

Device Modeling Report

COMPONENTS: PIN Diode
PART NUMBER: L301DB
MANUFACTURER: Litec Corporation

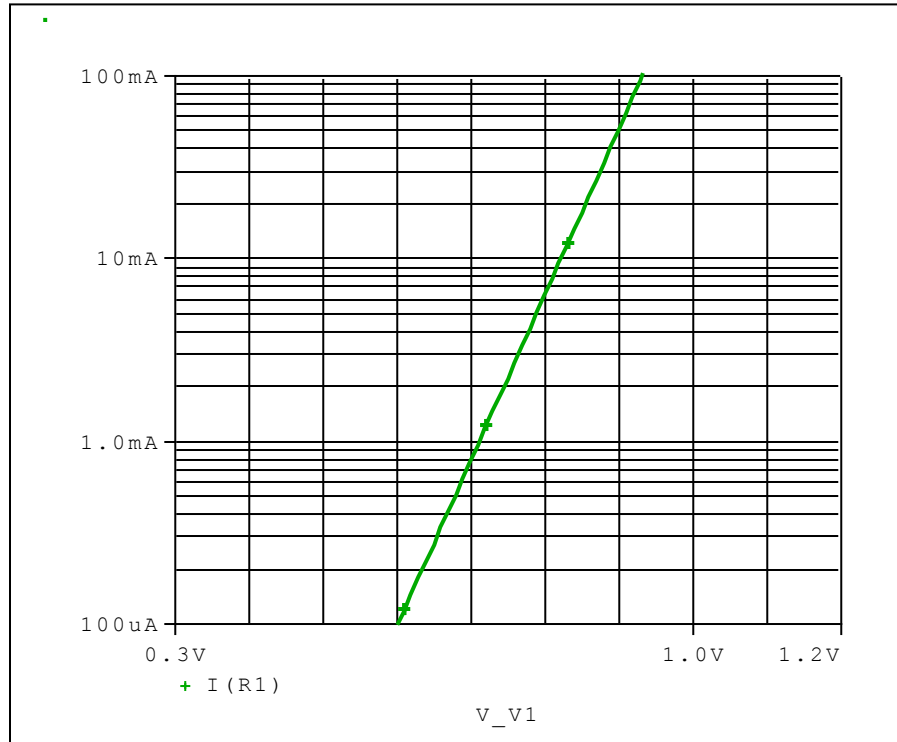


Bee Technologies Inc.

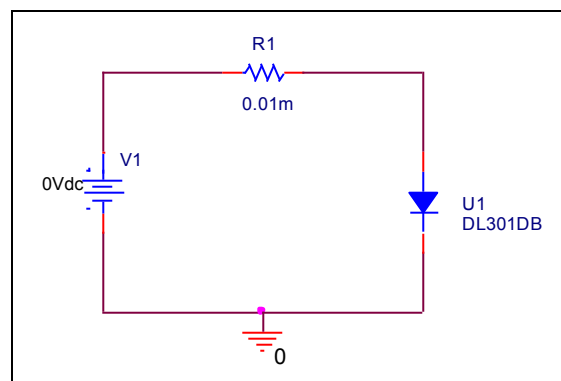
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

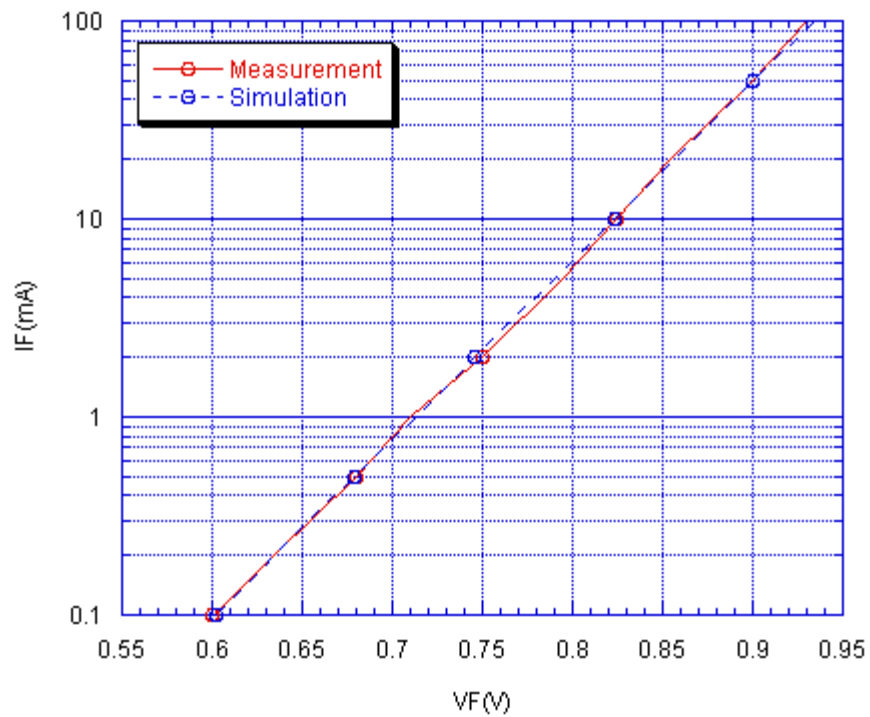


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

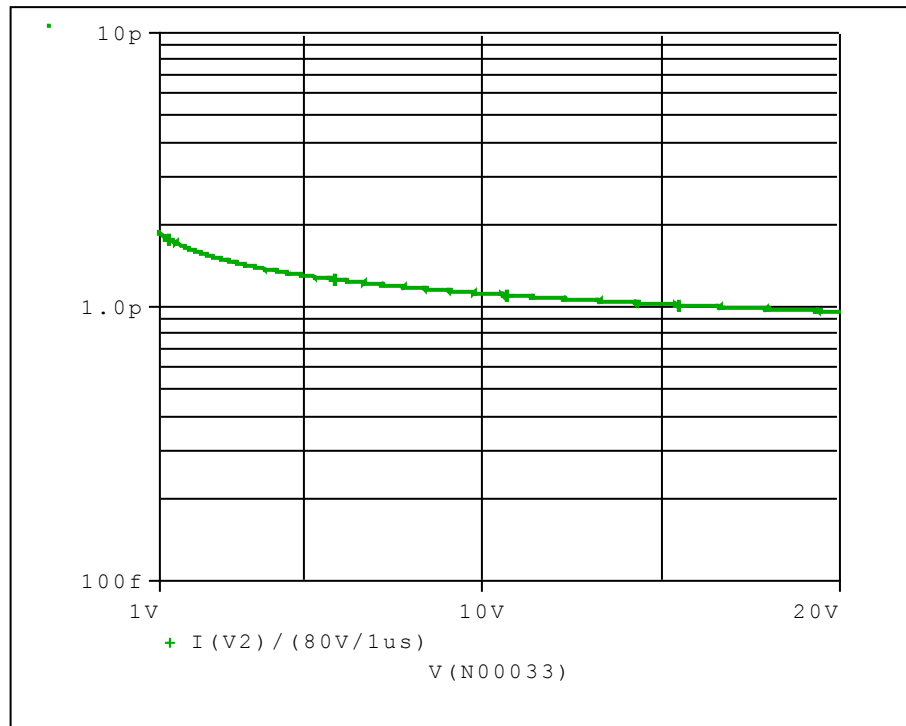


Simulation Result

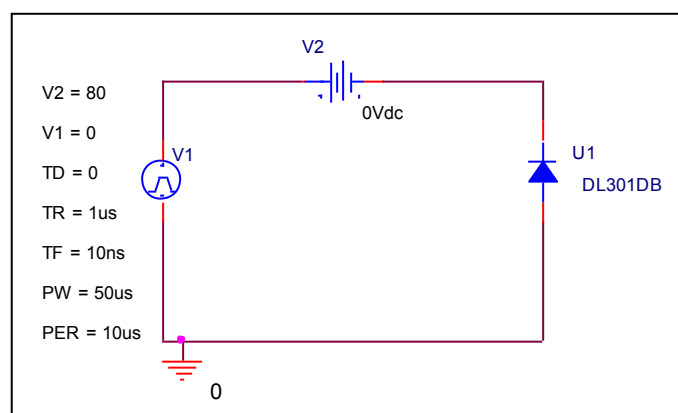
I_F (mA)	V_F (V)		Error(%)
	Measurement	Simulation	
0.1	0.600	0.602	0.333
0.2	0.635	0.635	0.000
0.5	0.680	0.679	-0.147
1	0.710	0.713	0.423
2	0.750	0.746	-0.533
5	0.795	0.790	-0.629
10	0.825	0.823	-0.242
20	0.855	0.857	0.234
50	0.900	0.900	0.000
100	0.930	0.934	0.430

Junction Capacitance Characteristic

Circuit Simulation Result

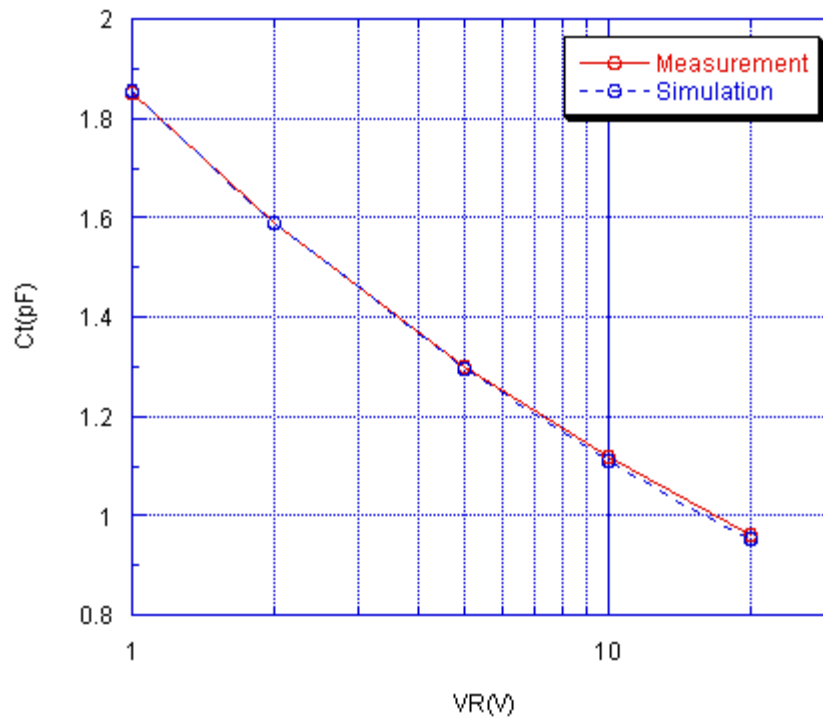


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

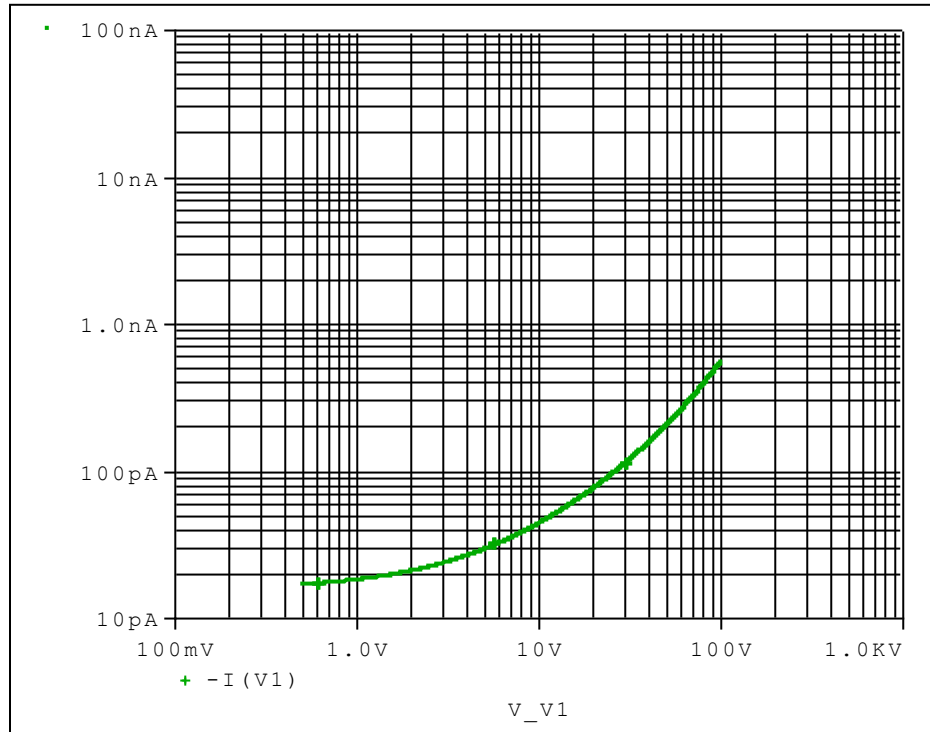


Simulation Result

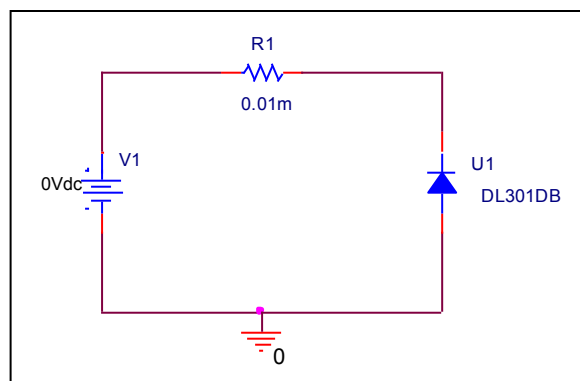
V_R (V)	C_t (pF)		Error(%)
	Measurement	Simulation	
1.000	1.850	1.854	0.216
2.000	1.590	1.591	0.063
5.000	1.300	1.296	-0.308
10.000	1.120	1.112	-0.714
20.000	9.600	9.550	-0.521

Reverse Characteristic

Circuit Simulation Result

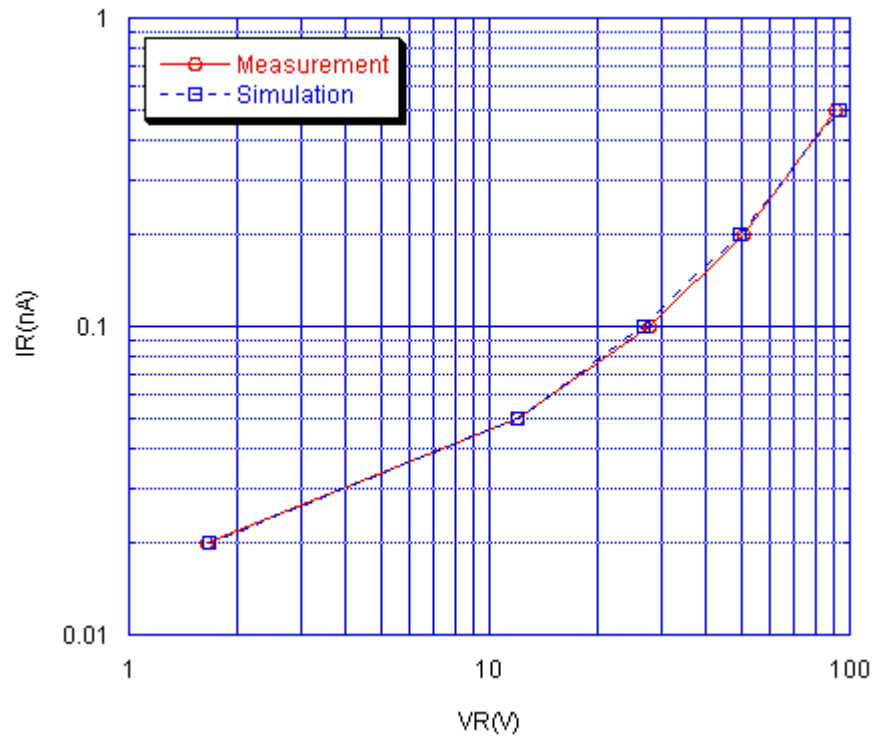


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

IR(nA)	V _R (V)		Error(%)
	Measurement	Simulation	
0.020	1.650	1.664	0.848
0.050	12.000	11.983	-0.142
0.100	28.000	26.645	-4.839
0.200	51.000	49.447	-3.045
0.500	92.000	94.317	2.518