

Device Modeling Report

COMPONENTS: PIN Diode
PART NUMBER: L303EC
MANUFACTURER: Litec Corporation

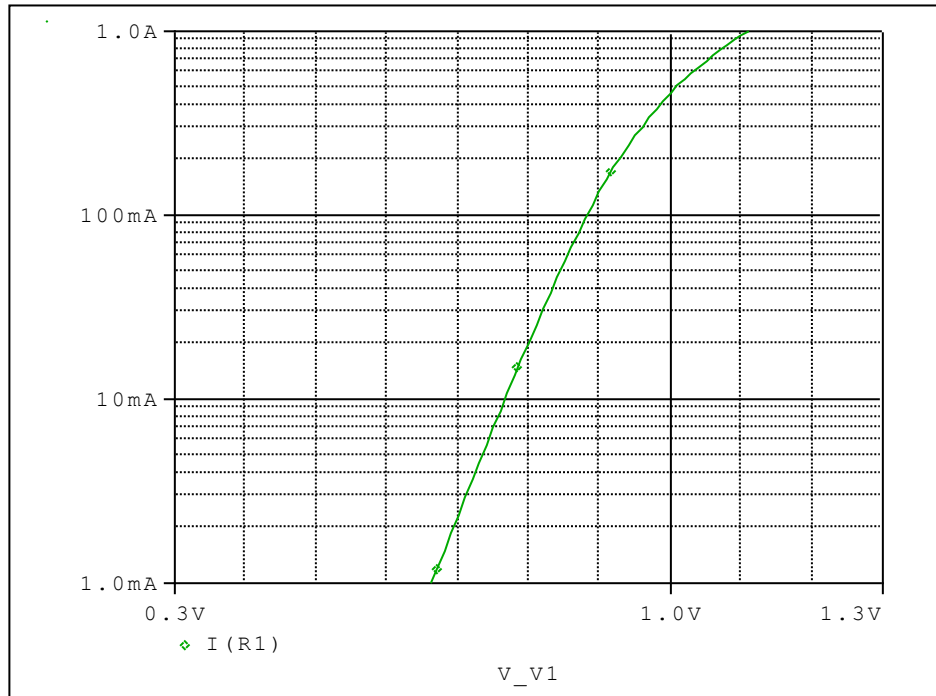


Bee Technologies Inc.

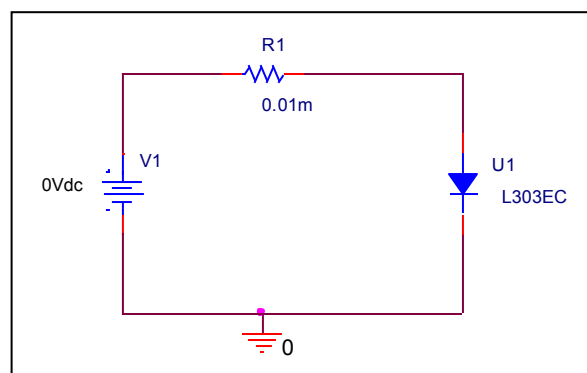
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

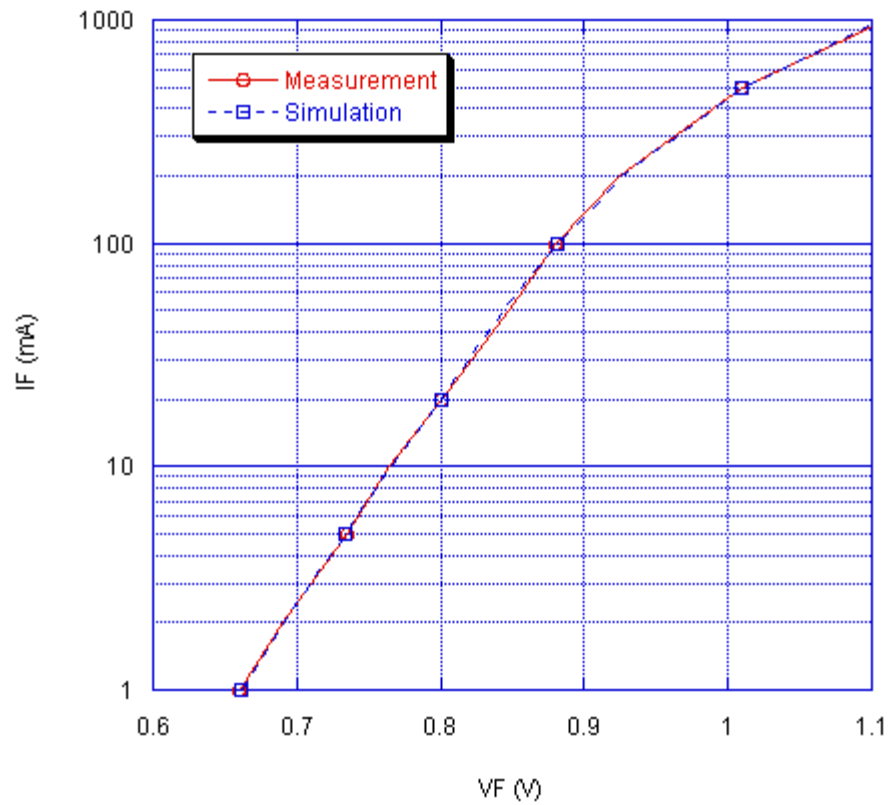


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

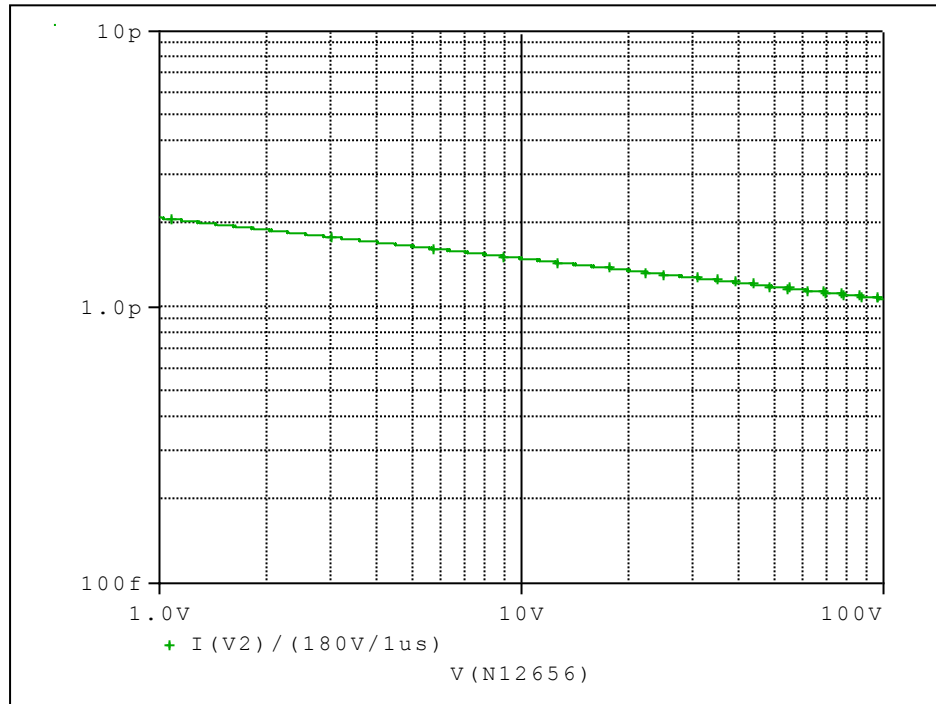


Simulation Result

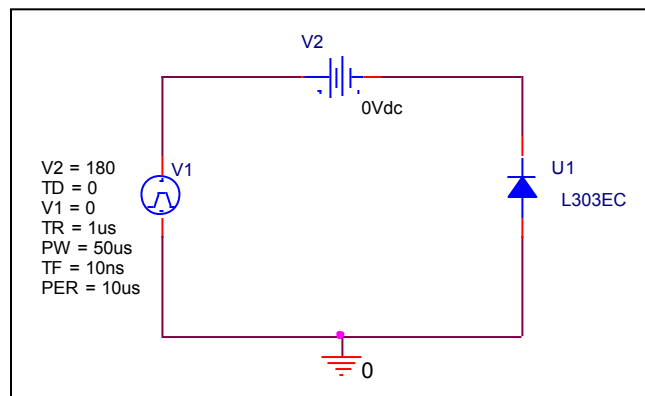
I _F (mA)	V _F (V)		Error(%)
	Measurement	Simulation	
1.000	0.660	0.661	0.152
2.000	0.690	0.692	0.290
5.000	0.735	0.734	-0.136
10.000	0.765	0.766	0.131
20.000	0.800	0.800	0.000
50.000	0.848	0.844	-0.472
100.000	0.880	0.882	0.227
200.000	0.925	0.926	0.108
500.000	1.010	1.010	0.000
1000.000	1.108	1.107	-0.090

Junction Capacitance Characteristic

Circuit Simulation Result

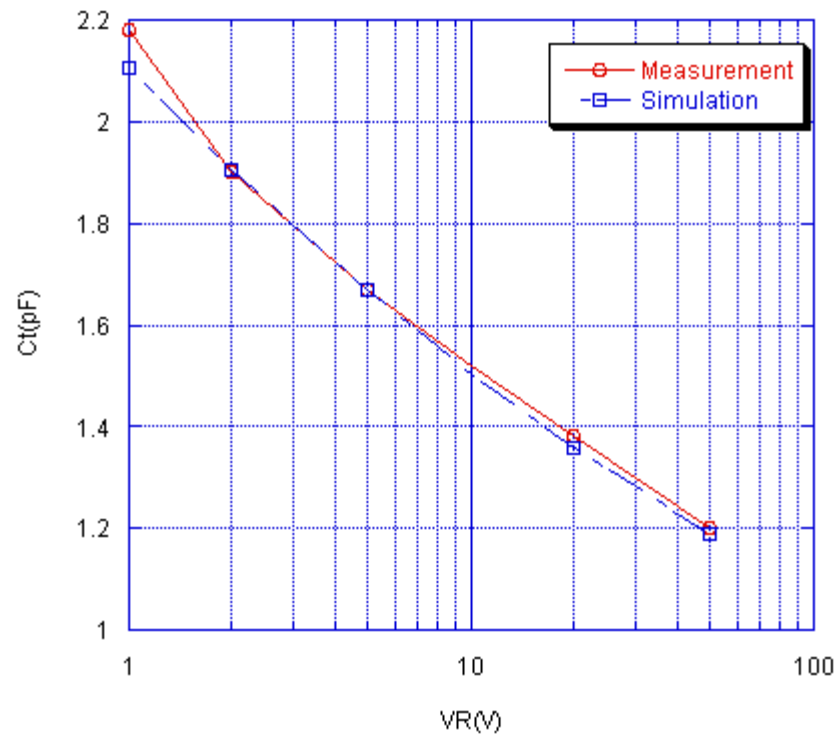


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

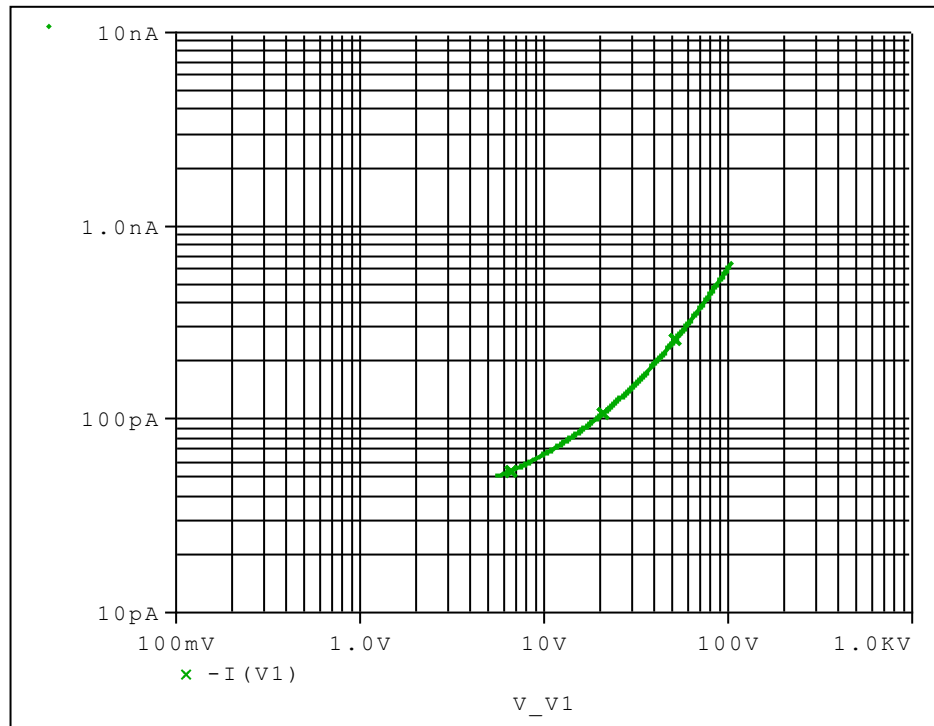


Simulation Result

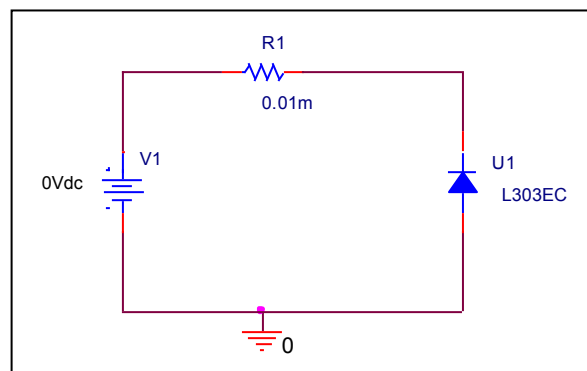
V_R (V)	C_t (pF)		Error(%)
	Measurement	Simulation	
1.000	2.180	2.106	-3.394
2.000	1.900	1.905	0.263
5.000	1.670	1.670	0.000
10.000	1.520	1.502	-1.184
20.000	1.380	1.359	-1.522
50.000	1.200	1.188	-1.000

Reverse Characteristic

Circuit Simulation Result

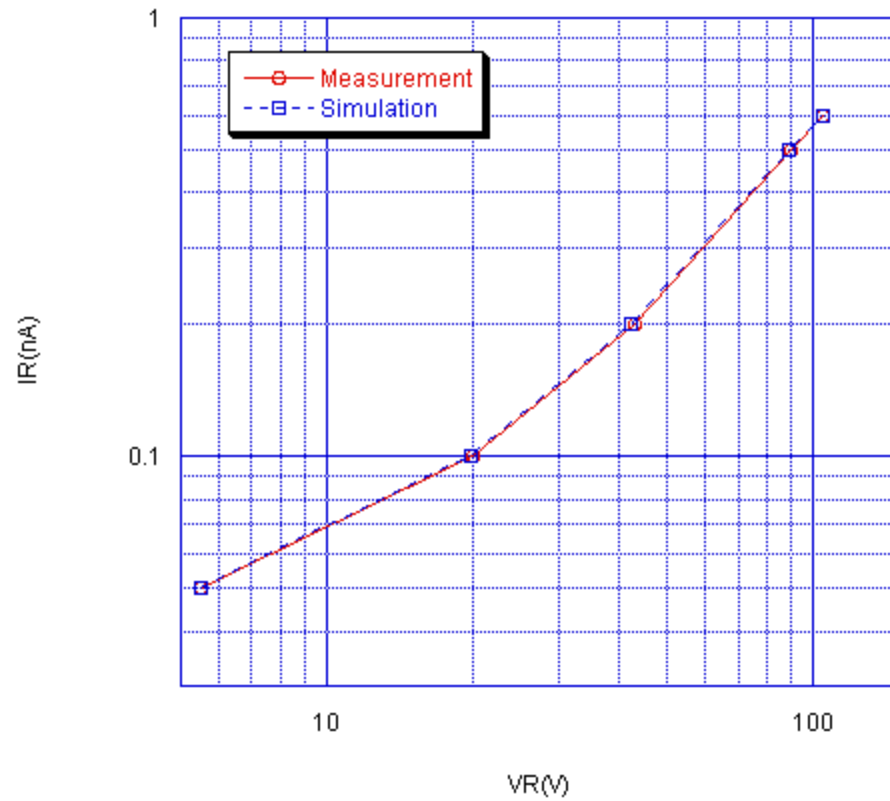


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

IR(nA	VR(V)		Error(%)
	Measurement	Simulation	
0.050	5.500	5.500	0.000
0.100	20.000	19.700	-1.500
0.200	43.000	42.300	-1.628
0.500	90.000	89.500	-0.556
0.600	105.000	105.000	0.000