

Linearized Thermistor

Sept 27, '0

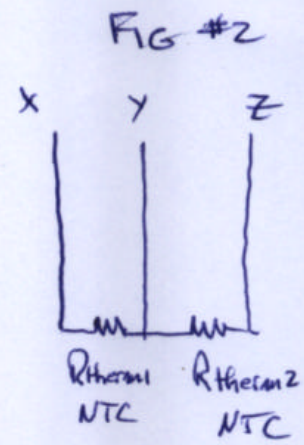
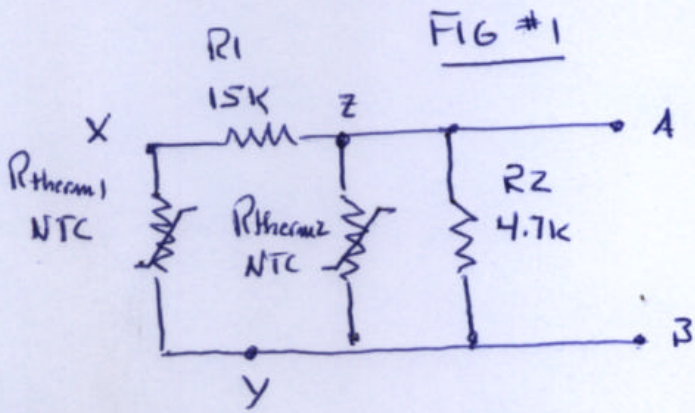


FIG #3

EXCEL SPREAD SHEET

	A	B	C	D	E	F	G	H	I	
0	32554	15000	47554	32554	19324.8	4700	3780.5	3797.5	<<< 1	
5	25339	15000	40339	25339	15563.0	4700	3609.8	3602.8		
10	19872	15000	34872	19872	12658.5	4700	3427.4	3408.1		
15	15698	15000	30698	15698	10386.6	4700	3235.8	3213.3		
20	12488	15000	27488	12488	8586.9	4700	3037.5	3018.6		
25	10000	15000	25000	10000	7142.9	4700	2834.7	2823.9		①
30	8059	15000	23059	8059	5971.9	4700	2630.1	2629.1		
35	6535	15000	21535	6535	5013.6	4700	2425.9	2434.4		
40	5330	15000	20330	5330	4222.9	4700	2224.3	2239.7		
45	4372	15000	19372	4372	3567.0	4700	2027.9	2044.9		
50	3605	15000	18605	3605	3019.9	4700	1838.5	1812.7	<<< 2	
55	2989	15000	17989	2989	2563.1	4700	1658.6	1662.0		
60	2490	15000	17490	2490	2179.7	4700	1489.1	1511.3		
65	2084	15000	17084	2084	1857.4	4700	1331.3	1360.5		②
70	1753	15000	16753	1753	1586.9	4700	1186.4	1209.8		
75	1481	15000	16481	1481	1358.9	4700	1054.1	1059.1		
80	1256	15000	16256	1256	1165.9	4700	934.2	908.3		
85	1070	15000	16070	1070	1003.2	4700	826.7	825.7	<<< 3	
90	915.4	15000	15915.4	915.4	865.6	4700	731.0	740.3		
95	786	15000	15786	786	748.7	4700	645.8	654.8		③
100	677.3	15000	15677.3	677.3	649.3	4700	570.4	569.4	<<< 4	

T_c R_{therm1} 15K $R_{therm1} + 15K$ R_{therm2} 4.7K FIG ↑ Using Piecewise Linear Eq
 D11E

Piecewise Linear Equations

- ① $R_{eq} = -38.95 * T_c + 3797$ $0 \leq T_c \leq 45$
- ② $R_{eq} = -31.0 * T_c + 3360$ $45 \leq T_c \leq 85$
- ③ $R_{eq} = -17.0 * T_c + 2278$ $85 \leq T_c \leq 100$