Report No. MCR-22-0662
Oct. 03,2022

RENESAS SEMICONDUCTOR RELIABILITY REPORT

GROUP : 78K0RKx3-L

DEVICE : Refer to Product List

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 (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 .

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= 8.19 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	78K0RKx3-L	UPD78F1001GA(R)-HAA-AX	PTQP0048*
2	78K0RKx3-L	UPD78F1001GA(R)-XXX-HAA-AX	PTQP0048*
3	78K0RKx3-L	UPD78F1001GA(S)-HAA-AX	PTQP0048*
4	78K0RKx3-L	UPD78F1001GA(S)-XXX-HAA-AX	PTQP0048*
5	78K0RKx3-L	UPD78F1001GA-HAA-AX	PTQP0048*
6	78K0RKx3-L	UPD78F1001GA-XXX-HAA-AX	PTQP0048*
7	78K0RKx3-L	UPD78F1002GA(R)-HAA-AX	PTQP0048*
8	78K0RKx3-L	UPD78F1002GA(R)-XXX-HAA-AX	PTQP0048*
9	78K0RKx3-L	UPD78F1002GA(S)-XXX-HAA-AX	PTQP0048*
10	78K0RKx3-L	UPD78F1002GA-HAA-AX	PTQP0048*
11	78K0RKx3-L	UPD78F1002GA-XXX-HAA-AX	PTQP0048*
12	78K0RKx3-L	UPD78F1003GA(R)-HAA-AX	PTQP0048*
13	78K0RKx3-L	UPD78F1003GA(R)-XXX-HAA-AX	PTQP0048*
14	78K0RKx3-L	UPD78F1003GA(S)-HAA-AX	PTQP0048*
15	78K0RKx3-L	UPD78F1003GA(S)-XXX-HAA-AX	PTQP0048*
16	78K0RKx3-L	UPD78F1003GA-HAA-AX	PTQP0048*
17	78K0RKx3-L	UPD78F1003GA-XXX-HAA-AX	PTQP0048*
18	78K0RKx3-L	UPD78F1003GA-XXX-HAA-E2-AX	PTQP0048*
19	78K0RKx3-L	UPD78F1000GB(R)-GAF-AX	PLQP0044*
20	78K0RKx3-L	UPD78F1000GB(R)-XXX-GAF-AX	PLQP0044*
21	78K0RKx3-L	UPD78F1000GB-GAF-AX	PLQP0044*
22	78K0RKx3-L	UPD78F1001GB(R)-XXX-GAF-AX	PLQP0044*
23	78K0RKx3-L	UPD78F1001GB(S)-XXX-GAF-AX	PLQP0044*
24	78K0RKx3-L	UPD78F1001GB-GAF-AX	PLQP0044*
25	78K0RKx3-L	UPD78F1001GB-XXX-GAF-AX	PLQP0044*
26	78K0RKx3-L	UPD78F1002GB(R)-XXX-GAF-AX	PLQP0044*
27	78K0RKx3-L	UPD78F1002GB(S)-XXX-GAF-AX	PLQP0044*
28	78K0RKx3-L	UPD78F1002GB-GAF-AX	PLQP0044*
29	78K0RKx3-L	UPD78F1002GB-XXX-GAF-AX	PLQP0044*
30	78K0RKx3-L	UPD78F1003GB(R)-GAF-AX	PLQP0044*
31	78K0RKx3-L	UPD78F1003GB(R)-GAF-E1-AX	PLQP0044*
32	78K0RKx3-L	UPD78F1003GB(R)-XXX-GAF-AX	PLQP0044*
33	78K0RKx3-L	UPD78F1003GB(S)-XXX-GAF-AX	PLQP0044*
34	78K0RKx3-L	UPD78F1003GB-GAF-AX	PLQP0044*
35	78K0RKx3-L	UPD78F1003GB-XXX-GAF-AX	PLQP0044*
36	78K0RKx3-L	UPD78F1004GB(R)-XXX-GAG-AX	PLQP0052*
37	78K0RKx3-L	UPD78F1004GB(S)-XXX-GAG-AX	PLQP0052*
38	78K0RKx3-L	UPD78F1004GB-GAG-AX	PLQP0052*
39	78K0RKx3-L	UPD78F1004GB-XXX-GAG-AX	PLQP0052*
40	78K0RKx3-L	UPD78F1005GB(R)-XXX-GAG-AX	PLQP0052*
41	78K0RKx3-L	UPD78F1005GB(S)-XXX-GAG-AX	PLQP0052*
42	78K0RKx3-L	UPD78F1005GB-GAG-AX	PLQP0052*
43	78K0RKx3-L	UPD78F1005GB-XXX-GAG-AX	PLQP0052*
44	78K0RKx3-L	UPD78F1006GB(R)-XXX-GAG-AX	PLQP0052*
45	78K0RKx3-L	UPD78F1006GB(S)-GAG-AX	PLQP0052*
46	78K0RKx3-L	UPD78F1006GB(S)-XXX-GAG-AX	PLQP0052*
47	78K0RKx3-L	UPD78F1006GB-GAG-AX	PLQP0052*
48	78K0RKx3-L	UPD78F1006GB-XXX-GAG-AX	PLQP0052*
49	78K0RKx3-L	UPD78F1007GA(R)-XXX-HAB-AX	PTQP0064*
50	78K0RKx3-L	UPD78F1007GA(S)-XXX-HAB-AX	PTQP0064*
51	78K0RKx3-L	UPD78F1007GA-HAB-AX	PTQP0064*
52	78K0RKx3-L	UPD78F1007GA-XXX-HAB-AX	PTQP0064*
53	78K0RKx3-L	UPD78F1008GA(R)-XXX-HAB-AX	PTQP0064*
54	78K0RKx3-L	UPD78F1008GA(S)-XXX-HAB-AX	PTQP0064*
55	78K0RKx3-L	UPD78F1008GA-HAB-AX	PTQP0064*
56	78K0RKx3-L	UPD78F1008GA-XXX-HAB-AX	PTQP0064*
57	78K0RKx3-L	UPD78F1009GA(R)-XXX-HAB-AX	PTQP0064*
58	78K0RKx3-L	UPD78F1009GA(S)-HAB-AX	PTQP0064*
59	78K0RKx3-L	UPD78F1009GA(S)-XXX-HAB-AX	PTQP0064*
60	78K0RKx3-L	UPD78F1009GA(S)-XXX-HAB-E1-AX	PTQP0064*
61	78K0RKx3-L	UPD78F1009GA(S)-XXX-HAB-E2-AX	PTQP0064*
62	78K0RKx3-L	UPD78F1009GA(S)-XXX-HAB-E3-AX	PTQP0064*
63	78K0RKx3-L	UPD78F1009GA(S)-XXX-HAB-E4-AX	PTQP0064*
64	78K0RKx3-L	UPD78F1009GA-HAB-AX	PTQP0064*
65	78K0RKx3-L	UPD78F1009GA-XXX-HAB-AX	PTQP0064*
66	78K0RKx3-L	UPD78F1007F1(R)-XXX-AN1-A	PVBG0064*
67	78K0RKx3-L	UPD78F1007F1(S)-XXX-AN1-A	PVBG0064*
68	78K0RKx3-L	UPD78F1007F1-AN1-A	PVBG0064*
69	78K0RKx3-L	UPD78F1007F1-XXX-AN1-A	PVBG0064*
70	78K0RKx3-L	UPD78F1008F1(R)-XXX-AN1-A	PVBG0064*
71	78K0RKx3-L	UPD78F1008F1(S)-XXX-AN1-A	PVBG0064*
72	78K0RKx3-L	UPD78F1008F1-AN1-A	PVBG0064*
73	78K0RKx3-L	UPD78F1008F1-XXX-AN1-A	PVBG0064*
74	78K0RKx3-L	UPD78F1009F1(R)-XXX-AN1-A	PVBG0064*
75	78K0RKx3-L	UPD78F1009F1(S)-AN1-A	PVBG0064*
76	78K0RKx3-L	UPD78F1009F1(S)-XXX-AN1-A	PVBG0064*
77	78K0RKx3-L	UPD78F1009F1-AN1-A	PVBG0064*
78	78K0RKx3-L	UPD78F1009F1-XXX-AN1-A	PVBG0064*
79	78K0RKx3-L	UPD78F1007F1(R)-XXX-AA2-A	PVBG0064*
80	78K0RKx3-L	UPD78F1007F1(S)-AA2-A	PVBG0064*
81	78K0RKx3-L	UPD78F1007F1(S)-XXX-AA2-A	PVBG0064*
82	78K0RKx3-L	UPD78F1007F1-XXX-AA2-A	PVBG0064*
83	78K0RKx3-L	UPD78F1008F1(R)-XXX-AA2-A	PVBG0064*
84	78K0RKx3-L	UPD78F1008F1(S)-XXX-AA2-A	PVBG0064*
85	78K0RKx3-L	UPD78F1008F1-AA2-A	PVBG0064*
86	78K0RKx3-L	UPD78F1008F1-XXX-AA2-A	PVBG0064*
87	78K0RKx3-L	UPD78F1009F1(R)-XXX-AA2-A	PVBG0064*
88	78K0RKx3-L	UPD78F1009F1(S)-AA2-A	PVBG0064*
89	78K0RKx3-L	UPD78F1009F1(S)-XXX-AA2-A	PVBG0064*
90	78K0RKx3-L	UPD78F1009F1-AA2-A	PVBG0064*
91	78K0RKx3-L	UPD78F1009F1-XXX-AA2-A	PLQP0064*
92	78K0RKx3-L	UPD78F1007GK(R)-XXX-GAJ-AX	PLQP0064*
93	78K0RKx3-L	UPD78F1007GK(S)-XXX-GAJ-AX	PLQP0064*
94	78K0RKx3-L	UPD78F1007GK-GAJ-AX	PLQP0064*
95	78K0RKx3-L	UPD78F1007GK-XXX-GAJ-AX	PLQP0064*
96	78K0RKx3-L	UPD78F1008GK(R)-XXX-GAJ-AX	PLQP0064*
97	78K0RKx3-L	UPD78F1008GK(S)-XXX-GAJ-AX	PLQP0064*
98	78K0RKx3-L	UPD78F1008GK-GAJ-AX	PLQP0064*
99	78K0RKx3-L	UPD78F1008GK-XXX-GAJ-AX	PLQP0064*
100	78K0RKx3-L	UPD78F1009GK(R)-XXX-GAJ-AX	PLQP0064*

Table. Product list

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No	Group	Product part number	Package code
101	78K0RKx3-L	UPD78F1009GK(S)-XXX-GAJ-AX	PLQP0064*
102	78K0RKx3-L	UPD78F1009GK-GAJ-AX	PLQP0064*
103	78K0RKx3-L	UPD78F1009GK-XXX-GAJ-AX	PLQP0064*
104	78K0RKx3-L	UPD78F1007GB(R)-XXX-GAH-AX	PLQP0064*
105	78K0RKx3-L	UPD78F1007GB(S)-XXX-GAH-AX	PLQP0064*
106	78K0RKx3-L	UPD78F1007GB-GAH-AX	PLQP0064*
107	78K0RKx3-L	UPD78F1007GB-XXX-GAH-AX	PLQP0064*
108	78K0RKx3-L	UPD78F1008GB(R)-GAH-AX	PLQP0064*
109	78K0RKx3-L	UPD78F1008GB(R)-XXX-GAH-AX	PLQP0064*
110	78K0RKx3-L	UPD78F1008GB(S)-XXX-GAH-AX	PLQP0064*
111	78K0RKx3-L	UPD78F1008GB-XXX-GAH-AX	PLQP0064*
112	78K0RKx3-L	UPD78F1009GB(R)-GAH-AX	PLQP0064*
113	78K0RKx3-L	UPD78F1009GB(R)-XXX-GAH-AX	PLQP0064*
114	78K0RKx3-L	UPD78F1009GB(S)-XXX-GAH-AX	PLQP0064*
115	78K0RKx3-L	UPD78F1009GB-GAH-AX	PLQP0064*
116	78K0RKx3-L	UPD78F1009GB-XXX-GAH-AX	PLQP0064*
117	78K0RKx3-L	UPD78F1010GC(R)-GAD-AX	PLQP0080*
118	78K0RKx3-L	UPD78F1010GC(R)-XXX-GAD-AX	PLQP0080*
119	78K0RKx3-L	UPD78F1010GC(S)-GAD-AX	PLQP0080*
120	78K0RKx3-L	UPD78F1010GC(S)-XXX-GAD-AX	PLQP0080*
121	78K0RKx3-L	UPD78F1010GC-GAD-AX	PLQP0080*
122	78K0RKx3-L	UPD78F1010GC-XXX-GAD-AX	PLQP0080*
123	78K0RKx3-L	UPD78F1011GC(R)-GAD-AX	PLQP0080*
124	78K0RKx3-L	UPD78F1011GC(R)-XXX-GAD-AX	PLQP0080*
125	78K0RKx3-L	UPD78F1011GC(S)-GAD-AX	PLQP0080*
126	78K0RKx3-L	UPD78F1011GC(S)-XXX-GAD-AX	PLQP0080*
127	78K0RKx3-L	UPD78F1011GC-GAD-AX	PLQP0080*
128	78K0RKx3-L	UPD78F1011GC-XXX-GAD-AX	PLQP0080*
129	78K0RKx3-L	UPD78F1012GC(R)-GAD-AX	PLQP0080*
130	78K0RKx3-L	UPD78F1012GC(R)-XXX-GAD-AX	PLQP0080*
131	78K0RKx3-L	UPD78F1012GC(S)-GAD-AX	PLQP0080*
132	78K0RKx3-L	UPD78F1012GC(S)-XXX-GAD-AX	PLQP0080*
133	78K0RKx3-L	UPD78F1012GC-GAD-AX	PLQP0080*
134	78K0RKx3-L	UPD78F1012GC-XXX-GAD-AX	PLQP0080*
135	78K0RKx3-L	UPD78F1027GC(R)-GAD-AX	PLQP0080*
136	78K0RKx3-L	UPD78F1027GC(S)-GAD-AX	PLQP0080*
137	78K0RKx3-L	UPD78F1027GC-GAD-AX	PLQP0080*
138	78K0RKx3-L	UPD78F1028GC(R)-GAD-AX	PLQP0080*
139	78K0RKx3-L	UPD78F1028GC(S)-GAD-AX	PLQP0080*
140	78K0RKx3-L	UPD78F1028GC-GAD-AX	PLQP0080*
141	78K0RKx3-L	UPD78F1010GK(R)-GAK-AX	PLQP0080*
142	78K0RKx3-L	UPD78F1010GK(R)-XXX-GAK-AX	PLQP0080*
143	78K0RKx3-L	UPD78F1010GK(S)-GAK-AX	PLQP0080*
144	78K0RKx3-L	UPD78F1010GK(S)-XXX-GAK-AX	PLQP0080*
145	78K0RKx3-L	UPD78F1010GK-GAK-AX	PLQP0080*
146	78K0RKx3-L	UPD78F1010GK-XXX-GAK-AX	PLQP0080*
147	78K0RKx3-L	UPD78F1011GK(R)-GAK-AX	PLQP0080*
148	78K0RKx3-L	UPD78F1011GK(R)-XXX-GAK-AX	PLQP0080*
149	78K0RKx3-L	UPD78F1011GK(S)-GAK-AX	PLQP0080*
150	78K0RKx3-L	UPD78F1011GK(S)-XXX-GAK-AX	PLQP0080*
151	78K0RKx3-L	UPD78F1011GK-GAK-AX	PLQP0080*
152	78K0RKx3-L	UPD78F1011GK-XXX-GAK-AX	PLQP0080*
153	78K0RKx3-L	UPD78F1012GK(R)-GAK-AX	PLQP0080*
154	78K0RKx3-L	UPD78F1012GK(R)-XXX-GAK-AX	PLQP0080*
155	78K0RKx3-L	UPD78F1012GK(S)-GAK-AX	PLQP0080*
156	78K0RKx3-L	UPD78F1012GK(S)-XXX-GAK-AX	PLQP0080*
157	78K0RKx3-L	UPD78F1012GK-GAK-AX	PLQP0080*
158	78K0RKx3-L	UPD78F1012GK-XXX-GAK-AX	PLQP0080*
159	78K0RKx3-L	UPD78F1027GK(R)-GAK-AX	PLQP0080*
160	78K0RKx3-L	UPD78F1027GK(S)-GAK-AX	PLQP0080*

No	Group	Product part number	Package code
161	78K0RKx3-L	UPD78F1027GK-GAK-AX	PLQP0080*
162	78K0RKx3-L	UPD78F1028GK(R)-GAK-AX	PLQP0080*
163	78K0RKx3-L	UPD78F1028GK(S)-GAK-AX	PLQP0080*
164	78K0RKx3-L	UPD78F1028GK-GAK-AX	PLQP0080*
165	78K0RKx3-L	UPD78F1013F1(S)-BAK-A	PTBG0100*
166	78K0RKx3-L	UPD78F1013F1(S)-XXX-BAK-A	PTBG0100*
167	78K0RKx3-L	UPD78F1013F1-BAK-A	PTBG0100*
168	78K0RKx3-L	UPD78F1013F1-XXX-BAK-A	PTBG0100*
169	78K0RKx3-L	UPD78F1014F1(S)-BAK-A	PTBG0100*
170	78K0RKx3-L	UPD78F1014F1(S)-XXX-BAK-A	PTBG0100*
171	78K0RKx3-L	UPD78F1014F1-BAK-A	PTBG0100*
172	78K0RKx3-L	UPD78F1014F1-XXX-BAK-A	PTBG0100*
173	78K0RKx3-L	UPD78F1013GF(R)-GAS-AX	PLQP0100*
174	78K0RKx3-L	UPD78F1013GF(R)-XXX-GAS-AX	PLQP0100*
175	78K0RKx3-L	UPD78F1013GF(S)-GAS-AX	PLQP0100*
176	78K0RKx3-L	UPD78F1013GF(S)-XXX-GAS-AX	PLQP0100*
177	78K0RKx3-L	UPD78F1013GF-GAS-AX	PLQP0100*
178	78K0RKx3-L	UPD78F1013GF-XXX-GAS-AX	PLQP0100*
179	78K0RKx3-L	UPD78F1014GF(R)-GAS-AX	PLQP0100*
180	78K0RKx3-L	UPD78F1014GF(R)-XXX-GAS-AX	PLQP0100*
181	78K0RKx3-L	UPD78F1014GF(S)-GAS-AX	PLQP0100*
182	78K0RKx3-L	UPD78F1014GF(S)-XXX-GAS-AX	PLQP0100*
183	78K0RKx3-L	UPD78F1014GF-GAS-AX	PLQP0100*
184	78K0RKx3-L	UPD78F1014GF-XXX-GAS-AX	PLQP0100*
185	78K0RKx3-L	UPD78F1029GF(R)-GAS-AX	PLQP0100*
186	78K0RKx3-L	UPD78F1029GF(S)-GAS-AX	PLQP0100*
187	78K0RKx3-L	UPD78F1029GF-GAS-AX	PLQP0100*
188	78K0RKx3-L	UPD78F1030GF(R)-GAS-AX	PLQP0100*
189	78K0RKx3-L	UPD78F1030GF(S)-GAS-AX	PLQP0100*
190	78K0RKx3-L	UPD78F1030GF-GAS-AX	PLQP0100*
191	78K0RKx3-L	UPD78F1013GC(R)-UEU-AX	PLQP0100*
192	78K0RKx3-L	UPD78F1013GC(R)-XXX-UEU-AX	PLQP0100*
193	78K0RKx3-L	UPD78F1013GC(S)-UEU-AX	PLQP0100*
194	78K0RKx3-L	UPD78F1013GC(S)-XXX-UEU-AX	PLQP0100*
195	78K0RKx3-L	UPD78F1013GC-UEU-AX	PLQP0100*
196	78K0RKx3-L	UPD78F1013GC-XXX-UEU-AX	PLQP0100*
197	78K0RKx3-L	UPD78F1014GC(R)-UEU-AX	PLQP0100*
198	78K0RKx3-L	UPD78F1014GC(R)-XXX-UEU-AX	PLQP0100*
199	78K0RKx3-L	UPD78F1014GC(S)-XXX-UEU-AX	PLQP0100*
200	78K0RKx3-L	UPD78F1014GC-UEU-AX	PLQP0100*
201	78K0RKx3-L	UPD78F1014GC-XXX-UEU-AX	PLQP0100*
202	78K0RKx3-L	UPD78F1029GC(R)-UEU-AX	PLQP0100*
203	78K0RKx3-L	UPD78F1029GC(S)-UEU-AX	PLQP0100*
204	78K0RKx3-L	UPD78F1029GC-UEU-AX	PLQP0100*
205	78K0RKx3-L	UPD78F1030GC(R)-UEU-AX	PLQP0100*
206	78K0RKx3-L	UPD78F1030GC(S)-UEU-AX	PLQP0100*
207	78K0RKx3-L	UPD78F1030GC-UEU-AX	PLQP0100*
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