

Device Modeling Report

COMPONENTS: PIN Diode
PART NUMBER: L105AA
MANUFACTURER: Litec Corporation

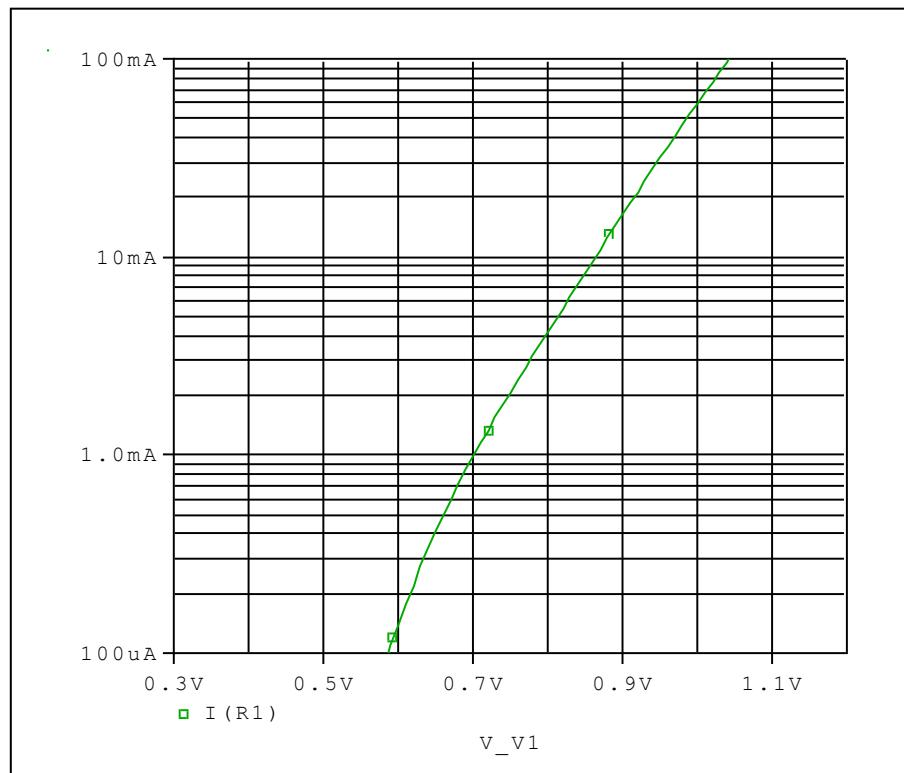


Bee Technologies Inc.

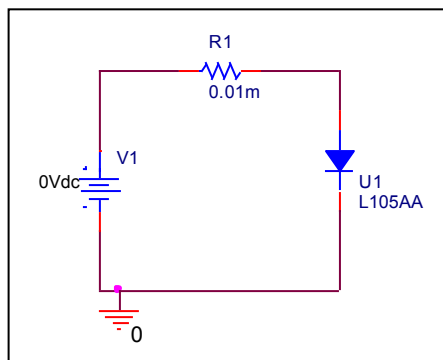
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a positive value)
IBV	Reverse Breakdown Current(a positive value)
TT	Transit Time
EG	Energy-band Gap

Forward Current Characteristic

Circuit Simulation Result

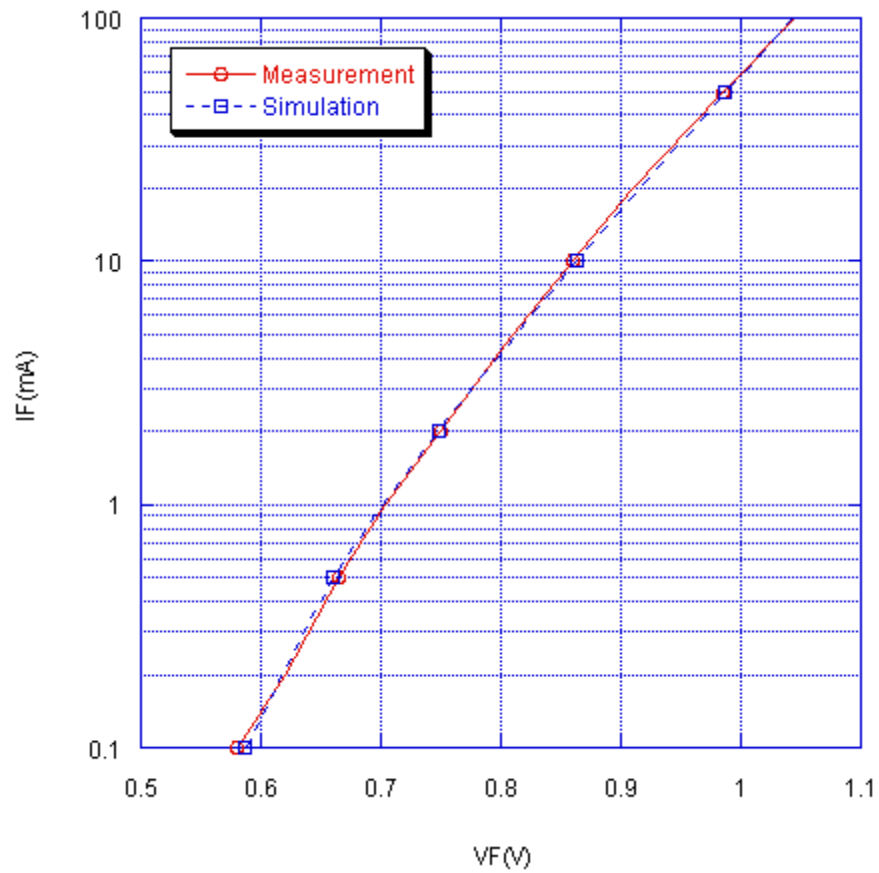


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

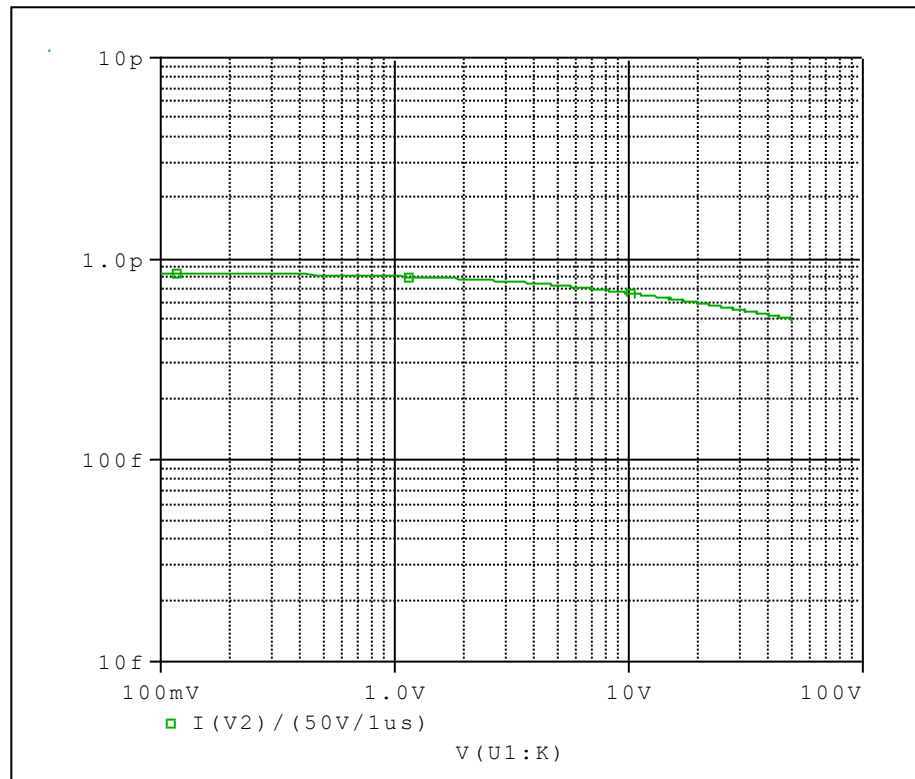


Simulation Result

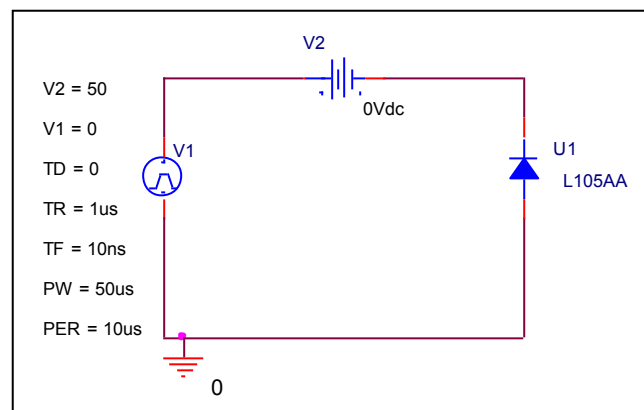
I_F (mA)	V_F (V)		Error(%)
	Measurement	Simulation	
0.100	0.580	0.586	1.034
0.200	0.620	0.616	-0.645
0.500	0.665	0.660	-0.752
1.000	0.707	0.702	-0.707
2.000	0.750	0.748	-0.267
5.000	0.810	0.813	0.370
10.000	0.860	0.864	0.465
20.000	0.910	0.915	0.549
50.000	0.985	0.986	0.102
100.000	1.045	1.043	-0.191

Junction Capacitance Characteristic

Circuit Simulation Result

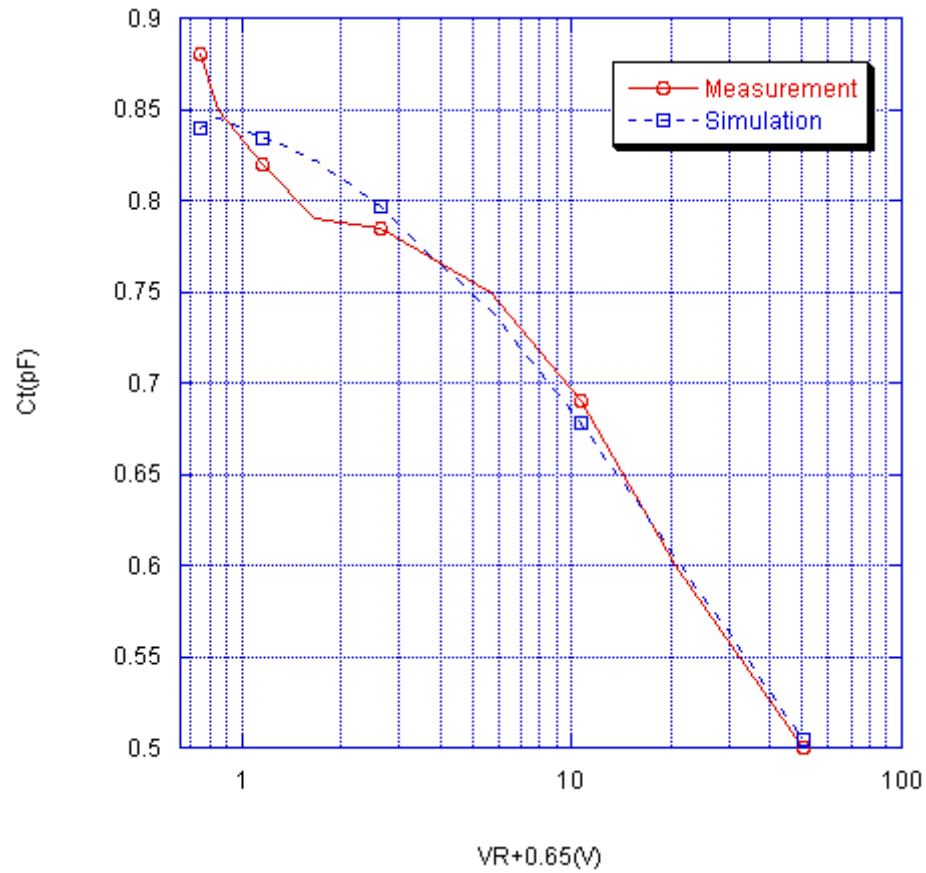


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

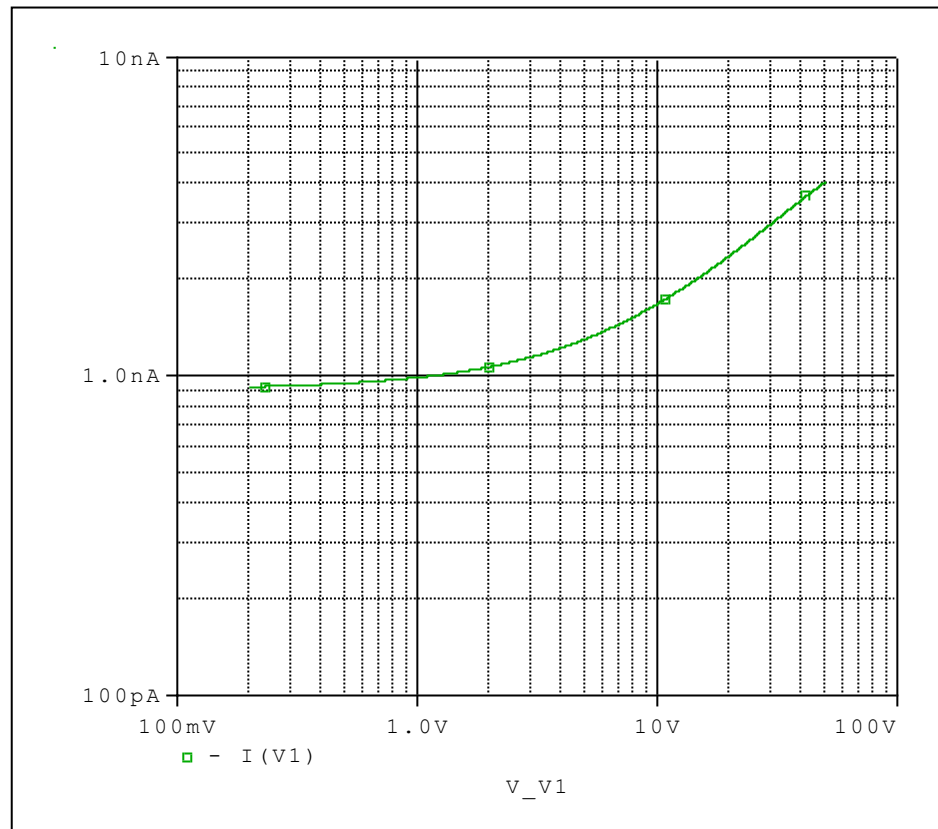


Simulation Result

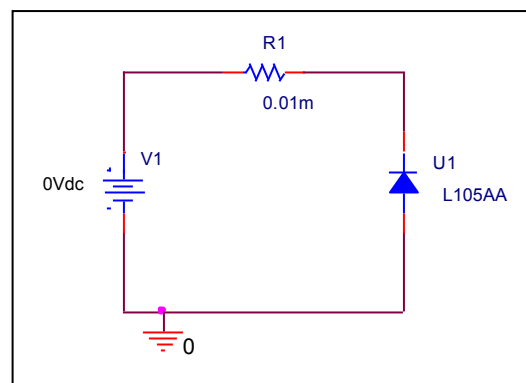
$V_R(V)+0.65$	$C_t(pF)$		Error(%)
	Measurement	Simulation	
0.750	0.880	0.840	-4.545
0.850	0.850	0.845	-0.588
1.150	0.820	0.834	1.707
1.650	0.790	0.822	4.051
2.650	0.785	0.797	1.529
5.650	0.750	0.740	-1.333
10.650	0.690	0.678	-1.739
20.650	0.600	0.604	0.667
50.650	0.500	0.504	0.800

Reverse Characteristic

Circuit Simulation Result

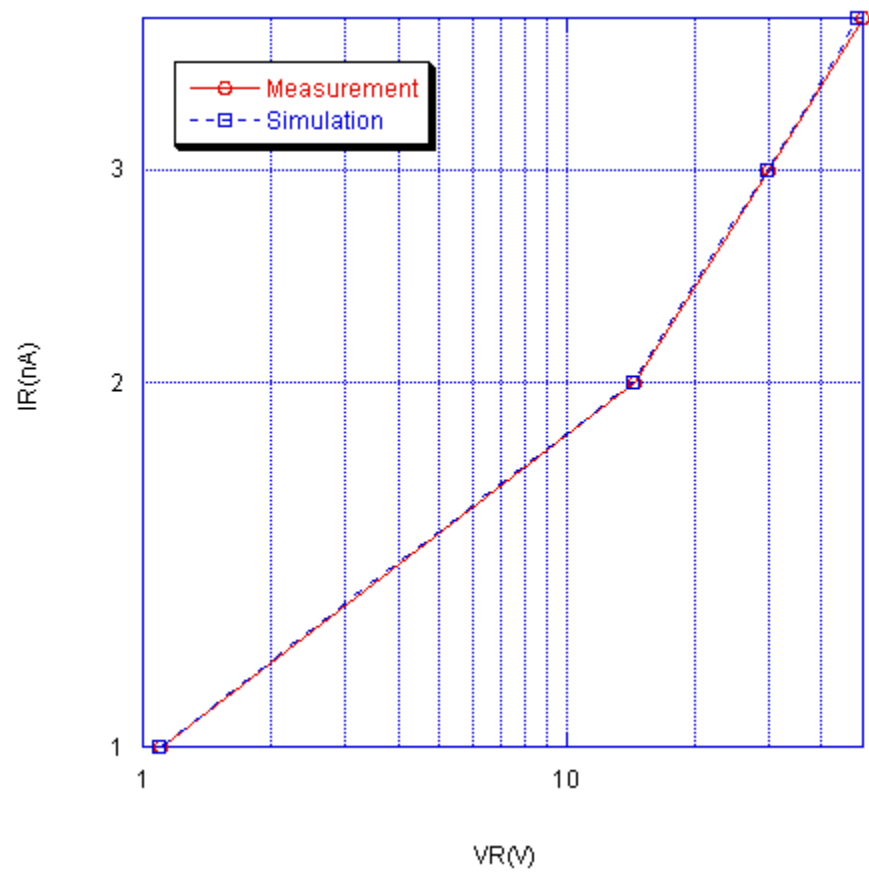


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

IR(nA)	V _R (V)		Error(%)
	Measurement	Simulation	
1.000	1.100	1.094	-0.545
2.000	14.500	14.319	-1.248
3.000	30.000	29.643	-1.190
4.000	50.000	48.576	-2.848