP#W5	R5F10AAACYSP#55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAAYSP#W5Q	R5F10AAACYSP#55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAAY***SPG5	R5F10AAACY***SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)

R5F10AAAY***SPG5Q	R5F10AAACY***SP15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAAY***SPU5	R5F10AAACY***SP35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AAAY***SPW5	R5F10AAACY***SP55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAAY***SPW5Q	R5F10AAACY***SP55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AACKSP#G5	R5F10AACCKSP#15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AACKSP#G5Q	R5F10AACCKSP#15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AACKSP#U5	R5F10AACCKSP#35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AACKSP#W5	R5F10AACCKSP#55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AACKSP#W5Q	R5F10AACCKSP#55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AACK***SPG5	R5F10AACCK***SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AACK***SPG5Q	R5F10AACCK***SP15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AACK***SPU5	R5F10AACCK***SP35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AACK***SPW5	R5F10AACCK***SP55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AACK***SPW5Q	R5F10AACCK***SP55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AACLSP#G5	R5F10AACCLSP#15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AACLSP#G5Q	R5F10AACCLSP#15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AACLSP#U5	R5F10AACCLSP#35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AACLSP#W5	R5F10AACCLSP#55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AACLSP#W5Q	R5F10AACCLSP#55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AACL***SPG5	R5F10AACCL***SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AACL***SPG5Q	R5F10AACCL***SP15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AACL***SPU5	R5F10AACCL***SP35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AACL***SPW5	R5F10AACCL***SP55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AACL***SPW5Q	R5F10AACCL***SP55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AACYSP#G5	R5F10AACCYSP#15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AACYSP#G5Q	R5F10AACCYSP#15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AACYSP#U5	R5F10AACCYSP#35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AACYSP#W5	R5F10AACCYSP#55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AACYSP#W5Q	R5F10AACCYSP#55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AACY***SPG5	R5F10AACCY***SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AACY***SPG5Q	R5F10AACCY***SP15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AACY***SPU5	R5F10AACCY***SP35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AACY***SPW5	R5F10AACCY***SP55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AACY***SPW5Q	R5F10AACCY***SP55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AADKSP#G5	R5F10AADCKSP#15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADKSP#G5Q	R5F10AADCKSP#15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADKSP#U5	R5F10AADCKSP#35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AADKSP#W5	R5F10AADCKSP#55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AADKSP#W5Q	R5F10AADCKSP#55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AADK***SPG5	R5F10AADCK***SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADK***SPG5Q	R5F10AADCK***SP15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADK***SPU5	R5F10AADCK***SP35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AADK***SPW5	R5F10AADCK***SP55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AADK***SPW5Q	R5F10AADCK***SP55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AADLL00SP#G5	R5F10AADCLL00SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADLL00SP#U5	R5F10AADCLL00SP35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AADLL01SP#G5	R5F10AADCLL01SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADLL02SP#G5	R5F10AADCLL02SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADLSP#G5	R5F10AADCLSP#15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADLSP#G5Q	R5F10AADCLSP#15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADLSP#U5	R5F10AADCLSP#35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AADLSP#W5	R5F10AADCLSP#55	F13(LIN)	SSOP 30pin	Tape&Reel

R5F10AADLSP#W5Q	R5F10AADCLSP#55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AADL***SPG5	R5F10AADCL***SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADL***SPG5Q	R5F10AADCL***SP15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADL***SPU5	R5F10AADCL***SP35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AADL***SPW5	R5F10AADCL***SP55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AADL***SPW5Q	R5F10AADCL***SP55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AADYSP#G5	R5F10AADCYSP#15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADYSP#G5Q	R5F10AADCYSP#15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADYSP#U5	R5F10AADCYSP#35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AADYSP#W5	R5F10AADCYSP#55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AADYSP#W5Q	R5F10AADCYSP#55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AADY***SPG5	R5F10AADCY***SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADY***SPG5Q	R5F10AADCY***SP15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AADY***SPU5	R5F10AADCY***SP35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AADY***SPW5	R5F10AADCY***SP55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AADY***SPW5Q	R5F10AADCY***SP55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAEKSP#G5	R5F10AAECKSP#15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAEKSP#G5Q	R5F10AAECKSP#15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAEKSP#U5	R5F10AAECKSP#35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AAEKSP#W5	R5F10AAECKSP#55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAEKSP#W5Q	R5F10AAECKSP#55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAEK***SPG5	R5F10AAECK***SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAEK***SPG5Q	R5F10AAECK***SP15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAEK***SPU5	R5F10AAECK***SP35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AAEK***SPW5	R5F10AAECK***SP55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAEK***SPW5Q	R5F10AAECK***SP55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAELSP#G5	R5F10AAECLSP#15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAELSP#G5Q	R5F10AAECLSP#15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAELSP#U5	R5F10AAECLSP#35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AAELSP#W5	R5F10AAECLSP#55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAELSP#W5Q	R5F10AAECLSP#55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAEL***SPG5	R5F10AAECL***SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAEL***SPG5Q	R5F10AAECL***SP15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAEL***SPU5	R5F10AAECL***SP35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AAEL***SPW5	R5F10AAECL***SP55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAEL***SPW5Q	R5F10AAECL***SP55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAEYSP#G5	R5F10AAECYSP#15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAEYSP#G5Q	R5F10AAECYSP#15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAEYSP#U5	R5F10AAECYSP#35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AAEYSP#W5	R5F10AAECYSP#55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAEYSP#W5Q	R5F10AAECYSP#55Q	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAEY***SPG5	R5F10AAECY***SP15	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAEY***SPG5Q	R5F10AAECY***SP15Q	F13(LIN)	SSOP 30pin	Full Carton (Tray)
R5F10AAEY***SPU5	R5F10AAECY***SP35	F13(LIN)	SSOP 30pin	Bulk (Tray)
R5F10AAEY***SPW5	R5F10AAECY***SP55	F13(LIN)	SSOP 30pin	Tape&Reel
R5F10AAEY***SPW5Q	R5F10AAECY***SP55Q	F13(LIN)	SSOP 30pin	Tape&Reel

\*\*\* means ROM code

## RL78/F13(CAN&LIN) series:

Before (Au wire)	After (Cu wire)	Nickname	PKG outline	Packing
R5F10BACKK00SP#U5	R5F10BACCKK00SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BACKK01SP#U5	R5F10BACCKK01SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BACKK02SP#G5	R5F10BACCKK02SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BACKSP#G5	R5F10BACCKSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BACKSP#G5Q	R5F10BACCKSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BACKSP#U5	R5F10BACCKSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BACKSP#W5	R5F10BACCKSP#55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BACKSP#W5Q	R5F10BACCKSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BACK***SPG5	R5F10BACCK***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BACK***SPG5Q	R5F10BACCK***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BACK***SPU5	R5F10BACCK***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BACK***SPW5	R5F10BACCK***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BACK***SPW5Q	R5F10BACCK***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BACLLO0SP#W5	R5F10BACCLL00SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BACLSP#G5	R5F10BACCLSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BACLSP#G5Q	R5F10BACCLSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BACLSP#U5	R5F10BACCLSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BACLSP#W5	R5F10BACCLSP#55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BACLSP#W5Q	R5F10BACCLSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BACL***SPG5	R5F10BACCL***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BACL***SPG5Q	R5F10BACCL***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BACL***SPU5	R5F10BACCL***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BACL***SPW5	R5F10BACCL***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BACL***SPW5Q	R5F10BACCL***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BACYSP#G5	R5F10BACCYSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BACYSP#G5Q	R5F10BACCYSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BACYSP#U5	R5F10BACCYSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BACYSP#W5	R5F10BACCYSP#55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BACYSP#W5Q	R5F10BACCYSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BACY***SPG5	R5F10BACCY***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BACY***SPG5Q	R5F10BACCY***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BACY***SPU5	R5F10BACCY***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BACY***SPW5	R5F10BACCY***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BACY***SPW5Q	R5F10BACCY***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BADKSP#G5	R5F10BADCKSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BADKSP#G5Q	R5F10BADCKSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BADKSP#U5	R5F10BADCKSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BADKSP#W5	R5F10BADCKSP#55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BADKSP#W5Q	R5F10BADCKSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BADK***SPG5	R5F10BADCK***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BADK***SPG5Q	R5F10BADCK***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BADK***SPU5	R5F10BADCK***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BADK***SPW5	R5F10BADCK***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BADK***SPW5Q	R5F10BADCK***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BADLSP#G5	R5F10BADCLSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BADLSP#G5Q	R5F10BADCLSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BADLSP#U5	R5F10BADCLSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BADLSP#W5	R5F10BADCLSP#55	F13(CAN)	SSOP 30pin	Tape&Reel



R5F10BADLSP#W5Q	R5F10BADCLSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BADL***SPG5	R5F10BADCL***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BADL***SPG5Q	R5F10BADCL***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BADL***SPU5	R5F10BADCL***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BADL***SPW5	R5F10BADCL***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BADL***SPW5Q	R5F10BADCL***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BADYSP#G5	R5F10BADCYSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BADYSP#G5Q	R5F10BADCYSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BADYSP#U5	R5F10BADCYSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BADYSP#W5	R5F10BADCYSP#55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BADYSP#W5Q	R5F10BADCYSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BADY***SPG5	R5F10BADCY***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BADY***SPG5Q	R5F10BADCY***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BADY***SPU5	R5F10BADCY***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BADY***SPW5	R5F10BADCY***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BADY***SPW5Q	R5F10BADCY***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAEKSP#G5	R5F10BAECKSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAEKSP#G5Q	R5F10BAECKSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAEKSP#U5	R5F10BAECKSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAEKSP#W5	R5F10BAECKSP#55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAEKSP#W5Q	R5F10BAECKSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAEK***SPG5	R5F10BAECK***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAEK***SPG5Q	R5F10BAECK***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAEK***SPU5	R5F10BAECK***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAEK***SPW5	R5F10BAECK***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAEK***SPW5Q	R5F10BAECK***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAELSP#G5	R5F10BAECLSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAELSP#G5Q	R5F10BAECLSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAELSP#U5	R5F10BAECLSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAELSP#W5	R5F10BAECLSP#55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAELSP#W5Q	R5F10BAECLSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAEL***SPG5	R5F10BAECL***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAEL***SPG5Q	R5F10BAECL***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAEL***SPU5	R5F10BAECL***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAEL***SPW5	R5F10BAECL***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAEL***SPW5Q	R5F10BAECL***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAEYSP#G5	R5F10BAECYSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAEYSP#G5Q	R5F10BAECYSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAEYSP#U5	R5F10BAECYSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAEYSP#W5	R5F10BAECYSP#55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAEYSP#W5Q	R5F10BAECYSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAEY***SPG5	R5F10BAECY***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAEY***SPG5Q	R5F10BAECY***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAEY***SPU5	R5F10BAECY***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAEY***SPW5	R5F10BAECY***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAEY***SPW5Q	R5F10BAECY***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAFKSP#G5	R5F10BAFCKSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAFKSP#G5Q	R5F10BAFCKSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAFKSP#U5	R5F10BAFCKSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAFKSP#W5	R5F10BAFCKSP#55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAFKSP#W5Q	R5F10BAFCKSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAFK***SPG5	R5F10BAFCK***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)

R5F10BAFK***SPG5Q	R5F10BAFCK***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAFK***SPU5	R5F10BAFCK***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAFK***SPW5	R5F10BAFCK***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAFK***SPW5Q	R5F10BAFCK***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAFLSP#G5	R5F10BAFCLSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAFLSP#G5Q	R5F10BAFCLSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAFLSP#U5	R5F10BAFCLSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAFLSP#W5	R5F10BAFCLSP#55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAFLSP#W5Q	R5F10BAFCLSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAFL***SPG5	R5F10BAFCL***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAFL***SPG5Q	R5F10BAFCL***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAFL***SPU5	R5F10BAFCL***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAFL***SPW5	R5F10BAFCL***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAFL***SPW5Q	R5F10BAFCL***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAFYSP#G5	R5F10BAFCYSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAFYSP#G5Q	R5F10BAFCYSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAFYSP#U5	R5F10BAFCYSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAFYSP#W5	R5F10BAFCYSP#55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAFYSP#W5Q	R5F10BAFCYSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAFY***SPG5	R5F10BAFCY***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAFY***SPG5Q	R5F10BAFCY***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAFY***SPU5	R5F10BAFCY***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAFY***SPW5	R5F10BAFCY***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAFY***SPW5Q	R5F10BAFCY***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAGKK00SP#W5Q	R5F10BAGCKK00SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAGKK01SP#W5Q	R5F10BAGCKK01SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAGKSP#G5	R5F10BAGCKSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAGKSP#G5Q	R5F10BAGCKSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAGKSP#U5	R5F10BAGCKSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAGKSP#W5	R5F10BAGCKSP#55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAGKSP#W5Q	R5F10BAGCKSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAGK***SPG5	R5F10BAGCK***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAGK***SPG5Q	R5F10BAGCK***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAGK***SPU5	R5F10BAGCK***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAGK***SPW5	R5F10BAGCK***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAGK***SPW5Q	R5F10BAGCK***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAGLSP#G5	R5F10BAGCLSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAGLSP#G5Q	R5F10BAGCLSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAGLSP#U5	R5F10BAGCLSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAGLSP#W5	R5F10BAGCLSP#55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAGLSP#W5Q	R5F10BAGCLSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAGL***SPG5	R5F10BAGCL***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAGL***SPG5Q	R5F10BAGCL***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAGL***SPU5	R5F10BAGCL***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAGL***SPW5	R5F10BAGCL***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAGL***SPW5Q	R5F10BAGCL***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAGYSP#G5	R5F10BAGCYSP#15	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAGYSP#G5Q	R5F10BAGCYSP#15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAGYSP#U5	R5F10BAGCYSP#35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAGYSP#W5	R5F10BAGCYSP#55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAGYSP#W5Q	R5F10BAGCYSP#55Q	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAGY***SPG5	R5F10BAGCY***SP15	F13(CAN)	SSOP 30pin	Full Carton (Tray)

R5F10BAGY***SPG5Q	R5F10BAGCY***SP15Q	F13(CAN)	SSOP 30pin	Full Carton (Tray)
R5F10BAGY***SPU5	R5F10BAGCY***SP35	F13(CAN)	SSOP 30pin	Bulk (Tray)
R5F10BAGY***SPW5	R5F10BAGCY***SP55	F13(CAN)	SSOP 30pin	Tape&Reel
R5F10BAGY***SPW5Q	R5F10BAGCY***SP55Q	F13(CAN)	SSOP 30pin	Tape&Reel

\*\*\* means ROM code

## RL78/F14(CAN) series:

Before (Au wire)	After (Cu wire)	Nickname	PKG outline	Packing
R5F10PADKSP#G5	R5F10PADCKSP#15	F14	SSOP 30pin	Full Carton (Tray)
R5F10PADKSP#G5Q	R5F10PADCKSP#15Q	F14	SSOP 30pin	Full Carton (Tray)
R5F10PADKSP#U5	R5F10PADCKSP#35	F14	SSOP 30pin	Bulk (Tray)
R5F10PADKSP#W5	R5F10PADCKSP#55	F14	SSOP 30pin	Tape&Reel
R5F10PADKSP#W5Q	R5F10PADCKSP#55Q	F14	SSOP 30pin	Tape&Reel
R5F10PADK***SPG5	R5F10PADCK***SP15	F14	SSOP 30pin	Full Carton (Tray)
R5F10PADK***SPG5Q	R5F10PADCK***SP15Q	F14	SSOP 30pin	Full Carton (Tray)
R5F10PADK***SPU5	R5F10PADCK***SP35	F14	SSOP 30pin	Bulk (Tray)
R5F10PADK***SPW5	R5F10PADCK***SP55	F14	SSOP 30pin	Tape&Reel
R5F10PADK***SPW5Q	R5F10PADCK***SP55Q	F14	SSOP 30pin	Tape&Reel
R5F10PADLSP#G5	R5F10PADCLSP#15	F14	SSOP 30pin	Full Carton (Tray)
R5F10PADLSP#G5Q	R5F10PADCLSP#15Q	F14	SSOP 30pin	Full Carton (Tray)
R5F10PADLSP#U5	R5F10PADCLSP#35	F14	SSOP 30pin	Bulk (Tray)
R5F10PADLSP#W5	R5F10PADCLSP#55	F14	SSOP 30pin	Tape&Reel
R5F10PADLSP#W5Q	R5F10PADCLSP#55Q	F14	SSOP 30pin	Tape&Reel
R5F10PADL***SPG5	R5F10PADCL***SP15	F14	SSOP 30pin	Full Carton (Tray)
R5F10PADL***SPG5Q	R5F10PADCL***SP15Q	F14	SSOP 30pin	Full Carton (Tray)
R5F10PADL***SPU5	R5F10PADCL***SP35	F14	SSOP 30pin	Bulk (Tray)
R5F10PADL***SPW5	R5F10PADCL***SP55	F14	SSOP 30pin	Tape&Reel
R5F10PADL***SPW5Q	R5F10PADCL***SP55Q	F14	SSOP 30pin	Tape&Reel
R5F10PADYSP#G5	R5F10PADCYSP#15	F14	SSOP 30pin	Full Carton (Tray)
R5F10PADYSP#G5Q	R5F10PADCYSP#15Q	F14	SSOP 30pin	Full Carton (Tray)
R5F10PADYSP#U5	R5F10PADCYSP#35	F14	SSOP 30pin	Bulk (Tray)
R5F10PADYSP#W5	R5F10PADCYSP#55	F14	SSOP 30pin	Tape&Reel
R5F10PADYSP#W5Q	R5F10PADCYSP#55Q	F14	SSOP 30pin	Tape&Reel
R5F10PADY***SPG5	R5F10PADCY***SP15	F14	SSOP 30pin	Full Carton (Tray)
R5F10PADY***SPG5Q	R5F10PADCY***SP15Q	F14	SSOP 30pin	Full Carton (Tray)
R5F10PADY***SPU5	R5F10PADCY***SP35	F14	SSOP 30pin	Bulk (Tray)
R5F10PADY***SPW5	R5F10PADCY***SP55	F14	SSOP 30pin	Tape&Reel
R5F10PADY***SPW5Q	R5F10PADCY***SP55Q	F14	SSOP 30pin	Tape&Reel
R5F10PAEKSP#G5	R5F10PAECKSP#15	F14	SSOP 30pin	Full Carton (Tray)
R5F10PAEKSP#G5Q	R5F10PAECKSP#15Q	F14	SSOP 30pin	Full Carton (Tray)
R5F10PAEKSP#U5	R5F10PAECKSP#35	F14	SSOP 30pin	Bulk (Tray)
R5F10PAEKSP#W5	R5F10PAECKSP#55	F14	SSOP 30pin	Tape&Reel
R5F10PAEKSP#W5Q	R5F10PAECKSP#55Q	F14	SSOP 30pin	Tape&Reel
R5F10PAEK***SPG5	R5F10PAECK***SP15	F14	SSOP 30pin	Full Carton (Tray)
R5F10PAEK***SPG5Q	R5F10PAECK***SP15Q	F14	SSOP 30pin	Full Carton (Tray)
R5F10PAEK***SPU5	R5F10PAECK***SP35	F14	SSOP 30pin	Bulk (Tray)
R5F10PAEK***SPW5	R5F10PAECK***SP55	F14	SSOP 30pin	Tape&Reel
R5F10PAEK***SPW5Q	R5F10PAECK***SP55Q	F14	SSOP 30pin	Tape&Reel
R5F10PAELSP#G5	R5F10PAECLSP#15	F14	SSOP 30pin	Full Carton (Tray)
R5F10PAELSP#G5Q	R5F10PAECLSP#15Q	F14	SSOP 30pin	Full Carton (Tray)
R5F10PAELSP#U5	R5F10PAECLSP#35	F14	SSOP 30pin	Bulk (Tray)
R5F10PAELSP#W5	R5F10PAECLSP#55	F14	SSOP 30pin	Tape&Reel
R5F10PAELSP#W5Q	R5F10PAECLSP#55Q	F14	SSOP 30pin	Tape&Reel
R5F10PAEL***SPG5	R5F10PAECL***SP15	F14	SSOP 30pin	Full Carton (Tray)
R5F10PAEL***SPG5Q	R5F10PAECL***SP15Q	F14	SSOP 30pin	Full Carton (Tray)
R5F10PAEL***SPU5	R5F10PAECL***SP35	F14	SSOP 30pin	Bulk (Tray)

R5F10PAEL***SPW5	R5F10PAECL***SP55	F14	SSOP 30pin	Tape&Reel
R5F10PAEL***SPW5Q	R5F10PAECL***SP55Q	F14	SSOP 30pin	Tape&Reel
R5F10PAEYSP#G5	R5F10PAECYSP#15	F14	SSOP 30pin	Full Carton (Tray)
R5F10PAEYSP#G5Q	R5F10PAECYSP#15Q	F14	SSOP 30pin	Full Carton (Tray)
R5F10PAEYSP#U5	R5F10PAECYSP#35	F14	SSOP 30pin	Bulk (Tray)
R5F10PAEYSP#W5	R5F10PAECYSP#55	F14	SSOP 30pin	Tape&Reel
R5F10PAEYSP#W5Q	R5F10PAECYSP#55Q	F14	SSOP 30pin	Tape&Reel
R5F10PAEY***SPG5	R5F10PAECY***SP15	F14	SSOP 30pin	Full Carton (Tray)
R5F10PAEY***SPG5Q	R5F10PAECY***SP15Q	F14	SSOP 30pin	Full Carton (Tray)
R5F10PAEY***SPU5	R5F10PAECY***SP35	F14	SSOP 30pin	Bulk (Tray)
R5F10PAEY***SPW5	R5F10PAECY***SP55	F14	SSOP 30pin	Tape&Reel
R5F10PAEY***SPW5Q	R5F10PAECY***SP55Q	F14	SSOP 30pin	Tape&Reel

\*\*\* means ROM code

Report No. MCR-24-MCR-24-0391

Date: 19/Dec./2024

# RENESAS SEMICONDUCTOR RELIABILITY REPORT

SERIES : RL78/F12,13,14

DEVICE : Please see [Device list]

APPLICATION : Automobile

<Wafer Fabrication>

Renesas Semiconductor Manufacturing Co., Ltd. Kawashiri Factory

<Assembly>

Renesas Semiconductor KL Sdn. Bhd.

Quality Assurance Div.

Renesas Electronics Corporation

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(Rev.5.0-2 October 2020)

## Q100 Qualification Test Results

[Note : Basically qualification tests were performed using a representative product with the same wafer process and the same package structure .]

Test	#	Reference	Test Conditions	Lots	S.S.	Total	Results (Fail of Total)	Comments: (N/A =Not Applicable)
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### TEST GROUP A – ACCELERATED ENVIRONMENT STRESS TESTS

PC	A1	JESD22 A113 J-STD-020	Preconditioning: (Test @ Rm) SMD only; Moisture Preconditioning for THB/HAST, AC/UHST, TC ; Peak Reflow Temp=260°C	Min.MSL=3			MSL=3	-
THB or HAST	A2	JESD22 A101	Temperature Humidity Bias: (Test @ Rm/Hot) Ta=85°C, RH=85%, T=1000hrs	3	77	231	0 of 231	-
AC or UHST or TH	A3	JESD22 A118	Unbiased Highly Accelerated Stress Test: (Test @ Rm) Ta=110°C, RH=85%, T=264hrs	3	77	231	0 of 231	-
TC	A4	JESD22 A104	Temperature Cycle: (Test@Hot) Ta=-55°C to 150°C, T=2000cyc Wire Bond Pull: (0 Fails after TC)	3	77	231	0 of 231	-
PTC	A5	JESD22 A105	Power Temperature Cycle: (Test @ Rm/Hot) Ta=-40°C to 125°C, T=1000cyc	-	-	-	-	N/A
HTSL	A6	JESD22 A103	High Temp Storage Life: (Test@Rm/Hot) Ta=175°C, T=1000hrs	1	45	45	0 of 45	-

### TEST GROUP B – ACCELERATED LIFETIME SIMULATION TESTS

HTOL	B1	JESD22 A108	High Temp Operating Life: (Test @ Rm/Hot/Cold) Ta=150°C, T=1000h	3	77	231	0 of 231	-	
ELFR	B2	AEC-Q100-008	Early Life Failure Rate: (Test@Rm/Hot) Ta=150°C, T=48hrs	3	800	2400	0 of 2400	-	
EDR	B3	AEC-Q100-005	NVM Endurance & Data Retention Test: (Test @ Rm/Hot)	For HTOL	3	77	231	0 of 231	-
				For HTSL	1	45	45	0 of 45	-

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Test	#	Reference	Test Conditions	Lots	S.S.	Total	Results (Fail of Total)	Comments: (N/A =Not Applicable)
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**TEST GROUP C – PACKAGE ASSEMBLY INTEGRITY TESTS**

WBS	C1	AEC-Q100-001 AEC-Q003	Wire Bond Shear Test: (Cpk > 1.67)	30 bonds	5 parts Min.	30 bonds	0 of 30 bonds	Ppk>1.67
WBP	C2	Mil-STD-883 Method 2011 AEC-Q003	Wire Bond Pull: (Cpk > 1.67); Each bonder used	30 bonds	5 parts Min.	30 bonds	0 of 30 bonds	Ppk>1.67
SD	C3	JESD22 B102 JSTD-002D	Solderability: (>95% coverage) 8 hr steam aging prior to testing	1	15	15	0 of 15	-
PD	C4	JESD22 B100 JESD22 B108 AEC-Q003	Physical Dimensions: (Cpk > 1.67)	3	10	30	0 of 30	Cpk>1.67
SBS	C5	AEC-Q100-010 AEC-Q003	Solder Ball Shear: (Cpk > 1.67); 5 balls from min. of 10 devices	-	-	-	-	N/A
LI	C6	JESD22 B105	Lead Integrity: (No lead cracking or breaking); Through-hole only; 10 leads from each of 5 devices	-	-	-	-	N/A

**TEST GROUP D – DIE FABRICATION RELIABILITY TESTS**

EM	D1	JESD61	Electromigration:	-	-	-	Pass	Confirmed by process TEG
TDDDB	D2	JESD35	Time Dependent Dielectric Breakdown:	-	-	-	Pass	Confirmed by process TEG
HCI	D3	JESD60 & 28	Hot Carrier Injection:	-	-	-	Pass	Confirmed by process TEG
NBTI	D4	JESD90	Negative Bias Temperature Instability:	-	-	-	Pass	Confirmed by process TEG
SM	D5	JESD61,87 & 202	Stress Migration:	-	-	-	Pass	Confirmed by process TEG

Test	#	Reference	Test Conditions	Lots	S.S.	Total	Results (Fail of Total)	Comments: (N/A =Not Applicable)
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**TEST GROUP E- ELECTRICAL VERIFICATION**

TEST	E1	User/Supplier Specification	Pre and Post Stress Electrical Test:	All	All	All	0 of All	-
HBM	E2	AEC-Q100-002	Electrostatic Discharge, Human Body Model: (Test @ Rm/Hot); (2KV HBM / Class 2 or better)	1	3	3	0 of 3 ESD Level=H2	HBM>2KV
CDM	E3	AEC-Q100-011	Electrostatic Discharge, Charged Device Model: (Test @ Rm/Hot); (750V corner leads, 500V all other leads)	1	3	3	0 of 3 ESD Level=C4B	Corner leads: 750V Pass All other leads:500V Pass
LU	E4	AEC-Q100-004	Latch-Up: (Test @ Rm/Hot)	1	6	6	0 of 6	-
ED	E5	AEC-Q100-009 AEC-Q003	Electrical Distributions: (Test @ Rm/Hot/Cold) (CPk > 1.33, Ppk >1.67)	3	30	90	0 of 90	Ppk>1.67
FG	E6	AEC-Q100-007	Fault Grading:	-	-	-	98.00%	-
CHAR	E7	AEC-Q003	Characterization: (Test @ Rm/Hot/Cold)	-	-	-	-	According to Renesas standard procedure
EMC	E9	SAE J1752/3	Electromagnetic Compatibility (Radiated Emissions)	1	1	1	0 of 1	
SC	E10	AEC Q100-012	Short Circuit Characterization	-	-	-	-	N/A
SER	E11	JESD89-1 JESD89-2 JESD89-3	Soft Error Rate	-	-	-	-	N/A
LF	E12	AEC-Q005	Lead (Pb) Free: (see AEC-Q005)	-	-	-	Pass	Solderability: See SD (C3) result. Solder heat resistance: N/A (Wave Solder is Not recommended.) Whisker: Performed on product TEG with test method based on JESD201.

Test	#	Reference	Test Conditions	Lots	S.S.	Total	Results (Fail of Total)	Comments: (N/A =Not Applicable)
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**TEST GROUP F – DEFECT SCREENING TESTS**

PAT	F1	AEC-Q001	Process Average Testing: (see AEC-Q001)	All	All	All	Reject units outside PAT limits	Apply to mass production according to Renesas standard procedure
SBA	F2	AEC-Q002	Statistical Bin/Yield Analysis: (see AEC-Q002)	All	All	All	Reject units outside criteria	Apply to mass production according to Renesas standard procedure

**TEST GROUP G – CAVITY PACKAGE INTEGRITY TESTS (for Ceramic Package testing only)**

MS	G1	JESD22 B104	Mechanical Shock: (Test @ Rm)	-	-	-	-	N/A
VFV	G2	JESD22 B103	Variable Frequency Vibration: (Test @ Rm)	-	-	-	-	N/A
CA	G3	MIL-STD-883 Method 2001	Constant Acceleration: (Test @ Rm)	-	-	-	-	N/A
GFL	G4	MIL-STD-883 Method 1014	Gross and Fine Leak:	-	-	-	-	N/A
DROP	G5	-----	Drop Test: (Test @ Rm) MEMS cavity parts only. Drop part on each of 6 axes once from a height of 1.2m onto a concrete surface.	-	-	-	-	N/A
LT	G6	MIL-STD-883 Method 2004	Lid Torque:	-	-	-	-	N/A
DS	G7	MIL-STD-883 Method 2019	Die Shear:	-	-	-	-	N/A
IWV	G8	MIL-STD-883 Method 1018	Internal Water Vapor:	-	-	-	-	N/A

## Calculation method of standard failure rate

Target : 0.13um CMOS process product (RL78 series Automobile)

Operating reliability is decided by inherent reliability of device and environment condition of use (See below).

Calculation method of standard failure rate ( $\lambda$ )

$$\lambda = \lambda_b \times \pi T \quad (\text{FIT})$$

→ (2) Temperature parameter

→ (1) Basic failure rate

(1) Basic failure rate ( $\lambda_b$ )

$\lambda_b : 0.18$  (FIT)

(2) Temperature parameter

$$\pi T = \exp \left\{ 11600 \times E_a \times \left( \frac{1}{273+55} - \frac{1}{273+T_a} \right) \right\}$$

$E_a$  : Activation energy (eV)

$T_a$  : ambient temperature

$\pi T$  Simplified chart ( $E_a=0.7\text{eV}$ )

$T_a(^{\circ}\text{C})$	40	50	55	60	65	70	75	80	85	90	100	110
$\pi T$	0.31	0.68	1	1.45	2.08	2.95	4.15	5.77	7.96	10.88	19.82	34.99

-Confidence level 60% -Standard temperature  $T_a=55^{\circ}\text{C}$

(3) MTTF ( Mean Time To Failure )

$$\text{MTTF} = \frac{1}{\lambda}$$

## Device List

[RL78/F12,13,14 series]

R5F109AACJSP	R5F10AAACLSP	R5F10BACCLSP
R5F109AACKSP	R5F10AACCLSP	R5F10BADCLSP
R5F109ABCJSP	R5F10AADCLSP	R5F10BAECLSP
R5F109ABCKSP	R5F10AAECLSP	R5F10BAFCLSP
R5F109ACCJSP	R5F10AAACKSP	R5F10BAGCLSP
R5F109ACCKSP	R5F10AACCKSP	R5F10BACCKSP
R5F109ADCJSP	R5F10AADCKSP	R5F10BADCKSP
R5F109ADCKSP	R5F10AAECKSP	R5F10BAECKSP
R5F109AECJSP	R5F10AAACYSP	R5F10BAFCKSP
R5F109AECKSP	R5F10AACCYSP	R5F10BAGCKSP
R5F10968CJSP	R5F10AADCYSP	R5F10BACCYSP
R5F10968CKSP	R5F10AAECYSP	R5F10BADCYSP
R5F1096ACJSP	R5F10A6ACLSP	R5F10BAECYSP
R5F1096ACKSP	R5F10A6CCLSP	R5F10BAFCYSP
R5F1096BCJSP	R5F10A6DCLSP	R5F10BAGCYSP
R5F1096BCKSP	R5F10A6ECLSP	R5F10PADCLSP
R5F1096DCJSP	R5F10A6ACKSP	R5F10PAECLSP
R5F1096DCKSP	R5F10A6CCKSP	R5F10PADCKSP
R5F1096ECJSP	R5F10A6ACYSP	R5F10PAECKSP
R5F1096ECKSP	R5F10A6CCYSP	R5F10PADCYSP
R5F1096CCJSP	R5F10A6DCYSP	R5F10PAECYSP
R5F1096CCKSP	R5F10A6ECYSP	
	R5F10A6DCKSP	
	R5F10A6ECKSP	