

Device Modeling Report

COMPONENTS: PIN Diode
PART NUMBER: L308CC
MANUFACTURER: Litec Corporation

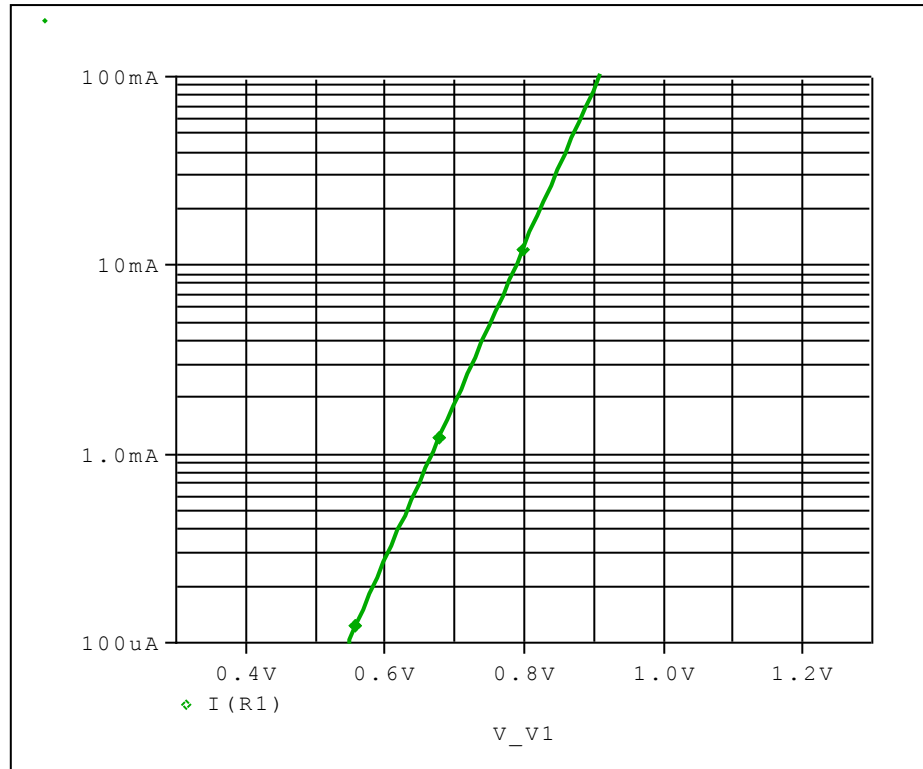


Bee Technologies Inc.

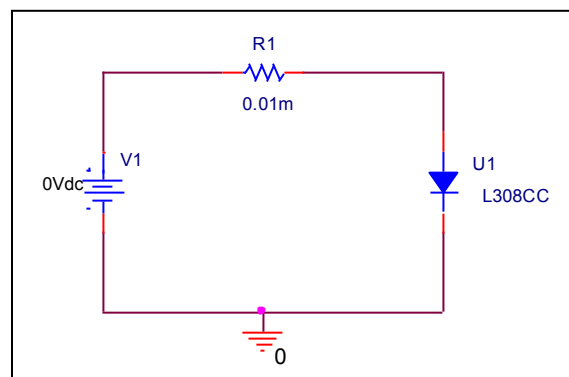
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

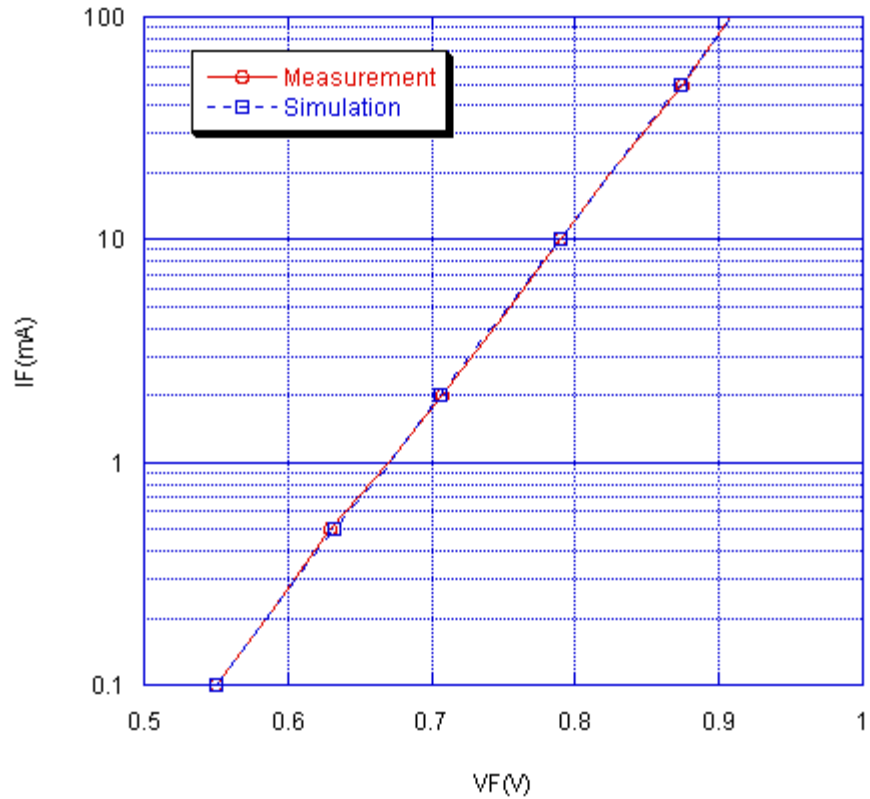


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

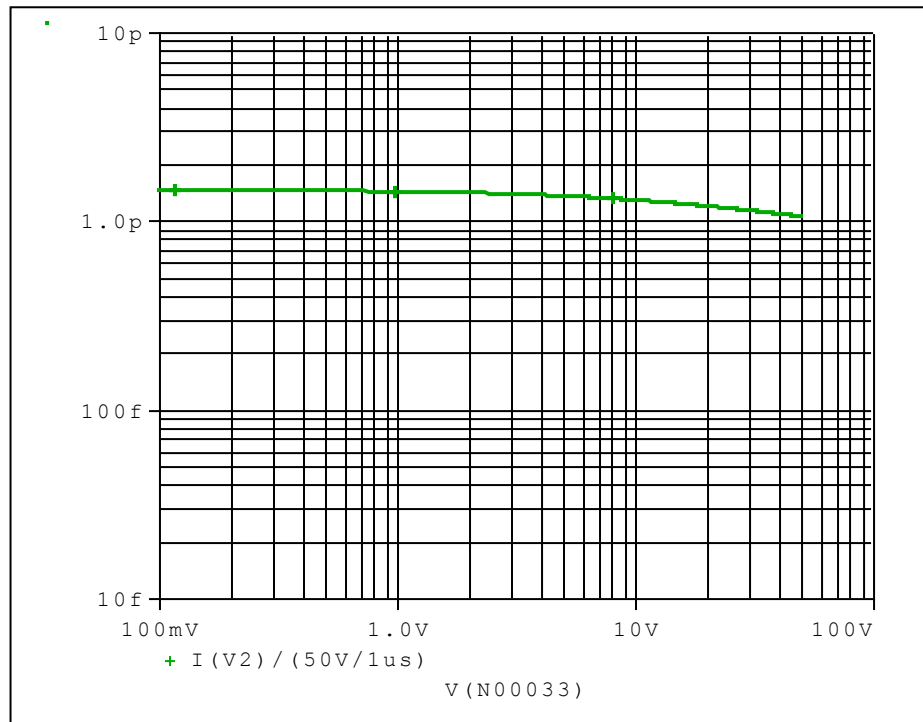


Simulation Result

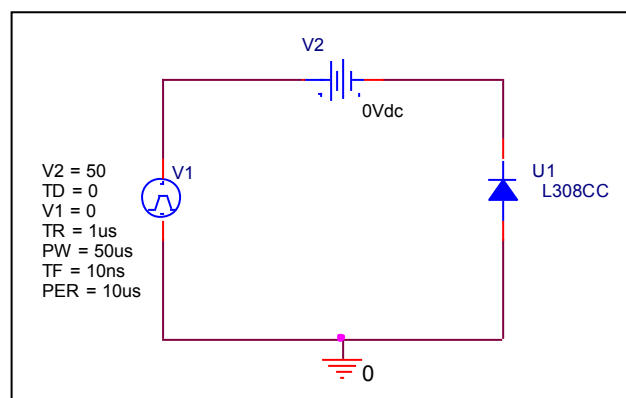
I_F (mA)	V_F (V)		Error(%)
	Measurement	Simulation	
0.100	0.550	0.550	0.000
0.200	0.585	0.585	0.000
0.500	0.630	0.633	0.476
1.000	0.670	0.671	0.149
2.000	0.707	0.706	-0.141
5.000	0.755	0.754	-0.132
10.000	0.790	0.790	0.000
20.000	0.825	0.825	0.000
50.000	0.875	0.874	-0.114
100.000	0.908	0.909	0.110

Junction Capacitance Characteristic

Circuit Simulation Result

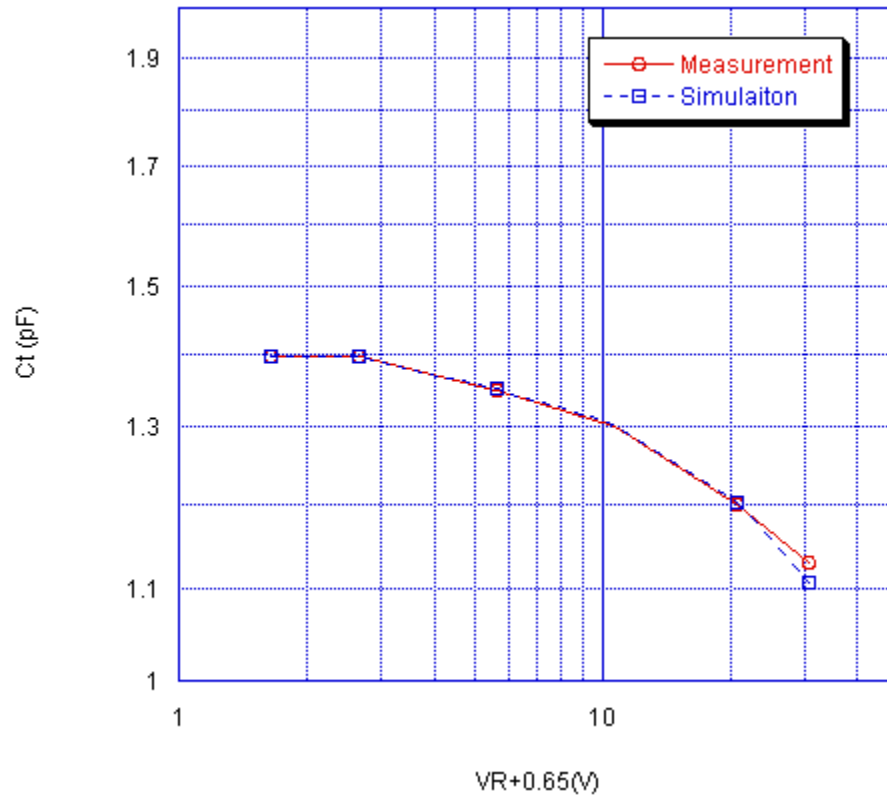


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

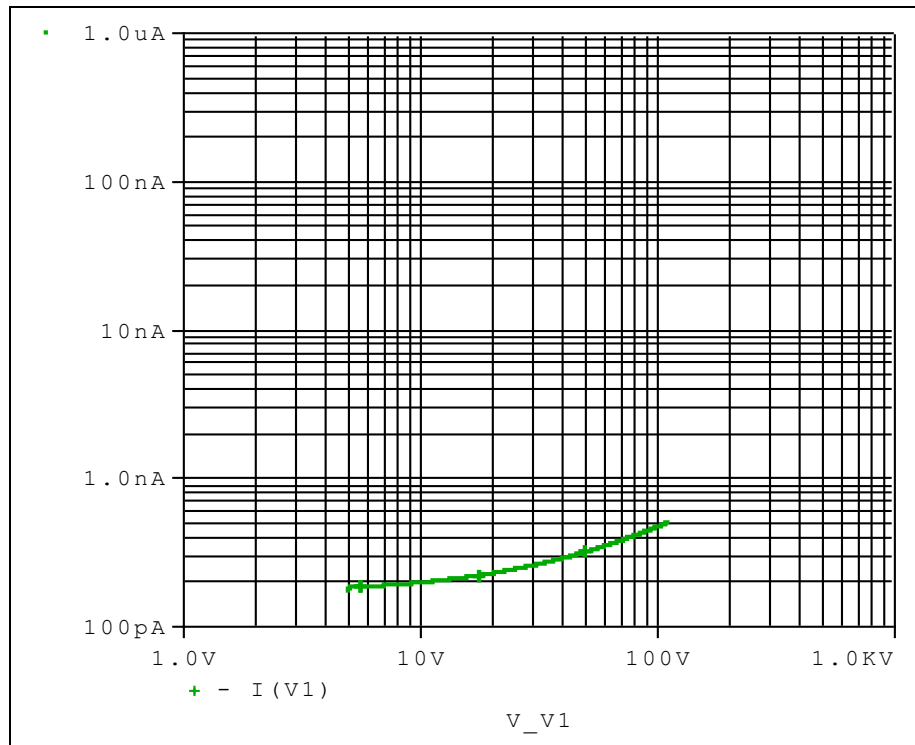


Simulation Result

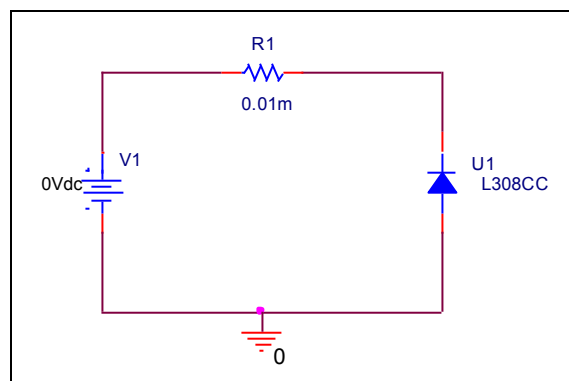
$V_R + 0.65(V)$	$C_t(pF)$		Error(%)
	Measurement	Simulation	
1.650	1.397	1.397	0.036
2.650	1.396	1.396	0.000
5.650	1.350	1.351	0.074
10.650	1.300	1.301	0.077
20.650	1.200	1.201	0.083
30.650	1.130	1.106	-2.124

Reverse Characteristic

Circuit Simulation Result

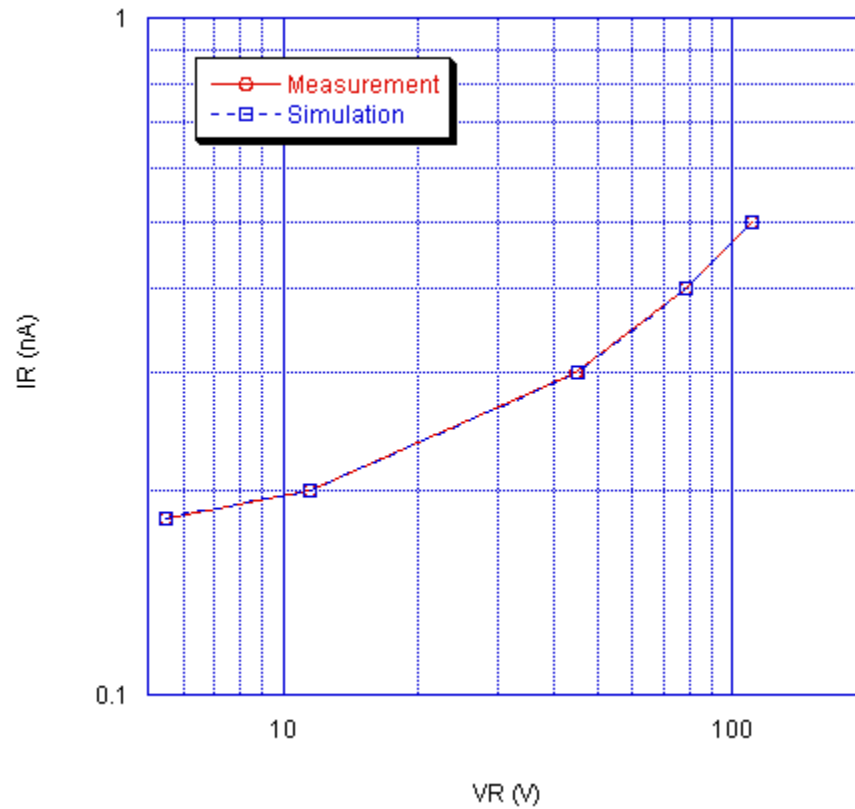


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

IR(nA)	VR(V)		Error(%)
	Measurement	Simulation	
0.182	5.500	5.490	-0.182
0.200	11.420	11.482	0.543
0.300	45.000	45.056	0.124
0.400	78.700	78.643	-0.072
0.500	110.000	110.000	0.000