Report No. MCR-22-0500
July 15,2022

RENESAS SEMICONDUCTOR RELIABILITY REPORT

GROUP : RL78/G14

DEVICE : R5F104XXX

APPLICATION : Consumer / Industry

Quality Assurance Div.
Renesas Electronics Corporation

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(Rev.5.0-2 October 2020)

Table. Reliability test results (QFP)

Test Items	Reference	Test Conditions	Results Failure/Size	Comment
High Temperature Operating Life (HTOL)	JESD22-A108	Ta=125 ℃, Vccmax, 1000 hrs	0/22	
High Temperature Storage Life (HTSL)	JESD22-A103	Ta=150 ℃, 1000 hrs	0/22	
Temperature Humidity bias (THB) (*1)	JESD22-A101	Ta=85 ℃, RH=85 %, Vccmax, 1000 hrs	0/22	
Temperature Cycling (TC) (*1)	JESD22-A104	Ta=-65 ℃ to 150 ℃ , 300 cycles	0/22	
Latch-Up (LU)	JESD78	Pulse Current Injection, I=+/-150 mA	0/3	
Electrostatic discharge (ESD-HBM)	JS-001	1.5 kΩ, 100 pF, +/-2000 V, 1 time	0/3	Class: 2
Electrostatic discharge (ESD-CDM)	JESD22-C101	+/-500V,1time	0/3	Class: C2
Solderability (SD)	J-STD-002	245 ℃, 5 s, Solder coverage ≥95 %	0/5	
Resistance to Soldering Heat (PC)	JESD22-A113, J-STD-020	MSL3(Moisture Sensitivity Level 3)	0/22	

*1) With preconditioning per JESD22-A113, MSL 3
・It is tested to confirm that all the samples are satisfied with an individual product specification.

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

Table. Reliability test results (QFN)

Test Items	Reference	Test Conditions	Results Failure/Size	Comment
High Temperature Operating Life (HTOL)	JESD22-A108	Ta=125 ℃, Vccmax, 1000 hrs	0/22	
High Temperature Storage Life (HTSL)	JESD22-A103	Ta=150 ℃, 1000 hrs	0/22	
Temperature Humidity bias (THB) (*1)	JESD22-A101	Ta=85 ℃, RH=85 %, Vccmax, 1000 hrs	0/22	
Temperature Cycling (TC) (*1)	JESD22-A104	Ta=-65 ℃ to 150 ℃ , 300 cycles	0/22	
Latch-Up (LU)	JESD78	Pulse Current Injection, I=+/-150 mA	0/3	
Electrostatic discharge (ESD-HBM)	JS-001	1.5 kΩ, 100 pF, +/-2000 V, 1 time	0/3	Class: 2
Electrostatic discharge (ESD-CDM)	JESD22-C101	+/-500V,1time	0/3	Class: C2
Solderability (SD)	J-STD-002	245 ℃, 5 s, Solder coverage ≥95 %	0/5	
Resistance to Soldering Heat (PC)	JESD22-A113, J-STD-020	MSL3(Moisture Sensitivity Level 3)	0/22	

*1) With preconditioning per JESD22-A113, MSL 3
・It is tested to confirm that all the samples are satisfied with an individual product specification.

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

Table. Reliability test results (SOP)

Test Items	Reference	Test Conditions	Results Failure/Size	Comment
High Temperature Operating Life (HTOL)	JESD22-A108	Ta=125 ℃, Vccmax, 1000 hrs	0/22	
High Temperature Storage Life (HTSL)	JESD22-A103	Ta=150 ℃, 1000 hrs	0/22	
Temperature Humidity bias (THB) (*1)	JESD22-A101	Ta=85 ℃, RH=85 %, Vccmax, 1000 hrs	0/22	
Temperature Cycling (TC) (*1)	JESD22-A104	Ta=-65 ℃ to 150 ℃ , 300 cycles	0/22	
Latch-Up (LU)	JESD78	Pulse Current Injection, I=+/-150 mA	0/3	
Electrostatic discharge (ESD-HBM)	JS-001	1.5 kΩ, 100 pF, +/-2000 V, 1 time	0/3	Class: 2
Electrostatic discharge (ESD-CDM)	JESD22-C101	+/-500V,1time	0/3	Class: C2
Solderability (SD)	J-STD-002	245 ℃, 5 s, Solder coverage ≥95 %	0/5	
Resistance to Soldering Heat (PC)	JESD22-A113, J-STD-020	MSL3(Moisture Sensitivity Level 3)	0/22	

*1) With preconditioning per JESD22-A113, MSL 3
・It is tested to confirm that all the samples are satisfied with an individual product specification.

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

Table. Reliability test results (BGA)

Test Items	Reference	Test Conditions	Results Failure/Size	Comment
High Temperature Operating Life (HTOL)	JESD22-A108	Ta=125 ℃, Vccmax, 1000 hrs	0/22	
High Temperature Storage Life (HTSL)	JESD22-A103	Ta=150 ℃, 1000 hrs	0/22	
Temperature Humidity bias (THB) (*1)	JESD22-A101	Ta=85 ℃, RH=85 %, Vccmax, 1000 hrs	0/22	
Temperature Cycling (TC) (*1)	JESD22-A104	Ta=-55 ℃ to 125 ℃ , 500 cycles	0/22	
Latch-Up (LU)	JESD78	Pulse Current Injection, I=+/-150 mA	0/3	
Electrostatic discharge (ESD-HBM)	JS-001	1.5 kΩ, 100 pF, +/-2000 V, 1 time	0/3	Class: 2
Electrostatic discharge (ESD-CDM)	JESD22-C101	+/-500V,1time	0/3	Class: C2
Resistance to Soldering Heat (PC)	JESD22-A113, J-STD-020	MSL3(Moisture Sensitivity Level 3)	0/22	

*1) With preconditioning per JESD22-A113, MSL 3
・It is tested to confirm that all the samples are satisfied with an individual product specification.

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

Table. Reliability test results (LGA)

Test Items	Reference	Test Conditions	Results Failure/Size	Comment
High Temperature Operating Life (HTOL)	JESD22-A108	Ta=125 ℃, Vccmax, 1000 hrs	0/22	
High Temperature Storage Life (HTSL)	JESD22-A103	Ta=150 ℃, 1000 hrs	0/22	
Temperature Humidity bias (THB) (*1)	JESD22-A101	Ta=85 ℃, RH=85 %, Vccmax, 1000 hrs	0/22	
Temperature Cycling (TC) (*1)	JESD22-A104	Ta=-55 ℃ to 125 ℃ , 500 cycles	0/22	
Latch-Up (LU)	JESD78	Pulse Current Injection, I=+/-150 mA	0/3	
Electrostatic discharge (ESD-HBM)	JS-001	1.5 kΩ, 100 pF, +/-2000 V, 1 time	0/3	Class: 2
Electrostatic discharge (ESD-CDM)	JESD22-C101	+/-500V,1time	0/3	Class: C2
Resistance to Soldering Heat (PC)	JESD22-A113, J-STD-020	MSL3(Moisture Sensitivity Level 3)	0/22	

*1) With preconditioning per JESD22-A113, MSL 3
・It is tested to confirm that all the samples are satisfied with an individual product specification.

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

The failure rate of the device in an actual use condition can be estimated by the below procedure.

・Equation for the failure rate estimation (λ)

$$\lambda = \lambda b \times \pi T \quad (FIT)$$

①Unique failure rate (λb)

λb= 3.8 FIT

Unique failure rate at Ta=55 ℃ using 60 % confidence level.

②Temperature term (πT)

$$\pi T = exp\{11600 \times Ea \times (1/(273+55) - 1/(273+Ta))\}$$

Ea : Activation energy (eV)
Ta : Ambient temperature (℃)

πT simplified chart as Ea=0.7 eV												
Ta (℃)	40	50	55	60	65	70	75	80	85	90	100	110
πT	0.31	0.68	1	1.45	2.08	2.95	4.15	5.77	7.96	10.88	19.82	34.99

・MTTF (Mean Time To Failure)

$$MTTF = 1/\lambda$$

Reference about Renesas package code

Package type		Package code *1
Lead type plastic package	QFP	PxQP
	SOP	PxSP
Non-lead type plastic package	QFN	PxQN
Grid array type plastic package	BGA	PxBG
	LGA	PxLG

*1. First four digit

Table. Product list

No	Group	Product part number	Package code
1	RL78/G14	R5F104AAASP	PLSP0030J*
2	RL78/G14	R5F104AADSP	PLSP0030J*
3	RL78/G14	R5F104AAGSP	PLSP0030J*
4	RL78/G14	R5F104ACASP	PLSP0030J*
5	RL78/G14	R5F104ACDSP	PLSP0030J*
6	RL78/G14	R5F104ACGSP	PLSP0030J*
7	RL78/G14	R5F104ADASP	PLSP0030J*
8	RL78/G14	R5F104ADDSP	PLSP0030J*
9	RL78/G14	R5F104ADGSP	PLSP0030J*
10	RL78/G14	R5F104AEASP	PLSP0030J*
11	RL78/G14	R5F104AEDSP	PLSP0030J*
12	RL78/G14	R5F104AEGSP	PLSP0030J*
13	RL78/G14	R5F104AFASP	PLSP0030J*
14	RL78/G14	R5F104AFDSP	PLSP0030J*
15	RL78/G14	R5F104AFGSP	PLSP0030J*
16	RL78/G14	R5F104AGASP	PLSP0030J*
17	RL78/G14	R5F104AGDSP	PLSP0030J*
18	RL78/G14	R5F104AGGSP	PLSP0030J*
19	RL78/G14	R5F104BAAFP	PLQP0032G*
20	RL78/G14	R5F104BAANA	PWQN0032K*
21	RL78/G14	R5F104BADFP	PLQP0032G*
22	RL78/G14	R5F104BADNA	PWQN0032K*
23	RL78/G14	R5F104BAGFP	PLQP0032G*
24	RL78/G14	R5F104BAGNA	PWQN0032K*
25	RL78/G14	R5F104BCAFP	PLQP0032G*
26	RL78/G14	R5F104BCANA	PWQN0032K*
27	RL78/G14	R5F104BCDFP	PLQP0032G*
28	RL78/G14	R5F104BCDNA	PWQN0032K*
29	RL78/G14	R5F104BCGFP	PLQP0032G*
30	RL78/G14	R5F104BCGNA	PWQN0032K*
31	RL78/G14	R5F104BDAFP	PLQP0032G*
32	RL78/G14	R5F104BDANA	PWQN0032K*
33	RL78/G14	R5F104BDDFP	PLQP0032G*
34	RL78/G14	R5F104BDDNA	PWQN0032K*
35	RL78/G14	R5F104BDGFP	PLQP0032G*
36	RL78/G14	R5F104BDGNA	PWQN0032K*
37	RL78/G14	R5F104BEAFP	PLQP0032G*
38	RL78/G14	R5F104BEANA	PWQN0032K*
39	RL78/G14	R5F104BEDFP	PLQP0032G*
40	RL78/G14	R5F104BEDNA	PWQN0032K*
41	RL78/G14	R5F104BEGFP	PLQP0032G*
42	RL78/G14	R5F104BEGNA	PWQN0032K*
43	RL78/G14	R5F104BFAFP	PLQP0032G*
44	RL78/G14	R5F104BFANA	PWQN0032K*
45	RL78/G14	R5F104BFDFP	PLQP0032G*
46	RL78/G14	R5F104BFDNA	PWQN0032K*
47	RL78/G14	R5F104BFGFP	PLQP0032G*
48	RL78/G14	R5F104BFGNA	PWQN0032K*
49	RL78/G14	R5F104BGAFP	PLQP0032G*
50	RL78/G14	R5F104BGANA	PWQN0032K*
51	RL78/G14	R5F104BGDFP	PLQP0032G*
52	RL78/G14	R5F104BGDNA	PWQN0032K*
53	RL78/G14	R5F104BGGFP	PLQP0032G*
54	RL78/G14	R5F104BGGNA	PWQN0032K*
55	RL78/G14	R5F104CAALA	PWLG0036K*
56	RL78/G14	R5F104CADLA	PWLG0036K*
57	RL78/G14	R5F104CAGLA	PWLG0036K*
58	RL78/G14	R5F104CCALA	PWLG0036K*
59	RL78/G14	R5F104CCDLA	PWLG0036K*
60	RL78/G14	R5F104CCGLA	PWLG0036K*
61	RL78/G14	R5F104CDALA	PWLG0036K*
62	RL78/G14	R5F104CDDLA	PWLG0036K*
63	RL78/G14	R5F104CDGLA	PWLG0036K*
64	RL78/G14	R5F104CEALA	PWLG0036K*
65	RL78/G14	R5F104CEDLA	PWLG0036K*
66	RL78/G14	R5F104CEGLA	PWLG0036K*
67	RL78/G14	R5F104CFALA	PWLG0036K*
68	RL78/G14	R5F104CFGLA	PWLG0036K*
69	RL78/G14	R5F104CGALA	PWLG0036K*
70	RL78/G14	R5F104CGDLA	PWLG0036K*
71	RL78/G14	R5F104CGGLA	PWLG0036K*
72	RL78/G14	R5F104EAANA	PWQN0040K*
73	RL78/G14	R5F104EADNA	PWQN0040K*
74	RL78/G14	R5F104EAGNA	PWQN0040K*
75	RL78/G14	R5F104ECANA	PWQN0040K*
76	RL78/G14	R5F104ECDNA	PWQN0040K*
77	RL78/G14	R5F104ECGNA	PWQN0040K*
78	RL78/G14	R5F104EDANA	PWQN0040K*
79	RL78/G14	R5F104EDDNA	PWQN0040K*
80	RL78/G14	R5F104EDGNA	PWQN0040K*
81	RL78/G14	R5F104EEANA	PWQN0040K*
82	RL78/G14	R5F104EEDNA	PWQN0040K*
83	RL78/G14	R5F104EEGNA	PWQN0040K*
84	RL78/G14	R5F104EFANA	PWQN0040K*
85	RL78/G14	R5F104EFDNA	PWQN0040K*
86	RL78/G14	R5F104EFGNA	PWQN0040K*
87	RL78/G14	R5F104EGANA	PWQN0040K*
88	RL78/G14	R5F104EGDNA	PWQN0040K*
89	RL78/G14	R5F104EGGNA	PWQN0040K*
90	RL78/G14	R5F104EHANA	PWQN0040K*
91	RL78/G14	R5F104EHDNA	PWQN0040K*
92	RL78/G14	R5F104EHGNA	PWQN0040K*
93	RL78/G14	R5F104FAAFP	PLQP0044G*
94	RL78/G14	R5F104FADFP	PLQP0044G*
95	RL78/G14	R5F104FAGFP	PLQP0044G*
96	RL78/G14	R5F104FCAFP	PLQP0044G*
97	RL78/G14	R5F104FCDFP	PLQP0044G*
98	RL78/G14	R5F104FCGFP	PLQP0044G*
99	RL78/G14	R5F104FDAFP	PLQP0044G*
100	RL78/G14	R5F104FDDFP	PLQP0044G*

Table. Product list

No	Group	Product part number	Package code
101	RL78/G14	R5F104FDGFP	PLQP0044G*
102	RL78/G14	R5F104FEAFP	PLQP0044G*
103	RL78/G14	R5F104FEDFP	PLQP0044G*
104	RL78/G14	R5F104FEGFP	PLQP0044G*
105	RL78/G14	R5F104FFAFP	PLQP0044G*
106	RL78/G14	R5F104FFDFP	PLQP0044G*
107	RL78/G14	R5F104FFGFP	PLQP0044G*
108	RL78/G14	R5F104FGAFP	PLQP0044G*
109	RL78/G14	R5F104FGDFP	PLQP0044G*
110	RL78/G14	R5F104FGGFP	PLQP0044G*
111	RL78/G14	R5F104FHAFP	PLQP0044G*
112	RL78/G14	R5F104FHDFP	PLQP0044G*
113	RL78/G14	R5F104FHGFP	PLQP0044G*
114	RL78/G14	R5F104FJAFP	PLQP0044G*
115	RL78/G14	R5F104FJDFP	PLQP0044G*
116	RL78/G14	R5F104FJGFP	PLQP0044G*
117	RL78/G14	R5F104JCAFA	PLQP0052J*
118	RL78/G14	R5F104JCDFA	PLQP0052J*
119	RL78/G14	R5F104JCGFA	PLQP0052J*
120	RL78/G14	R5F104JDAFA	PLQP0052J*
121	RL78/G14	R5F104JDDFA	PLQP0052J*
122	RL78/G14	R5F104JDGFA	PLQP0052J*
123	RL78/G14	R5F104JEAFA	PLQP0052J*
124	RL78/G14	R5F104JEDFA	PLQP0052J*
125	RL78/G14	R5F104JEGFA	PLQP0052J*
126	RL78/G14	R5F104JFAFA	PLQP0052J*
127	RL78/G14	R5F104JFDFA	PLQP0052J*
128	RL78/G14	R5F104JFGFA	PLQP0052J*
129	RL78/G14	R5F104JGAFA	PLQP0052J*
130	RL78/G14	R5F104JGDFA	PLQP0052J*
131	RL78/G14	R5F104JGGFA	PLQP0052J*
132	RL78/G14	R5F104JHAFA	PLQP0052J*
133	RL78/G14	R5F104JHDFA	PLQP0052J*
134	RL78/G14	R5F104JHGFA	PLQP0052J*
135	RL78/G14	R5F104JJAFA	PLQP0052J*
136	RL78/G14	R5F104JJDFA	PLQP0052J*
137	RL78/G14	R5F104JJGFA	PLQP0052J*
138	RL78/G14	R5F104LCAFA	PLQP0064J*
139	RL78/G14	R5F104LCAFB	PLQP0064K*
140	RL78/G14	R5F104LCAFP	PLQP0064G*
141	RL78/G14	R5F104LCALA	PWLG0064K*
142	RL78/G14	R5F104LCDFA	PLQP0064J*
143	RL78/G14	R5F104LCDFB	PLQP0064K*
144	RL78/G14	R5F104LCDFP	PLQP0064G*
145	RL78/G14	R5F104LCDLA	PWLG0064K*
146	RL78/G14	R5F104LCGFA	PLQP0064J*
147	RL78/G14	R5F104LCGFB	PLQP0064K*
148	RL78/G14	R5F104LCGFP	PLQP0064G*
149	RL78/G14	R5F104LCGLA	PWLG0064K*
150	RL78/G14	R5F104LDAFA	PLQP0064J*
151	RL78/G14	R5F104LDAFB	PLQP0064K*
152	RL78/G14	R5F104LDAFP	PLQP0064G*
153	RL78/G14	R5F104LDALA	PWLG0064K*
154	RL78/G14	R5F104LDDFA	PLQP0064J*
155	RL78/G14	R5F104LDDFB	PLQP0064K*
156	RL78/G14	R5F104LDDFP	PLQP0064G*
157	RL78/G14	R5F104LDDLA	PWLG0064K*
158	RL78/G14	R5F104LDGFA	PLQP0064J*
159	RL78/G14	R5F104LDGFB	PLQP0064K*
160	RL78/G14	R5F104LDGFP	PLQP0064G*

No	Group	Product part number	Package code
161	RL78/G14	R5F104LDGLA	PWLG0064K*
162	RL78/G14	R5F104LEAFA	PLQP0064J*
163	RL78/G14	R5F104LEAFB	PLQP0064K*
164	RL78/G14	R5F104LEAFP	PLQP0064G*
165	RL78/G14	R5F104LEALA	PWLG0064K*
166	RL78/G14	R5F104LEDFA	PLQP0064J*
167	RL78/G14	R5F104LEDFB	PLQP0064K*
168	RL78/G14	R5F104LEDFP	PLQP0064G*
169	RL78/G14	R5F104LEDLA	PWLG0064K*
170	RL78/G14	R5F104LEGFA	PLQP0064J*
171	RL78/G14	R5F104LEGFB	PLQP0064K*
172	RL78/G14	R5F104LEGFP	PLQP0064G*
173	RL78/G14	R5F104LEGLA	PWLG0064K*
174	RL78/G14	R5F104LFABG	PVBG0064L*
175	RL78/G14	R5F104LFAFA	PLQP0064J*
176	RL78/G14	R5F104LFAFB	PLQP0064K*
177	RL78/G14	R5F104LFAFP	PLQP0064G*
178	RL78/G14	R5F104LFALA	PWLG0064K*
179	RL78/G14	R5F104LFANA	PWQN0064K*
180	RL78/G14	R5F104LFDFA	PLQP0064J*
181	RL78/G14	R5F104LFDFB	PLQP0064K*
182	RL78/G14	R5F104LFDFP	PLQP0064G*
183	RL78/G14	R5F104LFDNA	PWQN0064K*
184	RL78/G14	R5F104LFGBG	PVBG0064L*
185	RL78/G14	R5F104LFGFA	PLQP0064J*
186	RL78/G14	R5F104LFGFB	PLQP0064K*
187	RL78/G14	R5F104LFGFP	PLQP0064G*
188	RL78/G14	R5F104LFGLA	PWLG0064K*
189	RL78/G14	R5F104LFGNA	PWQN0064K*
190	RL78/G14	R5F104LGABG	PVBG0064L*
191	RL78/G14	R5F104LGAFA	PLQP0064J*
192	RL78/G14	R5F104LGAFB	PLQP0064K*
193	RL78/G14	R5F104LGAFP	PLQP0064G*
194	RL78/G14	R5F104LGALA	PWLG0064K*
195	RL78/G14	R5F104LGANA	PWQN0064K*
196	RL78/G14	R5F104LGDFA	PLQP0064J*
197	RL78/G14	R5F104LGDFB	PLQP0064K*
198	RL78/G14	R5F104LGDFP	PLQP0064G*
199	RL78/G14	R5F104LGDNA	PWQN0064K*
200	RL78/G14	R5F104LGGBG	PVBG0064L*
201	RL78/G14	R5F104LGGFA	PLQP0064J*
202	RL78/G14	R5F104LGGFB	PLQP0064K*
203	RL78/G14	R5F104LGGFP	PLQP0064G*
204	RL78/G14	R5F104LGGLA	PWLG0064K*
205	RL78/G14	R5F104LGGNA	PWQN0064K*
206	RL78/G14	R5F104LHABG	PVBG0064L*
207	RL78/G14	R5F104LHAFA	PLQP0064J*
208	RL78/G14	R5F104LHAFB	PLQP0064K*
209	RL78/G14	R5F104LHAFP	PLQP0064G*
210	RL78/G14	R5F104LHALA	PWLG0064K*
211	RL78/G14	R5F104LHANA	PWQN0064K*
212	RL78/G14	R5F104LHDFA	PLQP0064J*
213	RL78/G14	R5F104LHDFB	PLQP0064K*
214	RL78/G14	R5F104LHDFP	PLQP0064G*
215	RL78/G14	R5F104LHDNA	PWQN0064K*
216	RL78/G14	R5F104LHGBG	PVBG0064L*
217	RL78/G14	R5F104LHGFA	PLQP0064J*
218	RL78/G14	R5F104LHGFB	PLQP0064K*
219	RL78/G14	R5F104LHGFP	PLQP0064G*
220	RL78/G14	R5F104LHGLA	PWLG0064K*

Table. Product list

No	Group	Product part number	Package code
221	RL78/G14	R5F104LHGNA	PWQN0064K*
222	RL78/G14	R5F104LJABG	PVBG0064L*
223	RL78/G14	R5F104LJAFA	PLQP0064J*
224	RL78/G14	R5F104LJAFB	PLQP0064K*
225	RL78/G14	R5F104LJAFP	PLQP0064G*
226	RL78/G14	R5F104LJALA	PWLG0064K*
227	RL78/G14	R5F104LJANA	PWQN0064K*
228	RL78/G14	R5F104LJDFA	PLQP0064J*
229	RL78/G14	R5F104LJDFB	PLQP0064K*
230	RL78/G14	R5F104LJDFP	PLQP0064G*
231	RL78/G14	R5F104LJDNA	PWQN0064K*
232	RL78/G14	R5F104LJGBG	PVBG0064L*
233	RL78/G14	R5F104LJGFA	PLQP0064J*
234	RL78/G14	R5F104LJGFB	PLQP0064K*
235	RL78/G14	R5F104LJGFP	PLQP0064G*
236	RL78/G14	R5F104LJGLA	PWLG0064K*
237	RL78/G14	R5F104LJGNA	PWQN0064K*
238	RL78/G14	R5F104LKAFA	PLQP0064J*
239	RL78/G14	R5F104LKAFB	PLQP0064K*
240	RL78/G14	R5F104LKALA	PWLG0064K*
241	RL78/G14	R5F104LKGFA	PLQP0064J*
242	RL78/G14	R5F104LKGFB	PLQP0064K*
243	RL78/G14	R5F104LKGLA	PWLG0064K*
244	RL78/G14	R5F104LLAFA	PLQP0064J*
245	RL78/G14	R5F104LLAFB	PLQP0064K*
246	RL78/G14	R5F104LLALA	PWLG0064K*
247	RL78/G14	R5F104LLGFA	PLQP0064J*
248	RL78/G14	R5F104LLGFB	PLQP0064K*
249	RL78/G14	R5F104LLGLA	PWLG0064K*
250	RL78/G14	R5F104MFAFA	PLQP0080J*
251	RL78/G14	R5F104MFAFB	PLQP0080K*
252	RL78/G14	R5F104MFDFA	PLQP0080J*
253	RL78/G14	R5F104MFDFB	PLQP0080K*
254	RL78/G14	R5F104MFGFA	PLQP0080J*
255	RL78/G14	R5F104MFGFB	PLQP0080K*
256	RL78/G14	R5F104MGAFA	PLQP0080J*
257	RL78/G14	R5F104MGAFB	PLQP0080K*
258	RL78/G14	R5F104MGDFA	PLQP0080J*
259	RL78/G14	R5F104MGDFB	PLQP0080K*
260	RL78/G14	R5F104MGGFA	PLQP0080J*
261	RL78/G14	R5F104MGGFB	PLQP0080K*
262	RL78/G14	R5F104MHAFA	PLQP0080J*
263	RL78/G14	R5F104MHAFB	PLQP0080K*
264	RL78/G14	R5F104MHDFA	PLQP0080J*
265	RL78/G14	R5F104MHDFB	PLQP0080K*
266	RL78/G14	R5F104MHGFA	PLQP0080J*
267	RL78/G14	R5F104MHGFB	PLQP0080K*
268	RL78/G14	R5F104MJAFA	PLQP0080J*
269	RL78/G14	R5F104MJAFB	PLQP0080K*
270	RL78/G14	R5F104MJDFA	PLQP0080J*
271	RL78/G14	R5F104MJDFB	PLQP0080K*
272	RL78/G14	R5F104MJGFA	PLQP0080J*
273	RL78/G14	R5F104MJGFB	PLQP0080K*
274	RL78/G14	R5F104MKAFA	PLQP0080J*
275	RL78/G14	R5F104MKAFB	PLQP0080K*
276	RL78/G14	R5F104MKGFA	PLQP0080J*
277	RL78/G14	R5F104MKGFB	PLQP0080K*
278	RL78/G14	R5F104MLAFA	PLQP0080J*
279	RL78/G14	R5F104MLAFB	PLQP0080K*
280	RL78/G14	R5F104MLGFA	PLQP0080J*
281	RL78/G14	R5F104MLGFB	PLQP0080K*
282	RL78/G14	R5F104PFAFA	PLQP0100J*
283	RL78/G14	R5F104PFAFB	PLQP0100K*
284	RL78/G14	R5F104PFDFA	PLQP0100J*
285	RL78/G14	R5F104PFDFB	PLQP0100K*
286	RL78/G14	R5F104PFGFA	PLQP0100J*
287	RL78/G14	R5F104PFGFB	PLQP0100K*
288	RL78/G14	R5F104PGAFA	PLQP0100J*
289	RL78/G14	R5F104PGAFB	PLQP0100K*
290	RL78/G14	R5F104PGDFA	PLQP0100J*
291	RL78/G14	R5F104PGDFB	PLQP0100K*
292	RL78/G14	R5F104PGGFA	PLQP0100J*
293	RL78/G14	R5F104PGGFB	PLQP0100K*
294	RL78/G14	R5F104PHAFA	PLQP0100J*
295	RL78/G14	R5F104PHAFB	PLQP0100K*
296	RL78/G14	R5F104PHDFA	PLQP0100J*
297	RL78/G14	R5F104PHDFB	PLQP0100K*
298	RL78/G14	R5F104PHGFA	PLQP0100J*
299	RL78/G14	R5F104PHGFB	PLQP0100K*
300	RL78/G14	R5F104PJAFA	PLQP0100J*
301	RL78/G14	R5F104PJAFB	PLQP0100K*
302	RL78/G14	R5F104PJDFA	PLQP0100J*
303	RL78/G14	R5F104PJDFB	PLQP0100K*
304	RL78/G14	R5F104PJGFA	PLQP0100J*
305	RL78/G14	R5F104PJGFB	PLQP0100K*
306	RL78/G14	R5F104PKAFA	PLQP0100J*
307	RL78/G14	R5F104PKAFB	PLQP0100K*
308	RL78/G14	R5F104PKGFA	PLQP0100J*
309	RL78/G14	R5F104PKGFB	PLQP0100K*
310	RL78/G14	R5F104PLAFA	PLQP0100J*
311	RL78/G14	R5F104PLAFB	PLQP0100K*
312	RL78/G14	R5F104PLGFA	PLQP0100J*
313	RL78/G14	R5F104PLGFB	PLQP0100K*
314	RL78/G14	R5F104GAAFB	PLQP0048K*
315	RL78/G14	R5F104GAANA	PWQN0048K*
316	RL78/G14	R5F104GADFB	PLQP0048K*
317	RL78/G14	R5F104GADNA	PWQN0048K*
318	RL78/G14	R5F104GAGFB	PLQP0048K*
319	RL78/G14	R5F104GAGNA	PWQN0048K*
320	RL78/G14	R5F104GCAFB	PLQP0048K*
321	RL78/G14	R5F104GCANA	PWQN0048K*
322	RL78/G14	R5F104GCDFB	PLQP0048K*
323	RL78/G14	R5F104GCDNA	PWQN0048K*
324	RL78/G14	R5F104GCGFB	PLQP0048K*
325	RL78/G14	R5F104GCGNA	PWQN0048K*
326	RL78/G14	R5F104GDAFB	PLQP0048K*
327	RL78/G14	R5F104GDANA	PWQN0048K*
328	RL78/G14	R5F104GDDFB	PLQP0048K*
329	RL78/G14	R5F104GDDNA	PWQN0048K*
330	RL78/G14	R5F104GDGFB	PLQP0048K*
331	RL78/G14	R5F104GDGNA	PWQN0048K*
332	RL78/G14	R5F104GEAFB	PLQP0048K*
333	RL78/G14	R5F104GEANA	PWQN0048K*
334	RL78/G14	R5F104GEDFB	PLQP0048K*
335	RL78/G14	R5F104GEDNA	PWQN0048K*
336	RL78/G14	R5F104GEGFB	PLQP0048K*
337	RL78/G14	R5F104GEGNA	PWQN0048K*
338	RL78/G14	R5F104GFAFB	PLQP0048K*
339	RL78/G14	R5F104GFANA	PWQN0048K*
340	RL78/G14	R5F104GFDFB	PLQP0048K*

Table. Product list

No	Group	Product part number	Package code
341	RL78/G14	R5F104GFDNA	PWQN0048K*
342	RL78/G14	R5F104GFGFB	PLQP0048K*
343	RL78/G14	R5F104GFGNA	PWQN0048K*
344	RL78/G14	R5F104GGAFB	PLQP0048K*
345	RL78/G14	R5F104GGANA	PWQN0048K*
346	RL78/G14	R5F104GGDFB	PLQP0048K*
347	RL78/G14	R5F104GGDNA	PWQN0048K*
348	RL78/G14	R5F104GGGFB	PLQP0048K*
349	RL78/G14	R5F104GGGNA	PWQN0048K*
350	RL78/G14	R5F104GHAFB	PLQP0048K*
351	RL78/G14	R5F104GHANA	PWQN0048K*
352	RL78/G14	R5F104GHDFB	PLQP0048K*
353	RL78/G14	R5F104GHDNA	PWQN0048K*
354	RL78/G14	R5F104GHGFB	PLQP0048K*
355	RL78/G14	R5F104GHGNA	PWQN0048K*
356	RL78/G14	R5F104GJAFB	PLQP0048K*
357	RL78/G14	R5F104GJANA	PWQN0048K*
358	RL78/G14	R5F104GJDFB	PLQP0048K*
359	RL78/G14	R5F104GJDNA	PWQN0048K*
360	RL78/G14	R5F104GJGFB	PLQP0048K*
361	RL78/G14	R5F104GJGNA	PWQN0048K*
362	RL78/G14	R5F104GKAFB	PLQP0048K*
363	RL78/G14	R5F104GKANA	PWQN0048K*
364	RL78/G14	R5F104GKGFB	PLQP0048K*
365	RL78/G14	R5F104GKGNA	PWQN0048K*
366	RL78/G14	R5F104GLAFB	PLQP0048K*
367	RL78/G14	R5F104GLANA	PWQN0048K*
368	RL78/G14	R5F104GLGFB	PLQP0048K*
369	RL78/G14	R5F104GLGNA	PWQN0048K*
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No	Group	Product part number	Package code
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