

Device Modeling Report

COMPONENTS: PIN Diode
PART NUMBER: L407CD
MANUFACTURER: Litec Corporation

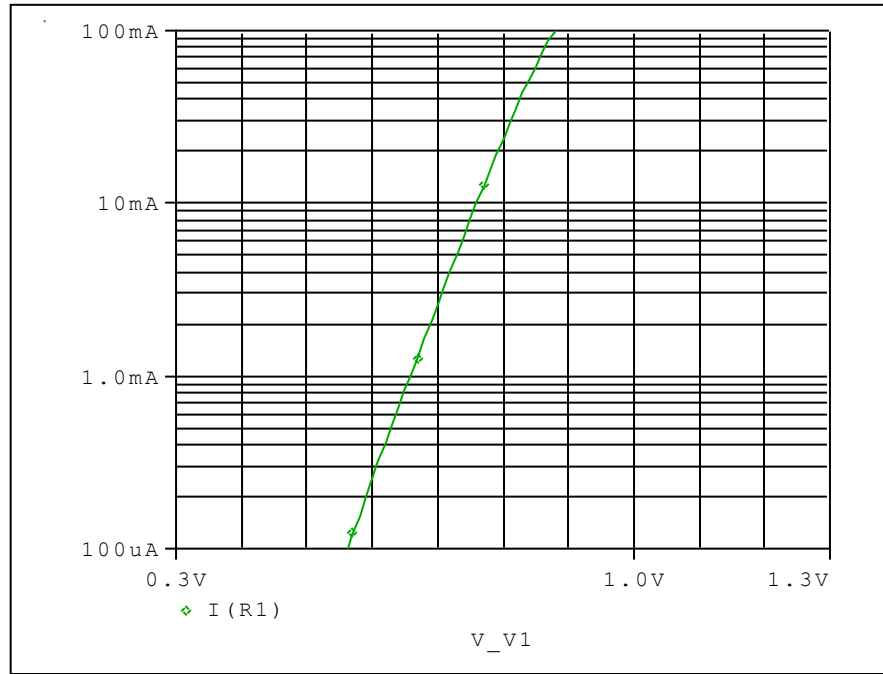


Bee Technologies Inc.

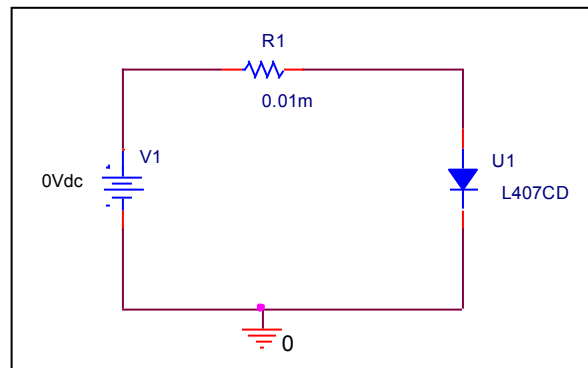
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

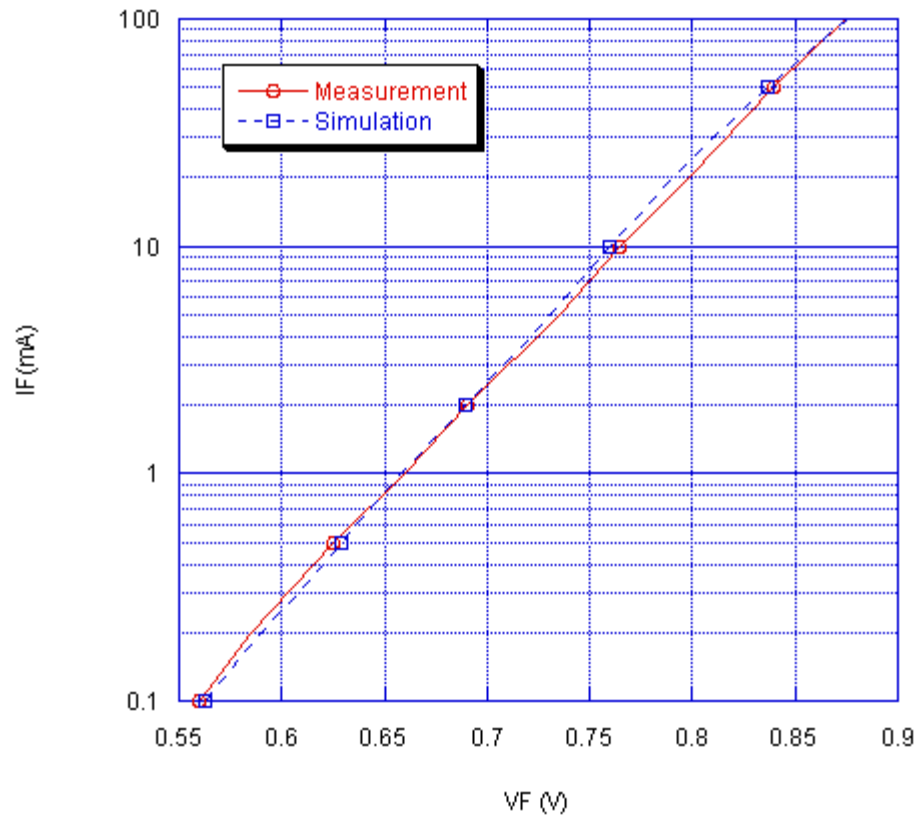


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

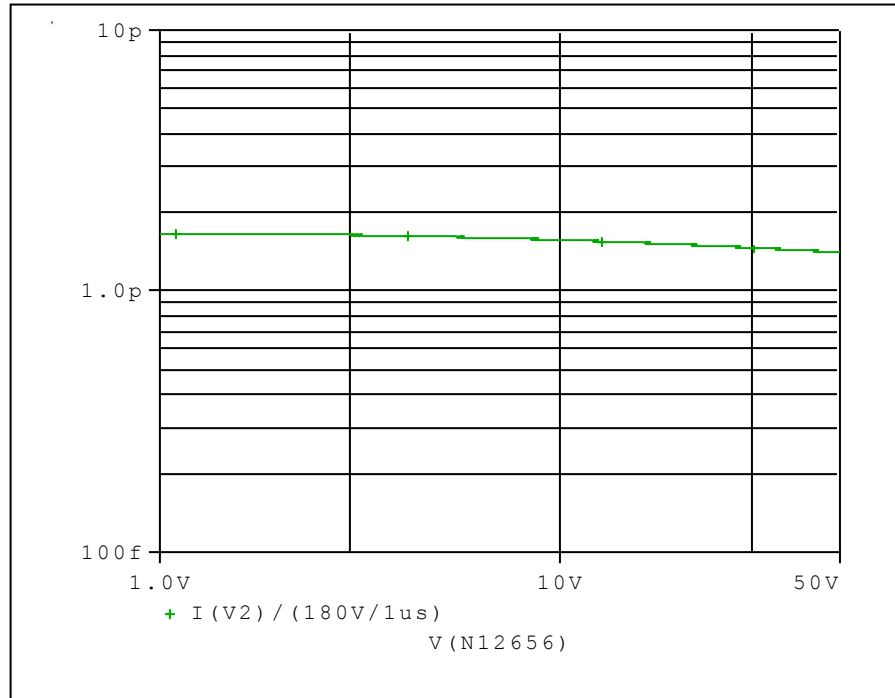


Simulation Result

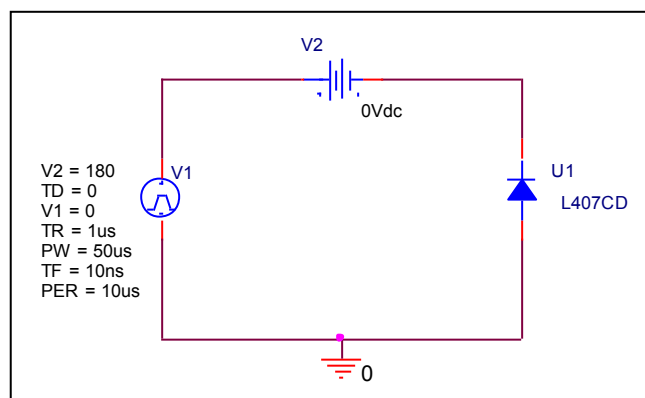
I _F (mA)	V _F (V)		Error(%)
	Measurement	Simulation	
0.100	0.560	0.563	0.536
0.200	0.579	0.590	1.926
0.500	0.625	0.629	0.580
1.000	0.660	0.658	-0.303
2.000	0.690	0.689	-0.145
5.000	0.735	0.730	-0.680
10.000	0.765	0.760	-0.654
20.000	0.799	0.791	-0.940
50.000	0.840	0.837	-0.357
100.000	0.875	0.876	0.114

Junction Capacitance Characteristic

Circuit Simulation Result

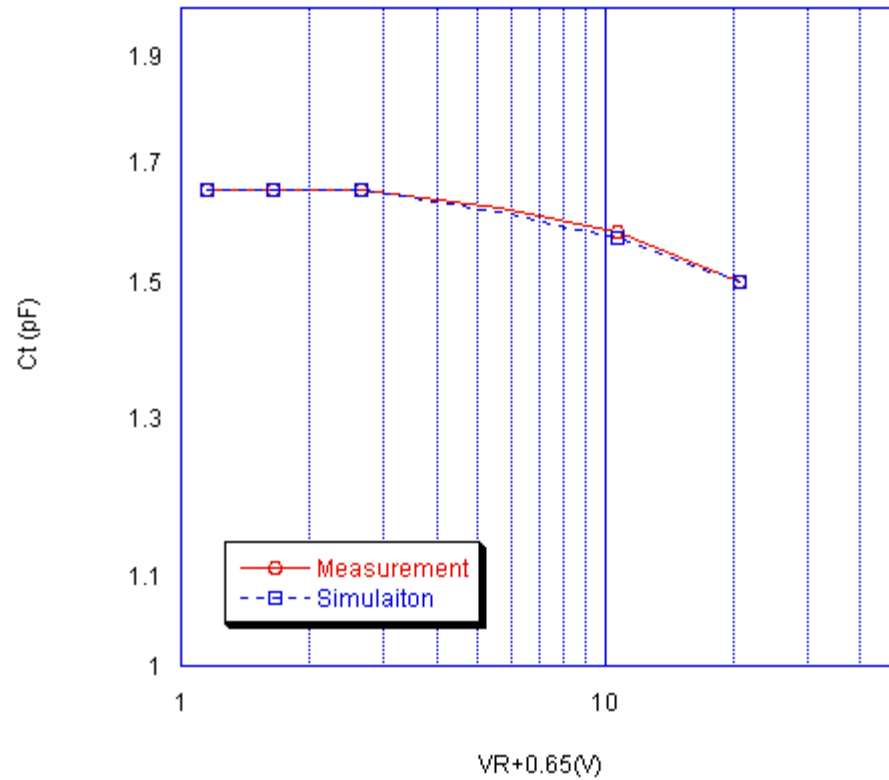


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

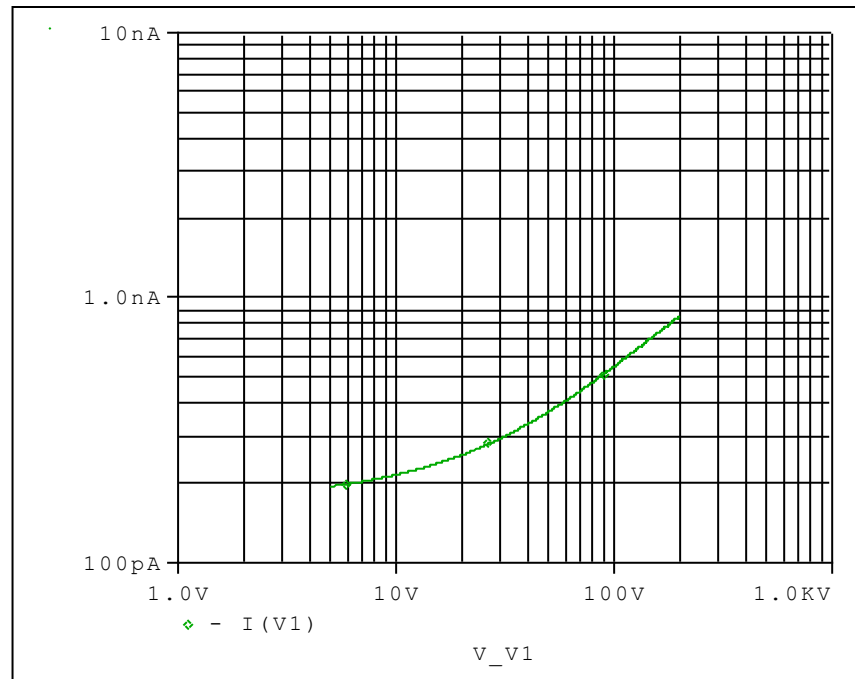


Simulation Result

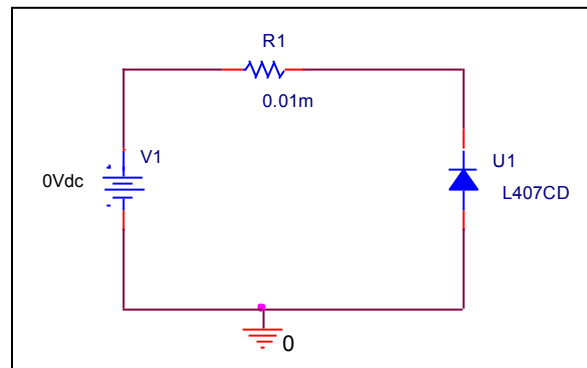
$V_R+0.650(V)$	$C_t(pF)$		Error(%)
	Measurement	Simulation	
1.150	1.650	1.650	0.000
1.650	1.650	1.650	0.000
2.650	1.650	1.650	0.000
5.650	1.620	1.613	-0.432
10.650	1.580	1.570	-0.633
20.650	1.500	1.500	0.000

Reverse Characteristic

Circuit Simulation Result

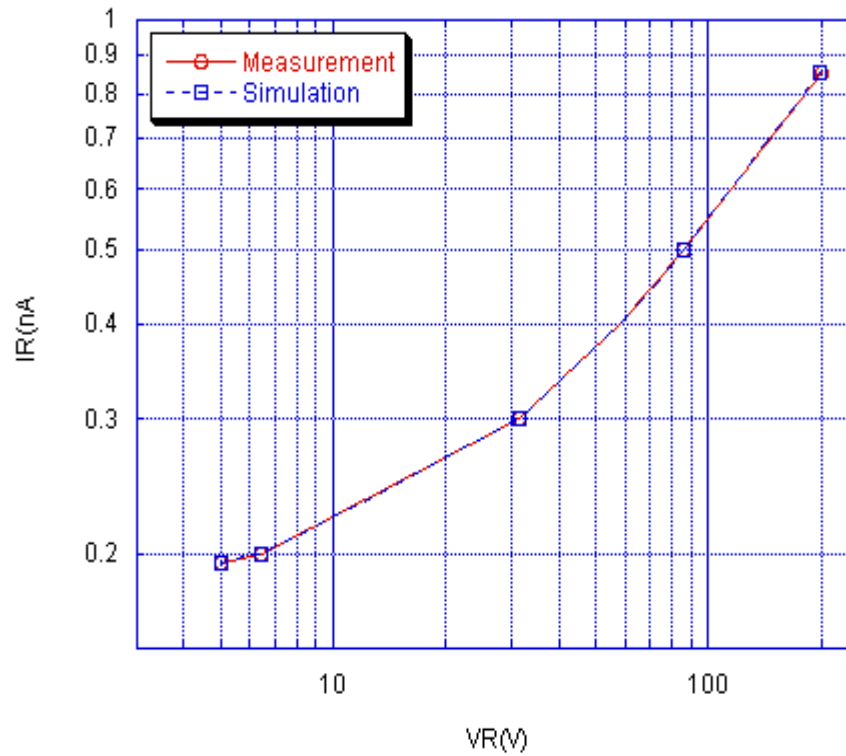


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

IR(nA)	V _R (V)		Error(%)
	Measurement	Simulation	
0.194	5.000	5.000	0.000
0.200	6.400	6.450	0.781
0.300	31.500	31.400	-0.317
0.400	57.800	57.700	-0.173
0.500	85.500	85.400	-0.117
0.851	200.000	199.000	-0.500