

# Device Modeling Report

COMPONENTS:  
DIODE/ SCHOTTKY RECTIFIER / PROFESSIONAL  
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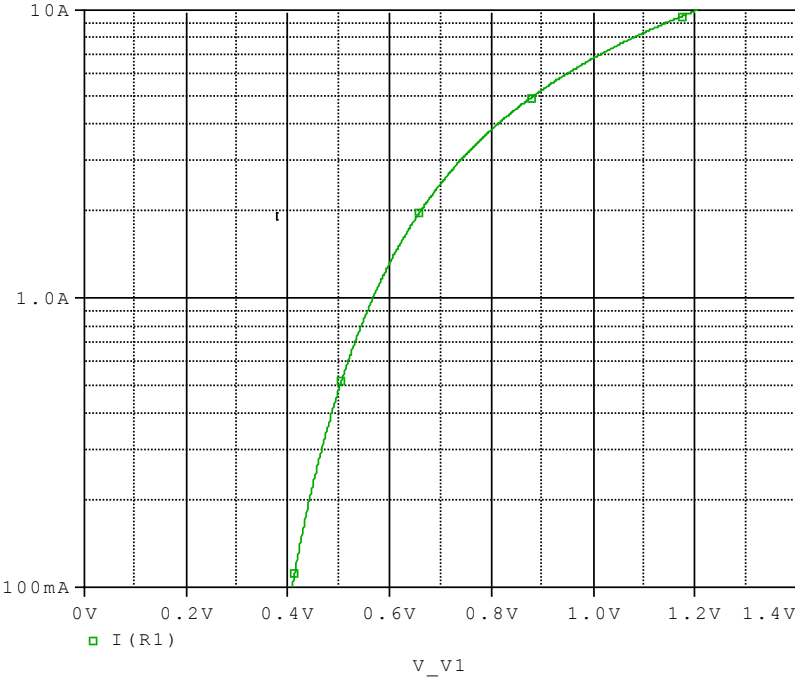


**Bee Technologies Inc.**

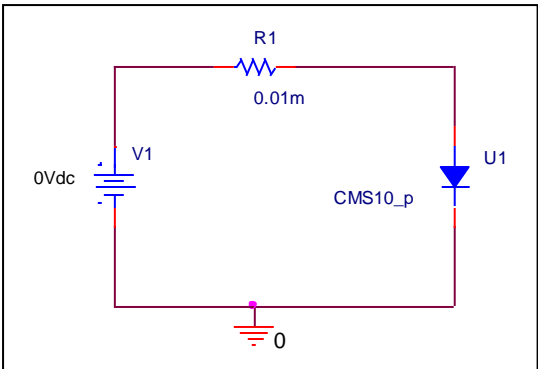
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

# Forward Current Characteristic

## Circuit Simulation Result

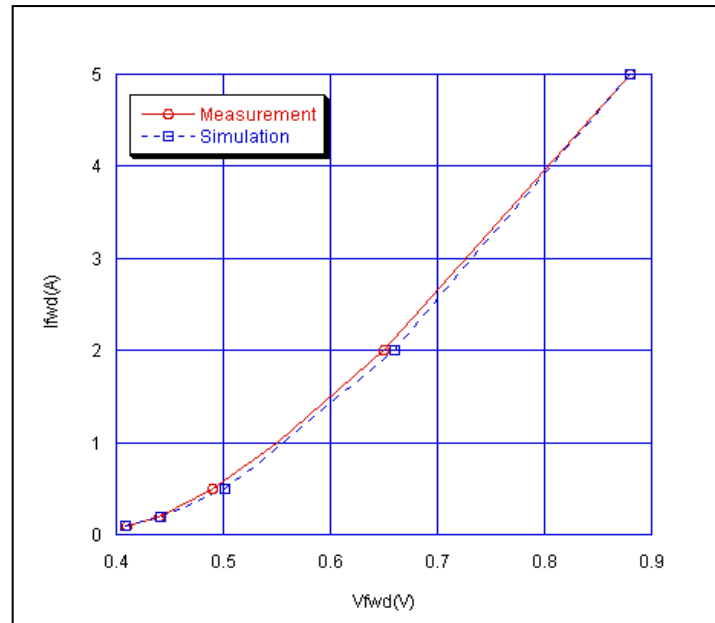


## Evaluation Circuit



## Comparison Graph

### Circuit Simulation Result

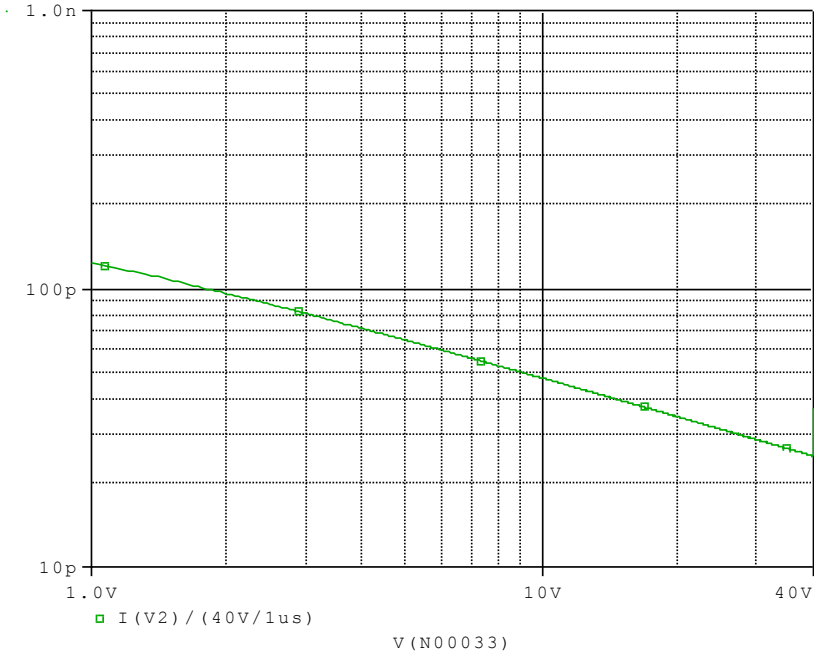


### Simulation Result

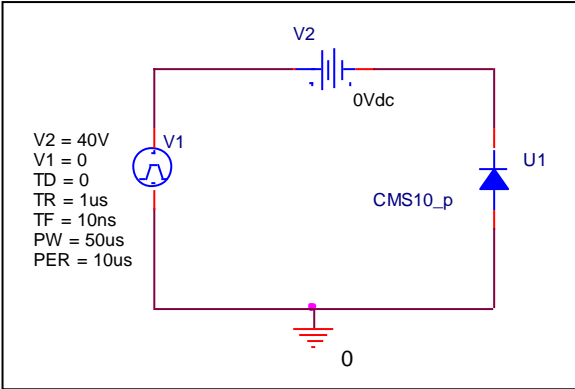
Ifwd(A)	Vfwd(V)		%Error
	Measurement	Simulation	
0.100	0.410	0.409	- 0.244
0.200	0.440	0.442	0.455
0.500	0.490	0.501	2.245
1.000	0.550	0.556	1.091
2.000	0.650	0.660	1.538
5.000	0.880	0.880	0.000

# Capacitance Characteristic

## Circuit Simulation Result

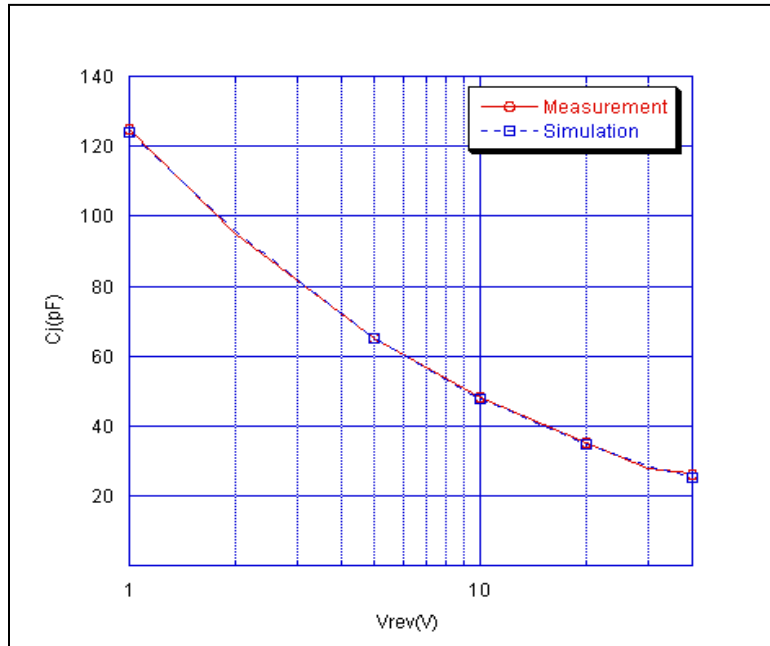


## Evaluation Circuit



## Comparison Graph

### Circuit Simulation Result

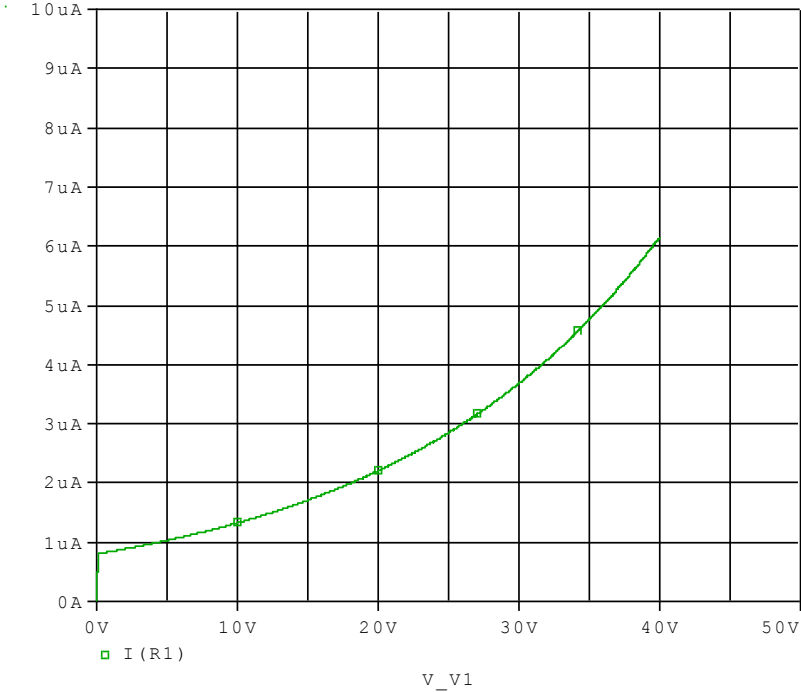


### Simulation Result

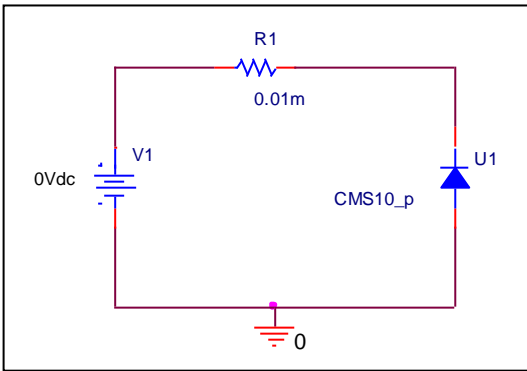
Vrev(V)	Cj(pF)		%Error
	Measurement	Simulation	
1.000	125.000	124.199	- 0.641
2.000	95.000	95.947	0.997
5.000	65.000	65.265	0.408
10.000	48.000	47.657	- 0.715
20.000	35.000	34.678	- 0.920
30.000	28.000	28.634	2.264
40.000	26.000	25.200	- 3.077

# Reverse Characteristic

## Circuit Simulation Result

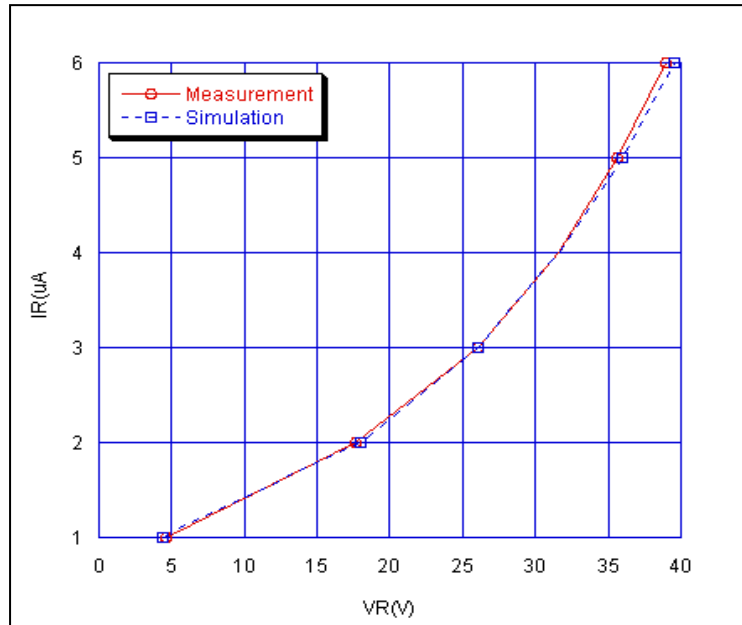


## Evaluation Circuit



## Comparison Graph

### Circuit Simulation Result



### Simulation Result

$I_R$ (uA)	$V_R$ (V)		Error(%)
	Measurement	Simulation	
1.000	4.600	4.439	- 3.500
2.000	17.600	18.000	2.273
3.000	26.100	26.016	- 0.322
4.000	31.600	31.631	0.098
5.000	35.650	35.970	0.898
6.000	39.000	39.512	1.313



# Reverse Characteristic

# Reference

