

# Device Modeling Report

COMPONENTS:  
DIODE/ SCHOOTKY RECTIFIER / STANDARD  
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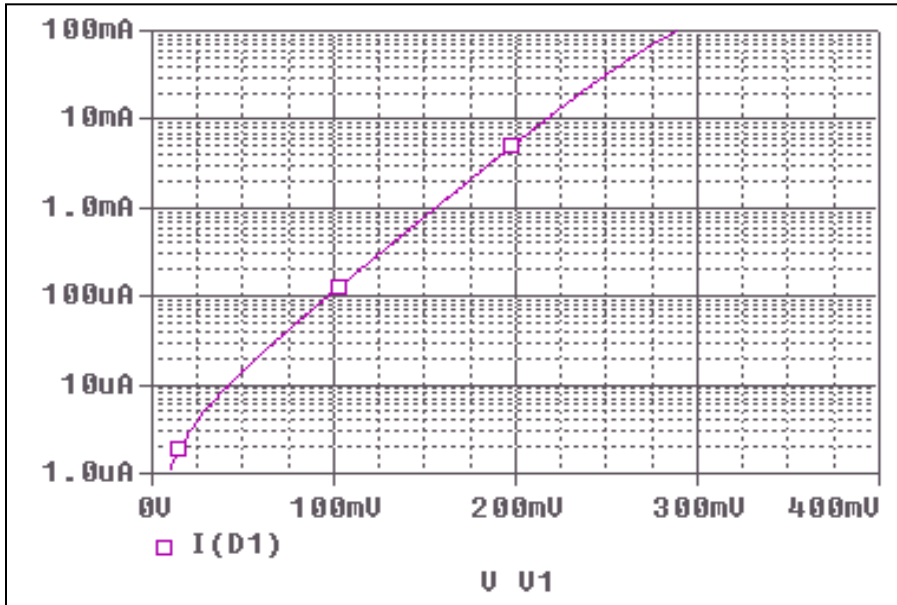


**Bee Technologies Inc.**

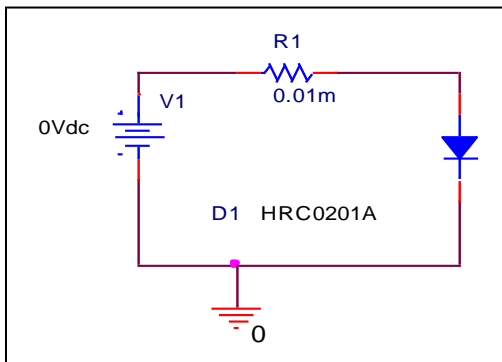
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

# Forward Current Characteristic

## Circuit Simulation Result

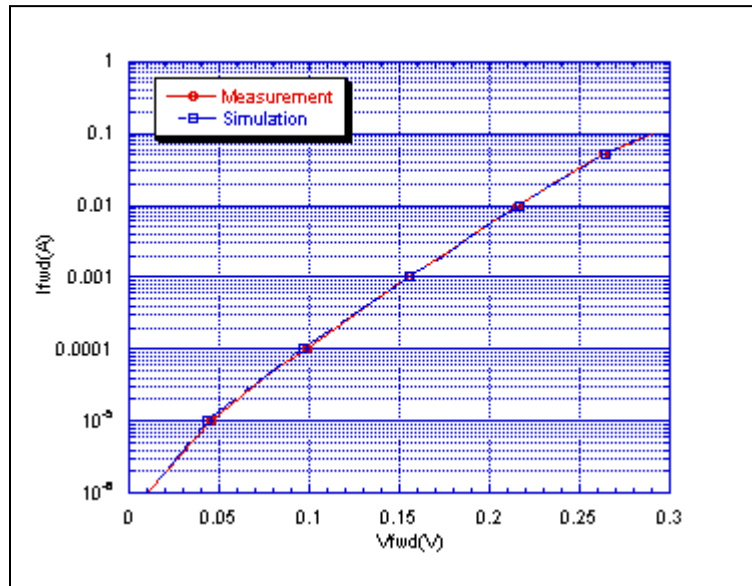


## Evaluation Circuit



# Comparison Graph

## Circuit Simulation Result

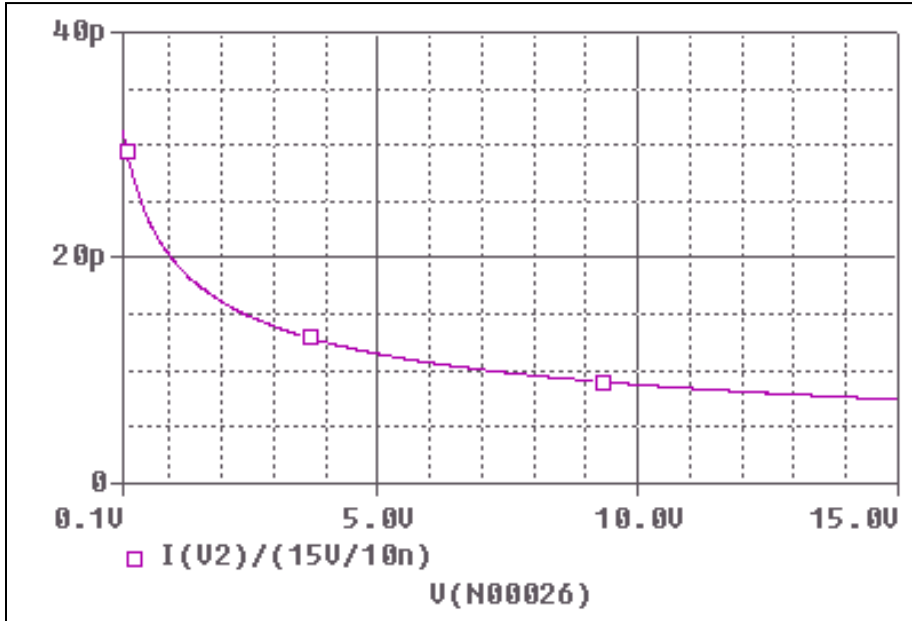


## Simulation Result

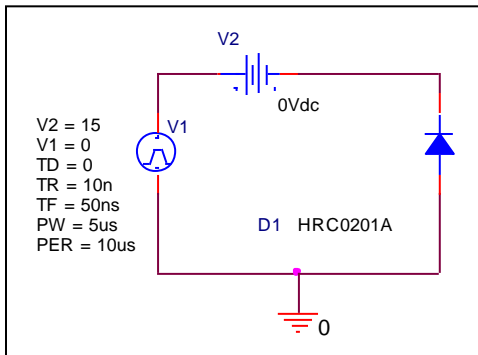
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
1.00E-06	0.010	0.010	0.00
0.0001	0.099	0.097	-2.22
0.001	0.155	0.156	0.58
0.002	0.173	0.174	0.58
0.005	0.198	0.198	0.05
0.01	0.215	0.217	0.79
0.02	0.235	0.236	0.43
0.05	0.263	0.264	0.38
0.1	0.290	0.289	-0.34

# Junction Capacitance Characteristic

## Circuit Simulation Result

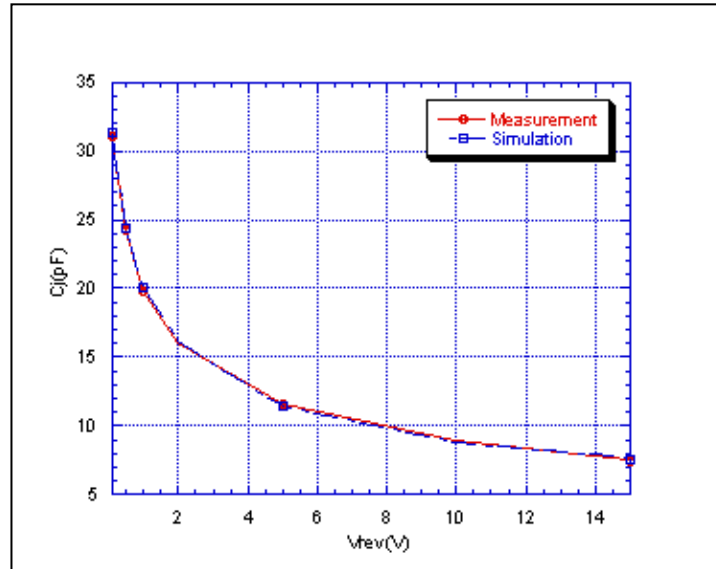


## Evaluation Circuit



# Comparison Graph

## Circuit Simulation Result



## Simulation Result

$V_{rev}$ (V)	$C_j$ (pF) Measurement	$C_j$ (pF) Simulation	%Error
0.1	31.000	31.300	0.97
0.2	28.800	28.900	0.35
0.5	24.200	24.300	0.41
1	19.800	20.100	1.52
2	16.000	16.100	0.63
5	11.500	11.400	-0.87
10	8.900	8.750	-1.69
15	7.400	7.500	1.35