

Device Modeling Report

COMPONENTS: PIN Diode
PART NUMBER: L204BB
MANUFACTURER: Litec Corporation

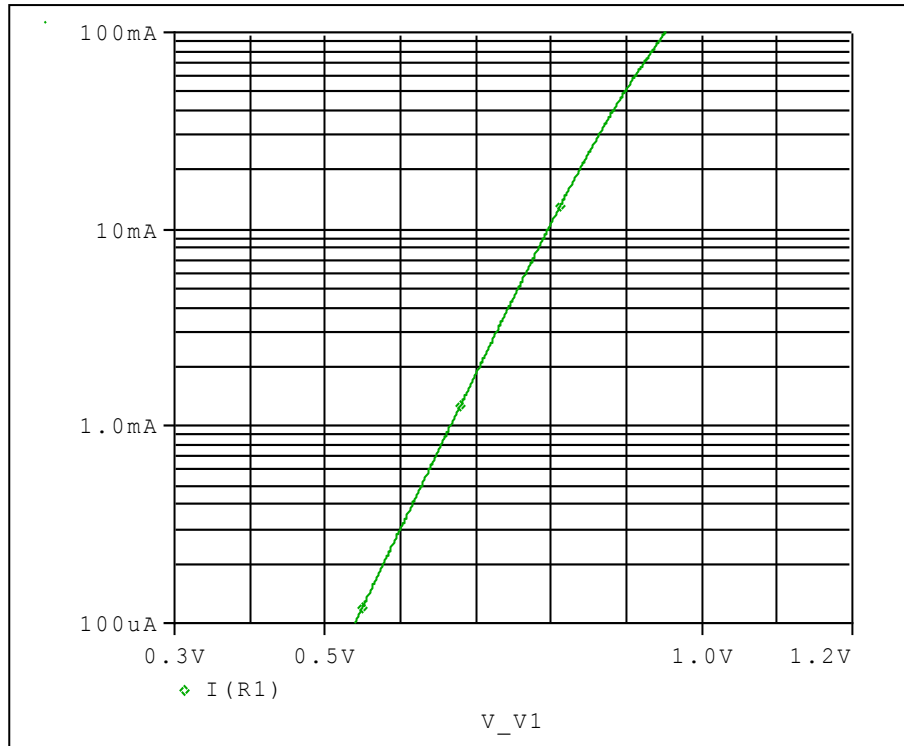


Bee Technologies Inc.

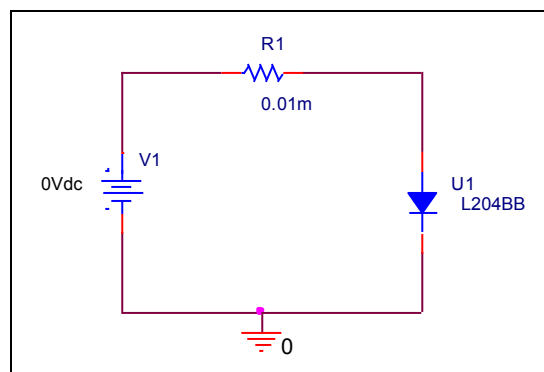
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

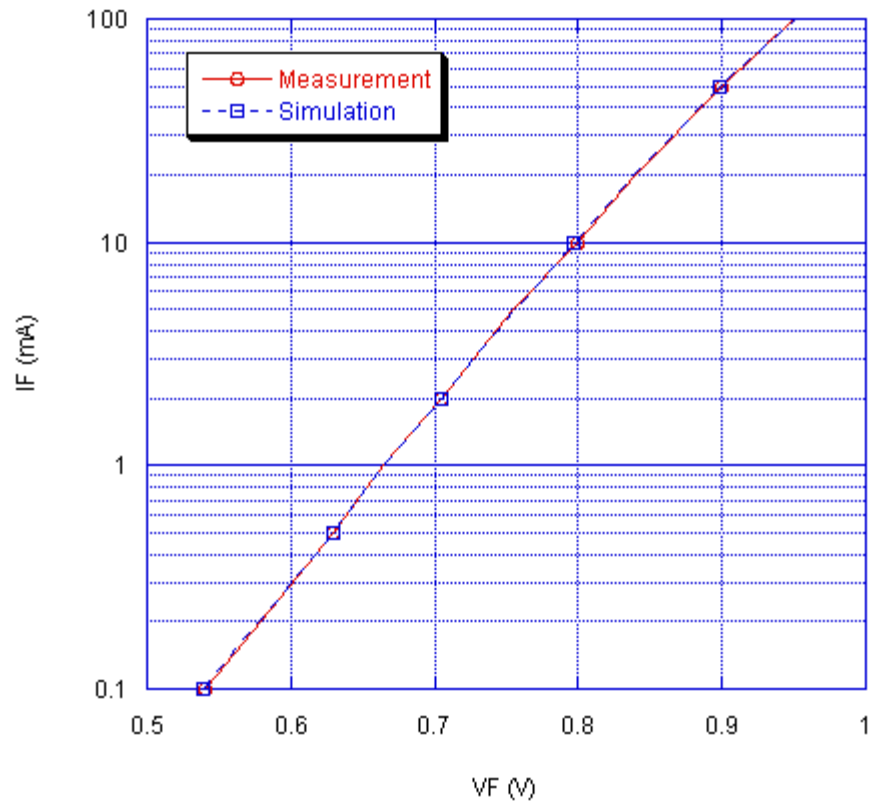


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

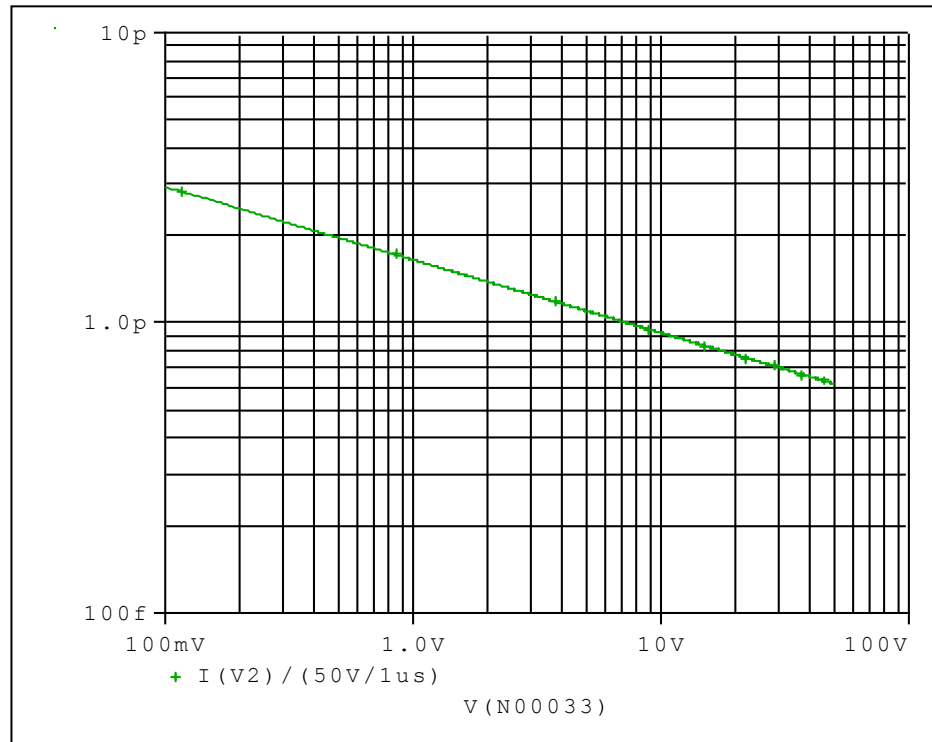


Simulation Result

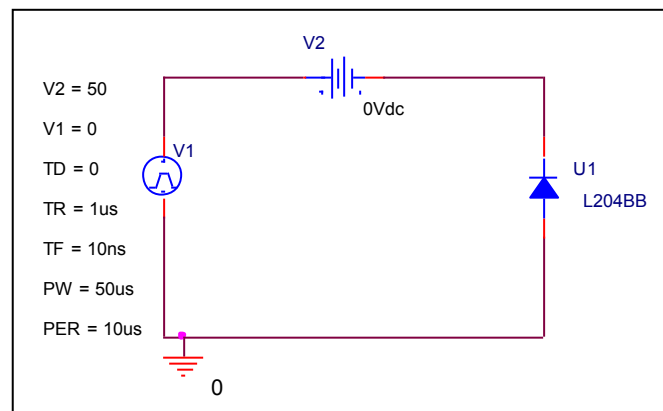
I _F (mA)	V _F (V)		Error(%)
	Measurement	Simulation	
0.100	0.540	0.539	-0.185
0.200	0.580	0.578	-0.345
0.500	0.630	0.629	-0.159
1.000	0.665	0.665	0.000
2.000	0.705	0.705	0.000
5.000	0.755	0.756	0.165
10.000	0.800	0.797	-0.375
20.000	0.840	0.838	-0.238
50.000	0.900	0.899	-0.111
100.000	0.950	0.951	0.105

Junction Capacitance Characteristic

Circuit Simulation Result

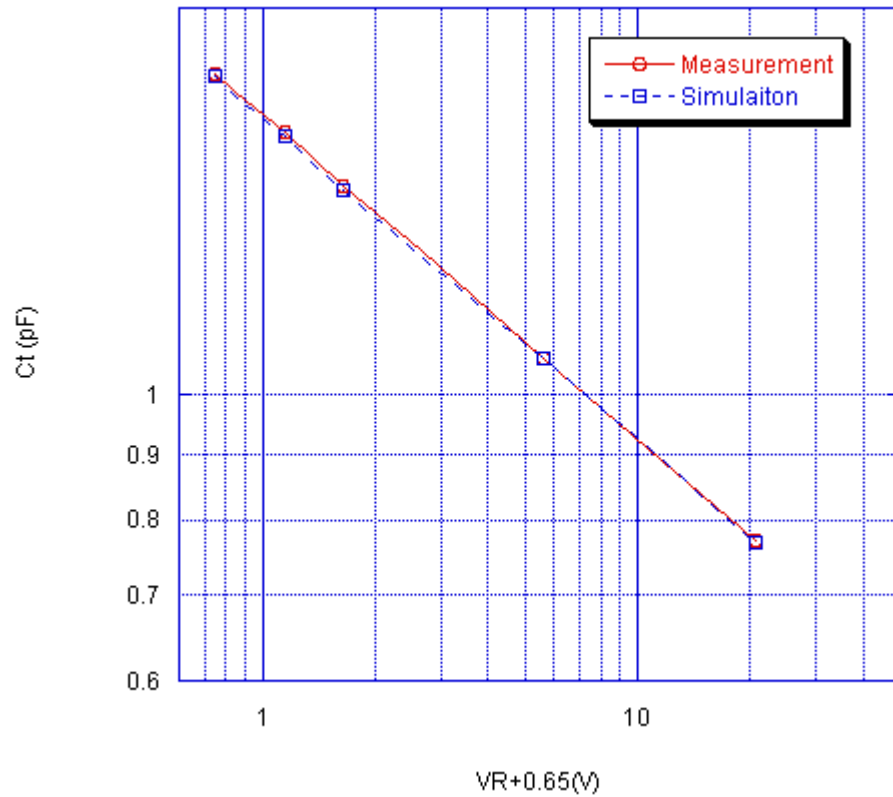


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

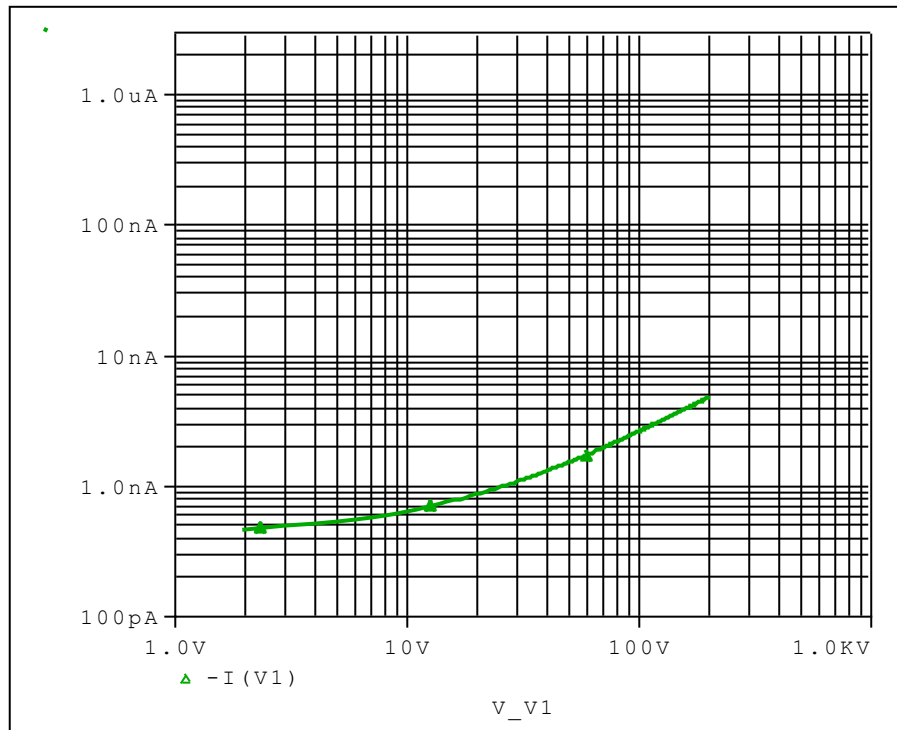


Simulation Result

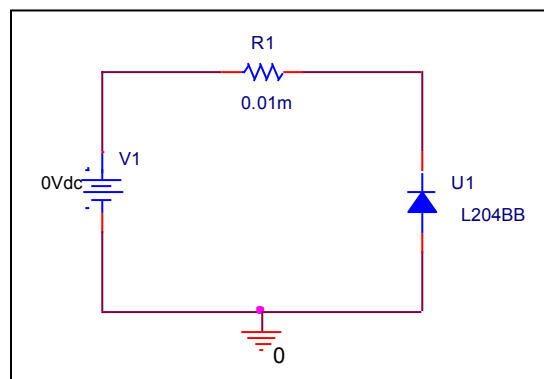
$V_R(V)+0.65$	$C_t(pF)$		Error(%)
	Measurement	Simulation	
0.750	1.780	1.770	-0.562
0.850	1.720	1.710	-0.581
1.150	1.600	1.590	-0.625
1.650	1.455	1.445	-0.687
2.650	1.295	1.284	-0.849
5.650	1.070	1.068	-0.187
10.650	0.910	0.912	0.220
20.650	0.770	0.769	-0.130

Reverse Characteristic

Circuit Simulation Result

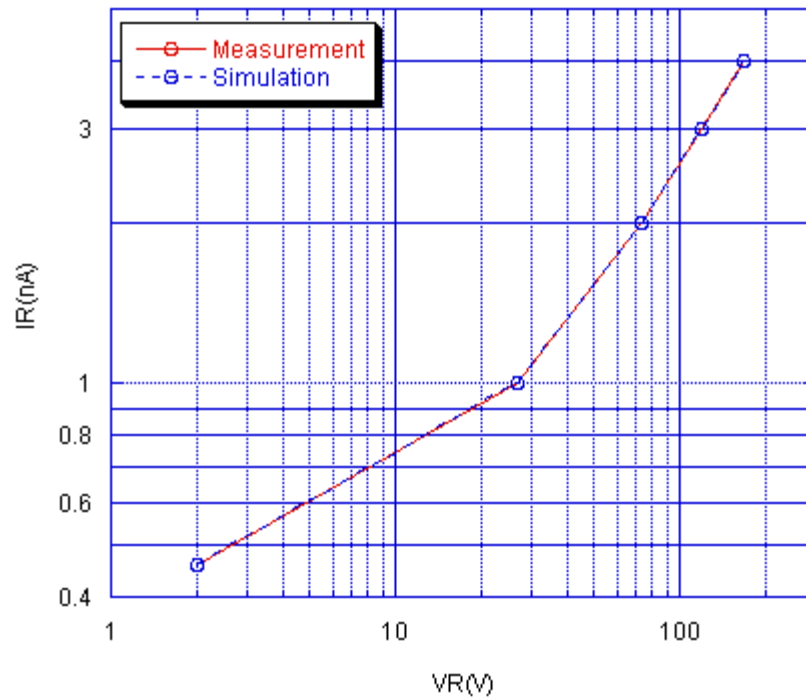


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

IR(nA)	V _R (V)		Error(%)
	Measurement	Simulation	
0.460	2.000	2.000	0.000
1.000	26.900	26.700	-0.743
2.000	73.800	73.500	-0.407
3.000	119.900	119.500	-0.334
4.000	168.000	168.100	0.060