1. FMK50T4

序列号	位置	Bank	信号名	NAME	BANK 电压
1	F4	5	U5_S0	VCC1V5	1.5V
2	J6	5	U5_1P_G0_AD4P		
3	K6	5	U5_1N_G0_AD4N		
4	H4	5	U5_2P_G0_AD12P		
5	G4	5	U5_2N_G0_AD12N		
6	H5	5	U5_3P_G0_DQS_AD5P	DDR3_CS_B	
7	J5	5	U5_3N_G0_DQS_AD5N	DDR3_BA1	
8	E3	5	U5_4P_G0		
9	F3	5	U5_4N_G0	DDR3_RAS_B	
10	G3	5	U5_5P_G0_AD13P		
11	H3	5	U5_5N_G0_AD13N		
12	B2	5	U5_6P_G0		
13	C2	5	U5_6N_G0_VREF	VREF0V75	
14	D1	5	U5_7P_G1_AD6P	DDR3_A13	
15	E1	5	U5_7N_G1_AD6N	DDR3_CAS_B	
16	D2	5	U5_8P_G1_AD14P	DDR3_ODT	
17	E2	5	U5_8N_G1_AD14N	DDR3_WE_B	
18	B1	5	U5_9P_G1_DQS_AD7P		
19	A1	5	U5_9N_G1_DQS_AD7N		
20	K4	5	U5_10P_G1_AD15P	DDR3_A4	
21	J4	5	U5_10N_G1_AD15N	DDR3_A10	
22	K3	5	U5_11P_G1_SRC	DDR3_A0	
23	L3	5	U5_11N_G1_SRC	DDR3_A12	
24	H2	5	U5_12P_G1_MRC	DDR3_A1	
25	G2	5	U5_12N_G1_MRC	DDR3_BA0	
26	L4	5	U5_13P_G2_MRC		
27	L5	5	U5_13N_G2_MRC	DDR3_A3	
28	J1	5	U5_14P_G2_SRC		
29	K1	5	U5_14N_G2_SRC	DDR3_A2	
30	K2	5	U5_15P_G2_DQS	DDR3_CLK_P	
31	J2	5	U5_15N_G2_DQS	DDR3_CLK_N	
32	L1	5	U5_16P_G2	DDR3_A6	
33	M1	5	U5_16N_G2	DDR3_A15	
34	F1	5	U5_17P_G2		
35	G1	5	U5_17N_G2		
36	M6	5	U5_18P_G2		
37	M5	5	U5_18N_G2	DDR3_EVENT_B	
38	M2	5	U5_19P_G3	DDR3_BA2	
39	M3	5	U5_19N_G3_VREF	VREF0V75	

40	N2	5	U5_20P_G3	DDR3_CKE	
41	P2	5	U5_20N_G3	DDR3_A7	
42	N4	5	U5_21P_G3_DQS		
43	N3	5	U5_21N_G3_DQS		
44	N5	5	U5_22P_G3	DDR3_A9	
45	P6	5	U5_22N_G3	DDR3_A14	
46	R1	5	U5_23P_G3	DDR3_RESET_B	
47	P1	5	U5_23N_G3	DDR3_A11	
48	P4	5	U5_24P_G3	DDR3_A8	
49	P5	5	U5_24N_G3	DDR3_A5	
50	L6	5	U5_S25		
51	T3	4	U4_S0	VCC1V5	1.5V
52	R2	4	U4_1P_G0	DDR3_DQ30	
53	R3	4	U4_1N_G0	DDR3_DQ31	
54	U2	4	U4_2P_G0	DDR3_DQ27	
55	V2	4	U4_2N_G0	DDR3_DQ26	
56	T1	4	U4_3P_G0_DQS	DDR3_DQS3_P	
57	U1	4	U4_3N_G0_DQS	DDR3_DQS3_N	
58	W2	4	U4_4P_G0	DDR3_DQ29	
59	Y2	4	U4_4N_G0	DDR3_DQ24	
60	W1	4	U4_5P_G0	DDR3_DQ28	
61	Y1	4	U4_5N_G0	DDR3_DQ25	
62	T4	4	U4_6P_G0	DDR3_DM3	
63	R4	4	U4_6N_G0_VREF	VREF0V75	
64	AA1	4	U4_7P_G1	DDR3_DQ23	
65	AB1	4	U4_7N_G1	DDR3_DQ22	
66	U3	4	U4_8P_G1	DDR3_DQ19	
67	V3	4	U4_8N_G1	DDR3_DQ18	
68	T5	4	U4_9P_G1_DQS	DDR3_DQS2_P	
69	U5	4	U4_9N_G1_DQS	DDR3_DQS2_N	
70	AB2	4	U4_10P_G1	DDR3_DM2	
71	AB3	4	U4_10N_G1	DDR3_DQ16	
72	Y3	4	U4_11P_G1_SRC	DDR3_DQ17	
73	AA3	4	U4_11N_G1_SRC	DDR3_DQ20	
74	V4	4	U4_12P_G1_MRC		
75	W4	4	U4_12N_G1_MRC	DDR3_DQ21	
76	AA5	4	U4_13P_G2_MRC	DDR3_DM1	

77	AB5	4	U4_13N_G2_MRC	DDR3_DQ13	
78	V5	4	U4_14P_G2_SRC	DDR3_DQ14	
79	U6	4	U4_14N_G2_SRC	DDR3_DQ9	
80	T6	4	U4_15P_G2_DQS	DDR3_DQS1_P	
81	R6	4	U4_15N_G2_DQS	DDR3_DQS1_N	
82	Y4	4	U4_16P_G2	DDR3_DQ15	
83	AA4	4	U4_16N_G2	DDR3_DQ11	
84	W6	4	U4_17P_G2	DDR3_DQ8	
85	W5	4	U4_17N_G2	DDR3_DQ10	
86	Y6	4	U4_18P_G2		
87	AA6	4	U4_18N_G2	DDR3_DQ12	
88	V7	4	U4_19P_G3	DDR3_DQ6	
89	W7	4	U4_19N_G3_VREF	VRE0V75	
90	AB6	4	U4_20P_G3	DDR3_DQ7	
91	AB7	4	U4_20N_G3	DDR3_DQ3	
92	V9	4	U4_21P_G3_DQS	DDR3_DQS0_P	
93	V8	4	U4_21N_G3_DQS	DDR3_DQS0_N	
94	AB8	4	U4_22P_G3	DDR3_DQ4	
95	AA8	4	U4_22N_G3	DDR3_DM0	
96	Y8	4	U4_23P_G3	DDR3_DQ5	
97	Y7	4	U4_23N_G3	DDR3_DQ2	
98	W9	4	U4_24P_G3	DDR3_DQ0	
99	Y9	4	U4_24N_G3	DDR3_DQ1	
100	U7	4	U4_S25		
101	T21	1	U1_S0		3.3V
102	U22	1	U1_1P_G0_D00_MOSI	FLASH_D0	
103	V22	1	U1_1N_G0_D01_DIN	FLASH_D1	
104	V21	1	U1_2P_G0_D02	FLASH_D2	
105	W21	1	U1_2N_G0_D03	FLASH_D3	
106	Y22	1	U1_3P_G0_DQS_PUDC		
107	AA22	1	U1_3N_G0_DQS_ECLK	SW_IO0	
108	T20	1	U1_4P_G0_D04	SW_IO1	
109	T19	1	U1_4N_G0_D05	SW_IO2	
110	U20	1	U1_5P_G0_D06	SW_IO3	
111	U19	1	U1_5N_G0_D07	SW_IO4	
112	V20	1	U1_6P_G0_CS	FLASH_CS	
113	V19	1	U1_6N_G0_D08_VREF		
114	Y20	1	U1_7P_G1_D09		
115	W20	1	U1_7N_G1_D10		
116	AA19	1	U1_8P_G1_D11		
117	Y19	1	U1_8N_G1_D12		
118	AA21	1	U1_9P_G1_DQS	B14_L9_P	
119	AA20	1	U1_9N_G1_DQS_D13	B14_L10_N	

120	AB19	1	U1_10P_G1_D14	B14_L12_P	
121	AB18	1	U1_10N_G1_D15	B14_L14_N	
122	AB21	1	U1_11P_G1_SRC	B14_L10_P	
123	AB20	1	U1_11N_G1_SRC	B14_L11_P	
124	AA18	1	U1_12P_G1_MRC	B14_L14_P	
125	AA17	1	U1_12N_G1_MRC	B14_L15_P	
126	W17	1	U1_13P_G2_MRC	SYS_CLK	
127	Y18	1	U1_13N_G2_MRC		
128	U18	1	U1_14P_G2_SRC	B14_L9_N	
129	U17	1	U1_14N_G2_SRC	B14_L17_N	
130	AA16	1	U1_15P_G2_DQS_RDWR	B14_L16_N	
131	AB17	1	U1_15N_G2_DQS_CFGDO_CSON	B14_L15_N	
132	V18	1	U1_16P_G2_CSIN	B14_L11_N	
133	V17	1	U1_16N_G2_A15_D31	B14_L12_N	
134	Y16	1	U1_17P_G2_A14_D30	B14_L16_P	
135	AA15	1	U1_17N_G2_A13_D29	B14_L17_P	
136	V16	1	U1_18P_G2_A12_D28		
137	U16	1	U1_18N_G2_A11_D27	DDR3_SCL	
138	U15	1	U1_19P_G3_A10_D26	DDR3_SDA	
139	W15	1	U1_19N_G3_A09_D25_VREF		
140	W16	1	U1_20P_G3_A08_D24		
141	V15	1	U1_20N_G3_A07_D23		
142	Y14	1	U1_21P_G3_DQS		
143	AA14	1	U1_21N_G3_DQS_A06_D22	LED0	
144	V13	1	U1_22P_G3_A05_D21	LED1	
145	W14	1	U1_22N_G3_A04_D20	LED2	
146	AB14	1	U1_23P_G3_A03_D19	LED3	
147	AB15	1	U1_23N_G3_A02_D18	LED4	
148	AB13	1	U1_24P_G3_A01_D17	LED5	
149	AA13	1	U1_24N_G3_A00_D16	LED6	
150	W13	1	U1_S25	LED7	
151	K16	2	U2_S0	B15_L25	1.8V
152	J16	2	U2_1P_G0_AD0P	PHY_RXD0	
153	H16	2	U2_1N_G0_AD0N	PHY_MDC	
154	J17	2	U2_2P_G0_AD8P	B15_L12_N	
155	J18	2	U2_2N_G0_AD8N	PHY_TX_CTRL	
156	H17	2	U2_3P_G0_DQS_AD1P	PHY_RX_CTRL	
157	J19	2	U2_3N_G0_DQS_AD1N	PHY_TXD2	
158	H19	2	U2_4P_G0	PHY_TXD0	
159	H20	2	U2_4N_G0	PHY_TXD1	
160	K17	2	U2_5P_G0_AD9P	B15_L16_N	
161	L17	2	U2_5N_G0_AD9N	PHY_TXD3	
162	G21	2	U2_6P_G0	PHY_RXD3	

163	G22	2	U2_6N_G0_VREF	PHY_RXD2	
164	G18	2	U2_7P_G1_AD2P	PHY_MDIO	
165	G19	2	U2_7N_G1_AD2N	PHY_RXD1	
166	J20	2	U2_8P_G1_AD10P	PS_POR_B	
167	K19	2	U2_8N_G1_AD10N		
168	K20	2	U2_9P_G1_DQS_AD3P	B15_L15_P	
169	K21	2	U2_9N_G1_DQS_AD3N	B15_L14_P	
170	L18	2	U2_10P_G1_AD11P	B15_L17_N	
171	L19	2	U2_10N_G1_AD11N	B15_L17_P	
172	L21	2	U2_11P_G1_SRC	B15_L16_P	
173	L22	2	U2_11N_G1_SRC	B15_L15_N	
174	L16	2	U2_12P_G1_MRC	PHY_TX_CLK	
175	M16	2	U2_12N_G1_MRC	B15_L12_P	
176	H22	2	U2_13P_G2_MRC	PHY_RX_CLK	
177	H21	2	U2_13N_G2_MRC	B15_L13_P	
178	M20	2	U2_14P_G2_SRC	B15_L20_P	
179	M19	2	U2_14N_G2_SRC	B15_L9_N	
180	K22	2	U2_15P_G2_DQS	B15_L14_N	
181	J22	2	U2_15N_G2_DQS_ADV	B15_L13_N	
182	R22	2	U2_16P_G2_A28	B15_L20_N	
183	R21	2	U2_16N_G2_A27	B15_L9_P	
184	N21	2	U2_17P_G2_A26	B15_L19_P	
185	M21	2	U2_17N_G2_A25	B15_L18_P	
186	R20	2	U2_18P_G2_A24	B15_L21_N	
187	P20	2	U2_18N_G2_A23	B15_L0	
188	P22	2	U2_19P_G3_A22	B15_L19_N	
189	N22	2	U2_19N_G3_A21_VREF	B15_L18_N	
190	M17	2	U2_20P_G3_A20	B15_L24_N	
191	N17	2	U2_20N_G3_A19	B15_L24_P	
192	P18	2	U2_21P_G3_DQS	B15_L23_P	
193	P19	2	U2_21N_G3_DQS_A18	B15_L10_P	
194	N19	2	U2_22P_G3_A17	B15_L10_N	
195	N18	2	U2_22N_G3_A16	B15_L23_N	
196	R19	2	U2_23P_G3_OE	B15_L22_P	
197	R18	2	U2_23N_G3_WE	B15_L22_N	
198	P17	2	U2_24P_G3_RS1	B15_L11_P	
199	P16	2	U2_24N_G3_RS0	B15_L11_N	
200	T22	2	U2_S25	B15_L21_P	
201	F15	3	U3_S0	HDMI_D15	3.3V
202	F14	3	U3_1P_G0	HDMI_D11	
203	F13	3	U3_1N_G0	HDMI_D14	
204	E14	3	U3_2P_G0	HDMI_D16	
205	E13	3	U3_2N_G0	HDMI_D12	

206	D15	3	U3_3P_G0_DQS	HDMI_D18	
207	D14	3	U3_3N_G0_DQS	HDMI_D17	
208	C13	3	U3_4P_G0	HDMI_D10	
209	B13	3	U3_4N_G0	HDMI_D9	
210	B15	3	U3_5P_G0	HDMI_D5	
211	B16	3	U3_5N_G0	HDMI_D3	
212	A13	3	U3_6P_G0	HDMI_D8	
213	A14	3	U3_6N_G0_VREF	HDMI_D6	
214	A15	3	U3_7P_G1	HDMI_D4	
215	A16	3	U3_7N_G1	HDMI_D2	
216	C14	3	U3_8P_G1	HDMI_D7	
217	C15	3	U3_8N_G1	HDMI_nRESET	
218	D16	3	U3_9P_G1_DQS	HDMI_D19	
219	E16	3	U3_9N_G1_DQS	HDMI_SD0	
220	E17	3	U3_10P_G1	HDMI_D22	
221	F16	3	U3_10N_G1	HDMI_D13	
222	B17	3	U3_11P_G1_SRC	HDMI_D1	
223	B18	3	U3_11N_G1_SRC	HDMI_HS	
224	C17	3	U3_12P_G1_MRC	HDMI_MCLK	
225	D17	3	U3_12N_G1_MRC	HDMI_D21	
226	A19	3	U3_13P_G2_MRC	HDMI_CLK	
227	A18	3	U3_13N_G2_MRC	HDMI_D0	
228	G16	3	U3_14P_G2_SRC	HDMI_INT	
229	G17	3	U3_14N_G2_SRC	HDMI_D20	
230	C19	3	U3_15P_G2_DQS	HDMI_SD1	
231	C18	3	U3_15N_G2_DQS	HDMI_DE	
232	D19	3	U3_16P_G2	HDMI_SCL	
233	E19	3	U3_16N_G2	HDMI_WS	
234	B21	3	U3_17P_G2	HDMI_SDA	
235	A21	3	U3_17P_G2	HDMI_SD3	
236	A20	3	U3_18P_G2	HDMI_SPDIF	
237	B20	3	U3_18N_G2	HDMI_VS	
238	F18	3	U3_19P_G3	HDMI_SCK	
239	E18	3	U3_19N_G3_VREF	HDMI_D23	
240	B22	3	U3_20P_G3	HDMI_SD2	
241	C22	3	U3_20N_G3		
242	D20	3	U3_21P_G3_DQS	570_SDA	
243	C20	3	U3_21N_G3_DQS	570_SCL	
244	D22	3	U3_22P_G3		
245	E22	3	U3_22N_G3	PCIE_RST	
246	E21	3	U3_23P_G3	PCIE_WAKE	
247	D21	3	U3_23N_G3		

248	F19	3	U3_24P_G3	UART_TXD	
249	F20	3	U3_24N_G3	UART_RXD	
250	F21	3	U3_S25		
251	A4	101	U101_UHST1TXP0	PCIE_TX0_P	
252	B4	101	U101_UHST1TXN0	PCIE_TX0_N	
253	C5	101	U101_UHST1TXP1	PCIE_TX1_P	
254	D5	101	U101_UHST1TXN1	PCIE_TX1_N	
255	A6	101	U101_UHST1TXP2		
256	B6	101	U101_UHST1TXN2		
257	C7	101	U101_UHST1TXP3	UHST1TXP3	
258	D7	101	U101_UHST1TXN3	UHST1TXN3	
259	A8	101	U101_UHST1RXN0	PCIE_RX0_N	
260	B8	101	U101_UHST1RXP0	PCIE_RX0_P	
261	C11	101	U101_UHST1RXP1	PCIE_RX1_P	
262	D11	101	U101_UHST1RXN1	PCIE_RX1_N	
263	A10	101	U101_UHST1RXP2		
264	B10	101	U101_UHST1RXN2		
265	C9	101	U101_UHST1RXN3	UHST1RXN3	
266	D9	101	U101_UHST1RXP3	UHST1RXP3	
267	E6	101	U101_UHSTREFCLK0P	PCIE_CLK_P	
268	F6	101	U101_UHSTREFCLK0N	PCIE_CLK_N	
269	E10	101	U101_UHSTREFCLK1P	PCIE_REFCLK1_P	
270	F10	101	U101_UHSTREFCLK1N	PCIE_REFCLK1_N	
271	F8	101	U101_UHSTREF	MGTAVTT	
272	N10	0	F0_TMS	JTAG_TMS	
273	P11	0	F0_CFG_STA	INIT_B	
274	R11	0	F0_CFG_V	CFG_V	
275	U11	0	F0_CFG_T2	CFG_T2	
276	N13	0	F0_TCK	JTAG_TCK	
277	P13	0	F0_TDI	JTAG_TDI	
278	R13	0	F0_CFG_DONE	DONE	
279	T13	0	F0_CFG_T1	CFG_T1	
280	J14	0	F0_TDN		
281	K14	0	F0_TDP		
282	N14	0	F0_CFG_CLK	CCLK	
283	P14	0	F0_TDO	JTAG_TDO	
284	T14	0	F0_CFG_ENB	PROG_B	
285	U14	0	F0_CFG_T0	CFG_T0	
286	L14	0	F0_VREFP		
287	L10	0	F0_VREFN		
288	M14	0	F0_VIN		
289	M10	0	F0_VIP		
290	K11	0	F0_VCCADC	VCC1V8	1.8V

291	L13	0	F0_GNDADC		
292	M13	0	F0_VCCBAT	VCC1V8	1.8V
293	R12	0	F0_VCCP	VCC3V3	3.3V
294	U13	0	F0_VCCP	VCC3V3	
295	C4	101	UHSTVTT	MGTAVTT	1.2V
296	B5	101	UHSTVTT	MGTAVTT	
297	B7	101	UHSTVTT	MGTAVTT	
298	C8	101	UHSTVTT	MGTAVTT	
299	B9	101	UHSTVTT	MGTAVTT	
300	B11	101	UHSTVTT	MGTAVTT	
301	D6	101	UHSTVCC	MGTAVCC	1.0V
302	E8	101	UHSTVCC	MGTAVCC	
303	D10	101	UHSTVCC	MGTAVCC	
304	F7	101	UHSTVCC	MGTAVCC	
305	F9	101	UHSTVCC	MGTAVCC	
306	C1	5	U5_VCCP	VCC1V5	1.5V
307	F2	5	U5_VCCP	VCC1V5	
308	H6	5	U5_VCCP	VCC1V5	
309	J3	5	U5_VCCP	VCC1V5	
310	M4	5	U5_VCCP	VCC1V5	
311	N1	5	U5_VCCP	VCC1V5	
312	R5	4	U4_VCCP	VCC1V5	
313	T2	4	U4_VCCP	VCC1V5	
314	V6	4	U4_VCCP	VCC1V5	
315	W3	4	U4_VCCP	VCC1V5	
316	AA7	4	U4_VCCP	VCC1V5	
317	AB4	4	U4_VCCP	VCC1V5	
318	V14	1	U1_VCCP	VCC1V5	
319	T15	1	U1_VCCP	VCC3V3	3.3V
320	Y17	1	U1_VCCP	VCC3V3	
321	T18	1	U1_VCCP	VCC3V3	
322	W19	1	U1_VCCP	VCC3V3	
323	W22	1	U1_VCCP	VCC3V3	
324	N15	2	U2_VCCP	VCC1V8	1.8V
325	P21	2	U2_VCCP	VCC1V8	
326	M18	2	U2_VCCP	VCC1V8	
327	L20	2	U2_VCCP	VCC1V8	
328	H18	2	U2_VCCP	VCC1V8	
329	G20	2	U2_VCCP	VCC1V8	
330	F22	3	U3_VCCP	VCC3V3	3.3V
331	E15	3	U3_VCCP	VCC3V3	
332	D18	3	U3_VCCP	VCC3V3	
333	C21	3	U3_VCCP	VCC3V3	

334	B14	3	U3_VCCP	VCC3V3	
335	A17	3	U3_VCCP	VCC3V3	
336	J7		VCCCORE	VCCINT	1.0V
337	L7		VCCCORE	VCCINT	
338	N7		VCCCORE	VCCINT	
339	R7		VCCCORE	VCCINT	
340	K8		VCCCORE	VCCINT	
341	M8		VCCCORE	VCCINT	
342	P8		VCCCORE	VCCINT	
343	T8		VCCCORE	VCCINT	
344	L9		VCCCORE	VCCINT	
345	M9		VCCCORE	VCCINT	
346	N9		VCCCORE	VCCINT	
347	R9		VCCCORE	VCCINT	
348	P10		VCCCORE	VCCINT	
349	T10		VCCCORE	VCCINT	
350	J11		VCCHRAM	VCCINT	
351	L11		VCCHRAM	VCCINT	
352	N11		VCCHRAM	VCCINT	
353	H12		VCCSUP	VCC1V8	1.8V
354	K12		VCCSUP	VCC1V8	
355	M12		VCCSUP	VCC1V8	
356	P12		VCCSUP	VCC1V8	
357	T12		VCCSUP	VCC1V8	
358	A2		GND		
359	A3		GND		
360	A5		GND		
361	A7		GND		
362	A9		GND		
363	A11		GND		
364	A12		GND		
365	A22		GND		
366	B3		GND		
367	B12		GND		
368	B19		GND		
369	C3		GND		
370	C6		GND		
371	C10		GND		
372	C12		GND		
373	C16		GND		
374	D3		GND		
375	D4		GND		
376	D8		GND		

377	D12		GND		
378	D13		GND		
379	E4		GND		
380	E5		GND		
381	E7		GND		
382	E9		GND		
383	E11		GND		
384	E12		GND		
385	E20		GND		
386	F5		GND		
387	F11		GND		
388	F12		GND		
389	F17		GND		
390	G5		GND		
391	G6		GND		
392	G7		GND		
393	G8		GND		
394	G9		GND		
395	G10		GND		
396	G12		GND		
397	G15		GND		
398	H1		GND		
399	H7		GND		
400	H9		GND		
401	H11		GND		
402	J12		GND		
403	J21		GND		
404	K5		GND		
405	K7		GND		
406	K13		GND		
407	K15		GND		
408	K18		GND		
409	L2		GND		
410	L8		GND		
411	M7		GND		
412	M11		GND		
413	M15		GND		
414	M22		GND		
415	N6		GND		
416	N8		GND		
417	N12		GND		
418	N16		GND		
419	N20		GND		

420	P3		GND		
421	P7		GND		
422	P9		GND		
423	R8		GND		
424	R10		GND		
425	R14		GND		
426	T11		GND		
427	T17		GND		
428	U4		GND		
429	U8		GND		
430	U10		GND		
431	U21		GND		
432	V1		GND		
433	V11		GND		
434	W8		GND		
435	W18		GND		
436	Y5		GND		
437	Y13		GND		
438	Y15		GND		
439	Y21		GND		
440	AA2		GND		
441	AA12		GND		
442	AB9		GND		
443	AB16		GND		
444	AB22		GND		
445	T7		NC		
446	H8		NC		
447	J8		NC		
448	J9		NC		
449	K9		NC		
450	T9		NC		
451	U9		NC		
452	AA9		NC		
453	H10		NC		
454	J10		NC		
455	K10		NC		
456	V10		NC		
457	W10		NC		
458	Y10		NC		
459	AA10		NC		
460	AB10		NC		
461	G11		NC		
462	W11		NC		

463	Y11		NC		
464	AA11		NC		
465	AB11		NC		
466	L12		NC		
467	U12		NC		
468	V12		NC		
469	W12		NC		
470	Y12		NC		
471	AB12		NC		
472	G13		NC		
474	H13		NC		
474	J13		NC		
475	G14		NC		
476	H14		NC		
477	H15		NC		
478	J15		NC		
479	L15		NC		
480	P15		NC		
481	R15		NC		
482	R16		NC		
483	T16		NC		
484	R17		NC		