

# **Device Modeling Report**

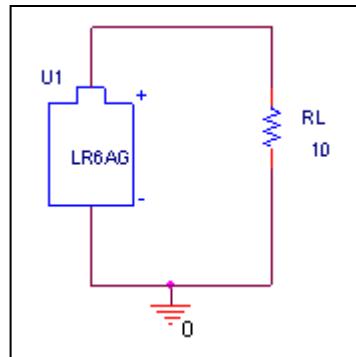
COMPONENTS: Alkaline  
PART NUMBER: LR6AG  
MANUFACTURER: TOSHIBA  
Remark: RL=10( $\Omega$ )



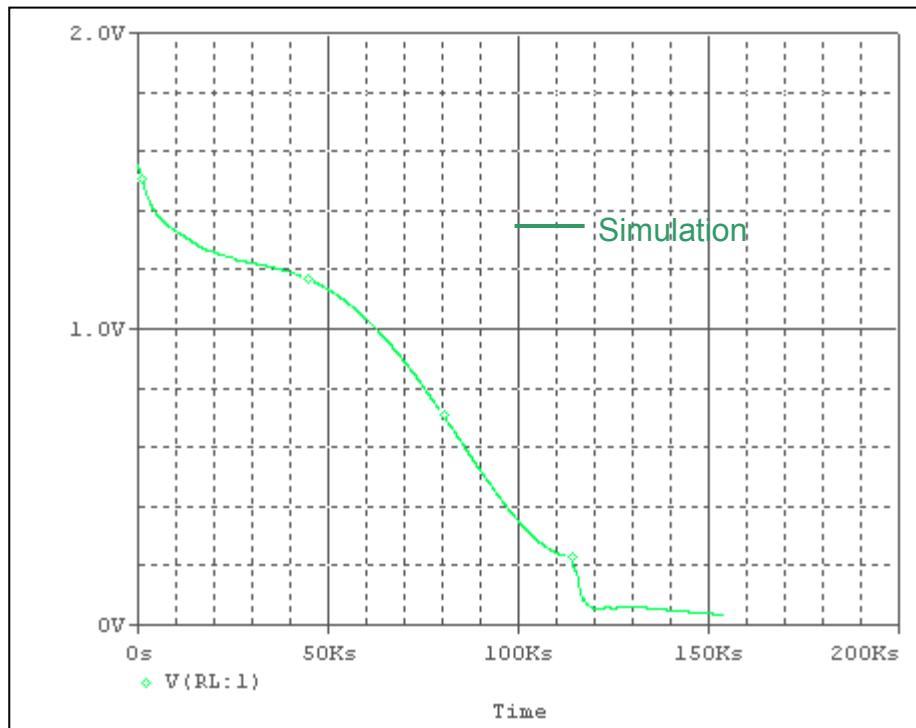
**Bee Technologies Inc.**

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## Evaluation Circuit



## Simulation result



## Comparison Table

Time (kSec)	Vdc(V) Measurement	Vdc(V) Simulation	%Error
0.5	1.531	1.529	0.131
1	1.499	1.502	-0.200
2	1.458	1.46	-0.137
3	1.43	1.43	0.000
4	1.408	1.4	0.568
5	1.389	1.385	0.288
6	1.372	1.37	0.146
7	1.359	1.358	0.074
8	1.348	1.347	0.074
9	1.338	1.338	0.000
10	1.329	1.329	0.000
11	1.321	1.321	0.000
12	1.312	1.313	-0.076
13	1.304	1.305	-0.077
14	1.296	1.296	0.000
15	1.288	1.288	0.000
16	1.281	1.28	0.078
17	1.274	1.272	0.157
18	1.268	1.266	0.158
19	1.262	1.262	0.000
20	1.257	1.258	-0.080
21	1.253	1.253	0.000
22	1.25	1.25	0.000
23	1.247	1.246	0.080
24	1.243	1.243	0.000
25	1.24	1.24	0.000
26	1.237	1.233	0.323
27	1.233	1.229	0.324
28	1.23	1.227	0.244
29	1.227	1.224	0.244
30	1.223	1.222	0.082
31	1.22	1.219	0.082
32	1.217	1.217	0.000
33	1.213	1.214	-0.082
34	1.21	1.211	-0.083
35	1.206	1.209	-0.249
36	1.203	1.205	-0.166
37	1.199	1.202	-0.250

<b>Time (kSec)</b>	<b>Vdc(V) Measurement</b>	<b>Vdc(V) Simulation</b>	<b>%Error</b>
38	1.196	1.199	-0.251
39	1.192	1.195	-0.252
40	1.188	1.191	-0.253
41	1.184	1.187	-0.253
42	1.18	1.182	-0.169
43	1.175	1.177	-0.170
44	1.171	1.172	-0.085
45	1.166	1.166	0.000
46	1.161	1.161	0.000
47	1.155	1.154	0.087
48	1.15	1.148	0.174
49	1.143	1.14	0.262
50	1.137	1.133	0.352
51	1.13	1.125	0.442
52	1.122	1.116	0.535
53	1.114	1.107	0.628
54	1.104	1.098	0.543
55	1.094	1.089	0.457
56	1.082	1.078	0.370
57	1.07	1.068	0.187
58	1.056	1.056	0.000
59	1.042	1.045	-0.288
60	1.029	1.033	-0.389
61	1.017	1.02	-0.295
62	1.004	1.007	-0.299
63	0.991	0.994	-0.303
64	0.978	0.981	-0.307
65	0.964	0.966	-0.207
66	0.949	0.952	-0.316
67	0.933	0.937	-0.429
68	0.916	0.921	-0.546
69	0.897	0.906	-1.003
70	0.879	0.89	-1.251
71	0.864	0.873	-1.042
72	0.85	0.856	-0.706
73	0.837	0.839	-0.239
74	0.825	0.822	0.364
75	0.813	0.804	1.107
76	0.8	0.786	1.750
77	0.787	0.768	2.414

<b>Time (kSec)</b>	<b>Vdc(V) Measurement</b>	<b>Vdc(V) Simulation</b>	<b>%Error</b>
78	0.772	0.749	2.979
79	0.755	0.731	3.179
80	0.734	0.712	2.997
81	0.713	0.693	2.805
82	0.69	0.674	2.319
83	0.664	0.655	1.355
84	0.639	0.636	0.469
85	0.615	0.616	-0.163
86	0.591	0.597	-1.015
87	0.567	0.578	-1.940
88	0.544	0.558	-2.574
89	0.521	0.539	-3.455
90	0.5	0.521	-4.200
91	0.479	0.502	-4.802
92	0.46	0.483	-5.000
93	0.443	0.466	-5.192
94	0.426	0.448	-5.164
95	0.411	0.43	-4.623
96	0.398	0.413	-3.769
97	0.386	0.396	-2.591
98	0.375	0.38	-1.333
99	0.365	0.365	0.000
100	0.356	0.35	1.685
101	0.347	0.335	3.458
102	0.338	0.322	4.734
103	0.328	0.308	6.098
104	0.319	0.296	7.210
105	0.308	0.285	7.468
106	0.297	0.275	7.407
107	0.285	0.266	6.667
108	0.272	0.252	7.353
109	0.259	0.249	3.861
110	0.246	0.243	1.220
111	0.234	0.238	-1.709
112	0.223	0.234	-4.933
113	0.211	0.232	-9.953
114	0.199	0.23	-15.578
115	0.181	0.183	-1.105
116	0.127	0.13	-2.362
117	0.0838	0.084	-0.239

<b>Time (kSec)</b>	<b>Vdc(V) Measurement</b>	<b>Vdc(V) Simulation</b>	<b>%Error</b>
118	0.0662	0.072	-8.761
119	0.0537	0.061	-13.594
120	0.0479	0.055	-14.823
121	0.047	0.054	-14.894
122	0.0482	0.0554	-14.938
123	0.0504	0.0581	-15.278
124	0.0531	0.0603	-13.559
125	0.0556	0.0556	0.000
126	0.0577	0.0577	0.000
127	0.0593	0.0593	0.000
128	0.0605	0.0605	0.000
129	0.0611	0.061	0.164
130	0.0611	0.061	0.164
131	0.0606	0.0605	0.165
132	0.0596	0.0596	0.000
133	0.0583	0.0581	0.343
134	0.0571	0.057	0.175
135	0.0559	0.0556	0.537
136	0.0545	0.0542	0.550
137	0.0531	0.0528	0.565
138	0.0518	0.0519	-0.193
139	0.0505	0.0506	-0.198
140	0.0492	0.0492	0.000
141	0.0482	0.0482	0.000
142	0.0469	0.047	-0.213
143	0.046	0.0459	0.217
144	0.0448	0.0447	0.223
145	0.0436	0.0435	0.229
146	0.0426	0.0428	-0.469
147	0.0415	0.0414	0.241
148	0.0405	0.0403	0.494
149	0.0394	0.0392	0.508
150	0.0382	0.0381	0.262
151	0.0372	0.0371	0.269
152	0.0361	0.036	0.277
153	0.035	0.035	0.000
154	0.0339	0.034	-0.295

## Comparison Graph

