

Device Modeling Report

COMPONENTS: PIN Diode
PART NUMBER: L402FD
MANUFACTURER: Litec Corporation

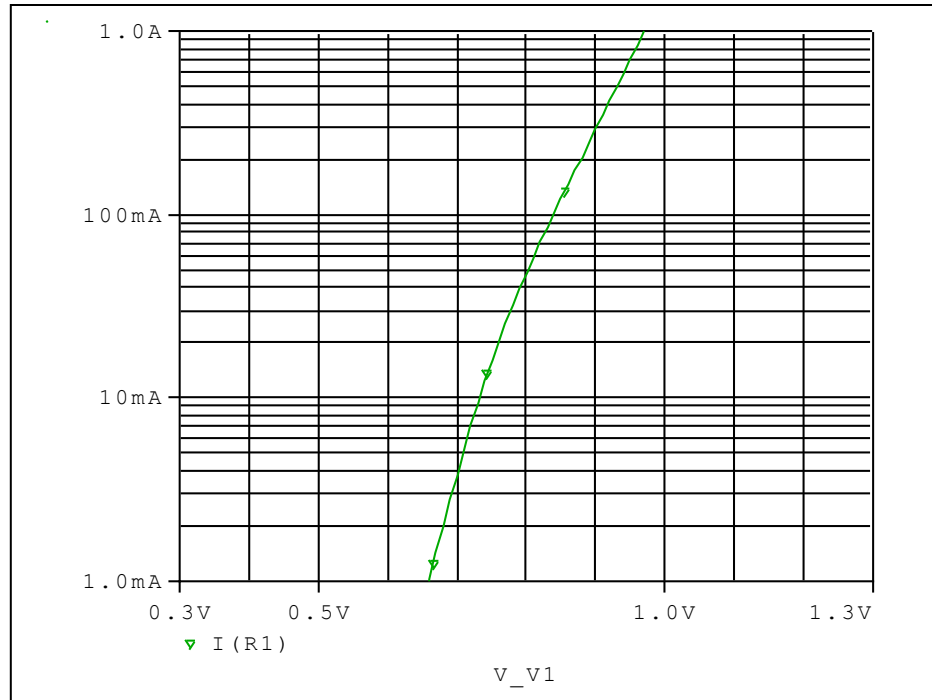


Bee Technologies Inc.

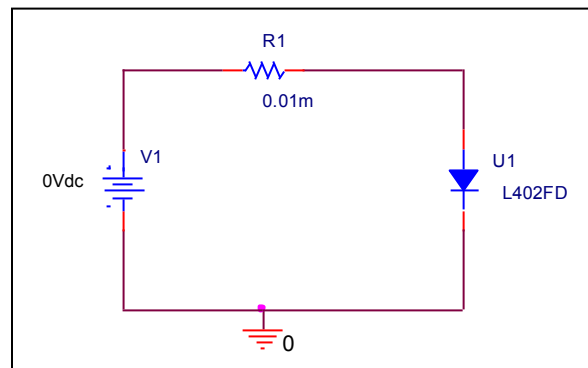
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

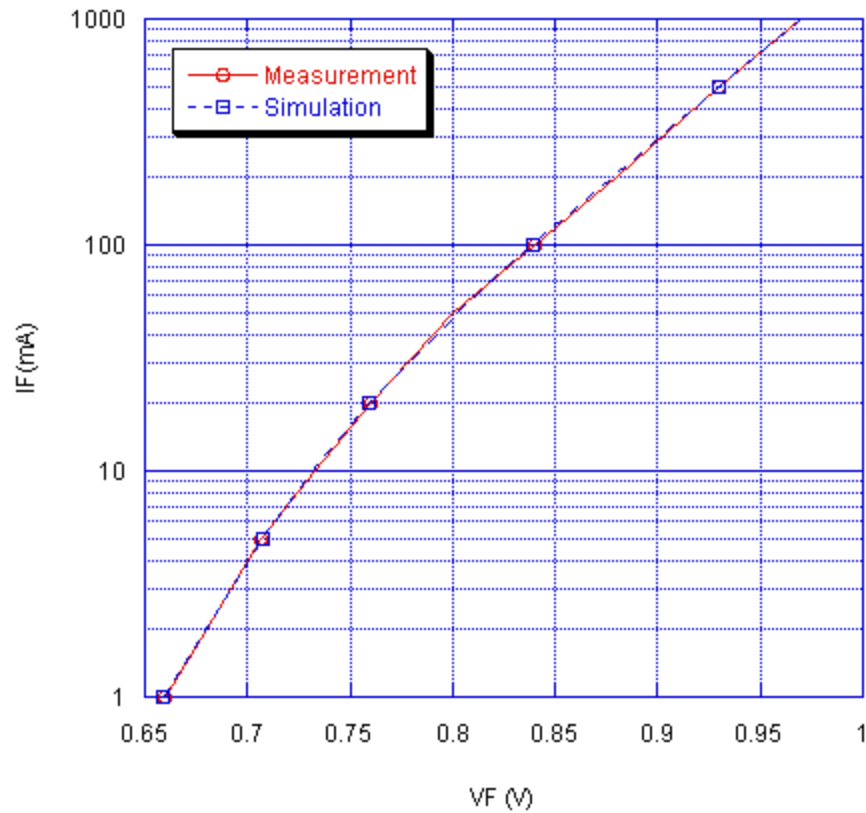


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

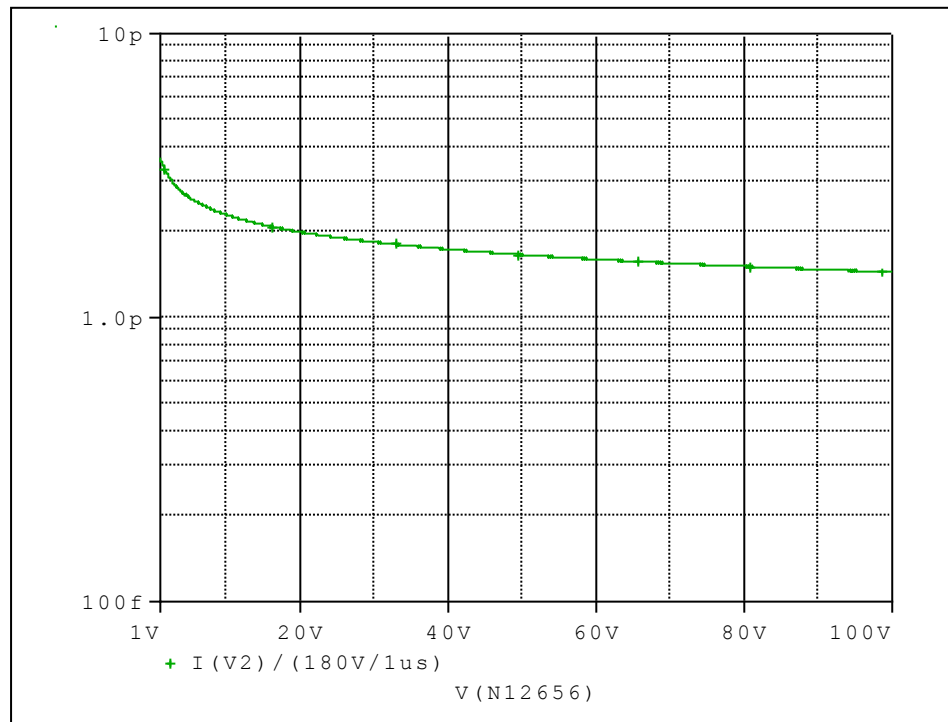


Simulation Result

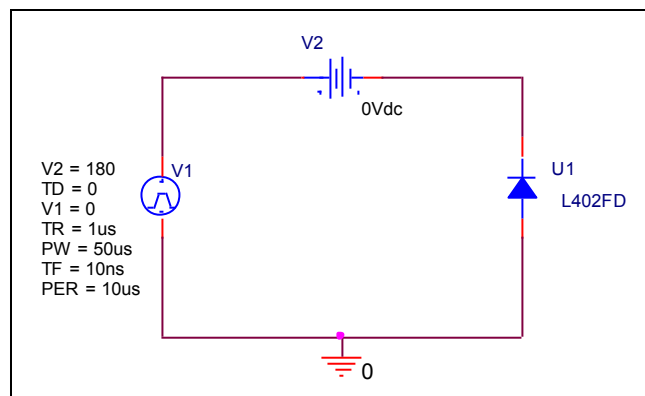
I _F (mA)	V _F (V)		Error(%)
	Measurement	Simulation	
1.000	0.660	0.659	-0.152
2.000	0.680	0.680	0.000
5.000	0.707	0.708	0.141
10.000	0.733	0.732	-0.136
20.000	0.760	0.759	-0.132
50.000	0.800	0.802	0.250
100.000	0.840	0.839	-0.119
200.000	0.880	0.878	-0.227
500.000	0.930	0.930	0.000
1000.000	0.970	0.970	0.000

Junction Capacitance Characteristic

Circuit Simulation Result

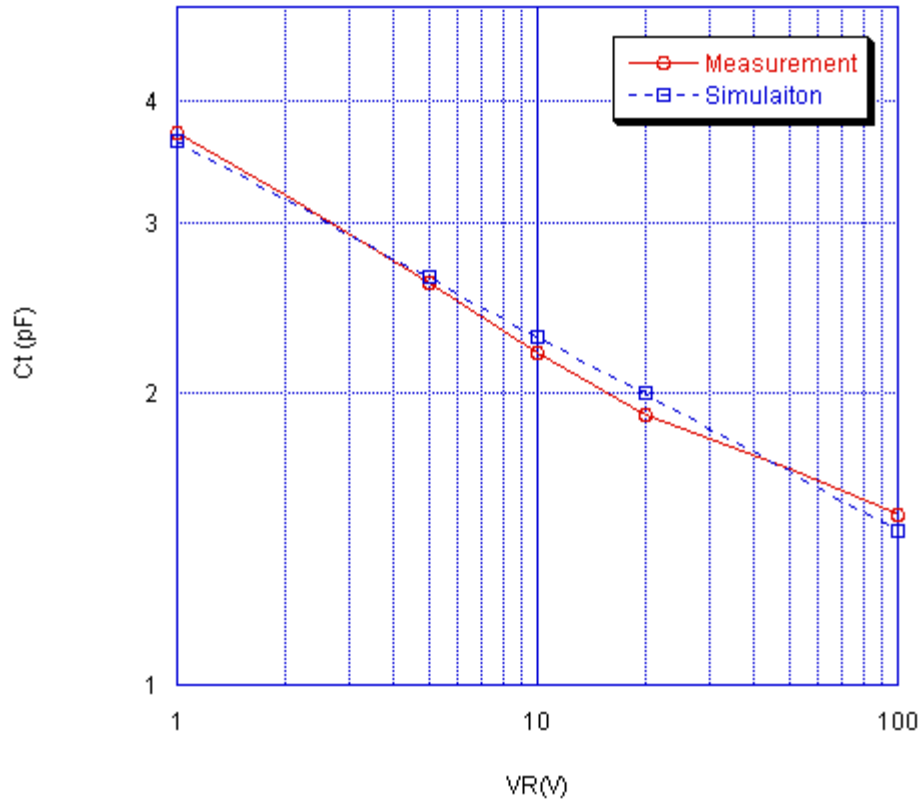


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

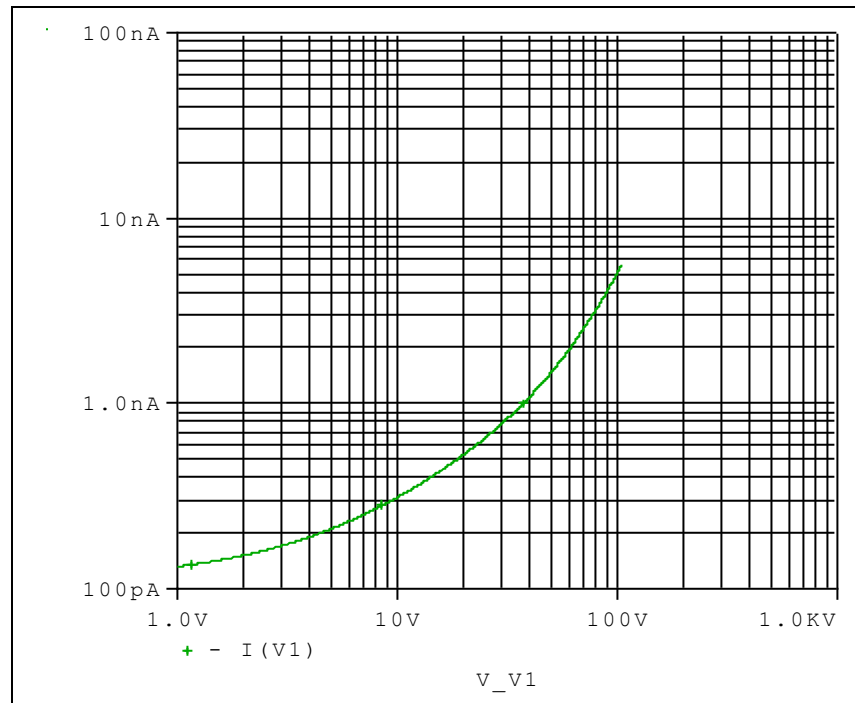


Simulation Result

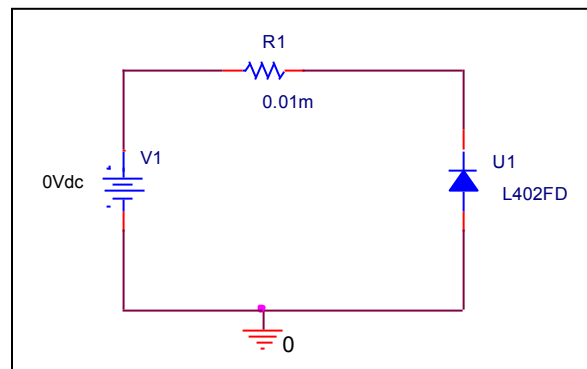
$V_R(V)$	$C_t(pF)$		Error(%)
	Measurement	Simulation	
1.000	3.700	3.645	-1.486
2.000	3.200	3.173	-0.844
5.000	2.600	2.636	1.385
10.000	2.200	2.290	4.091
20.000	1.900	2.000	5.263
50.000	1.700	1.662	-2.235
100.000	1.500	1.440	-4.000

Reverse Characteristic

Circuit Simulation Result

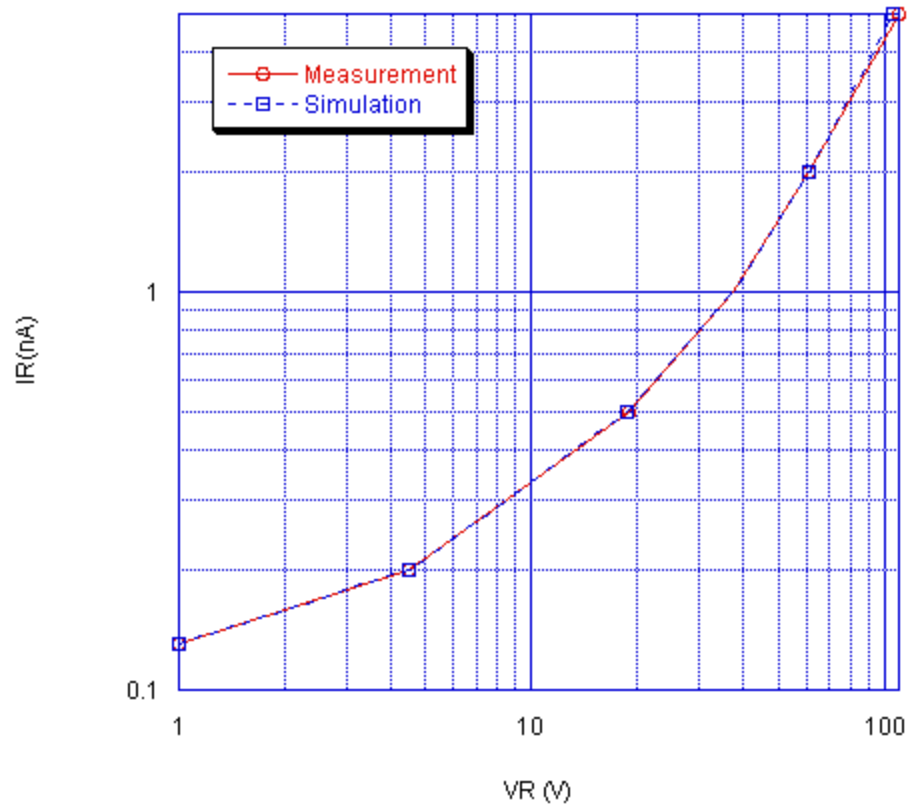


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

IR(nA)	V _R (V)		Error(%)
	Measurement	Simulation	
0.130	1.000	1.000	0.000
0.200	4.500	4.466	-0.756
0.500	18.800	18.756	-0.234
1.000	37.100	37.291	0.515
2.000	61.000	61.220	0.361
5.000	110.000	106.000	-3.636