

Device Modeling Report

COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER / STANDARD
PART NUMBER: CMS16
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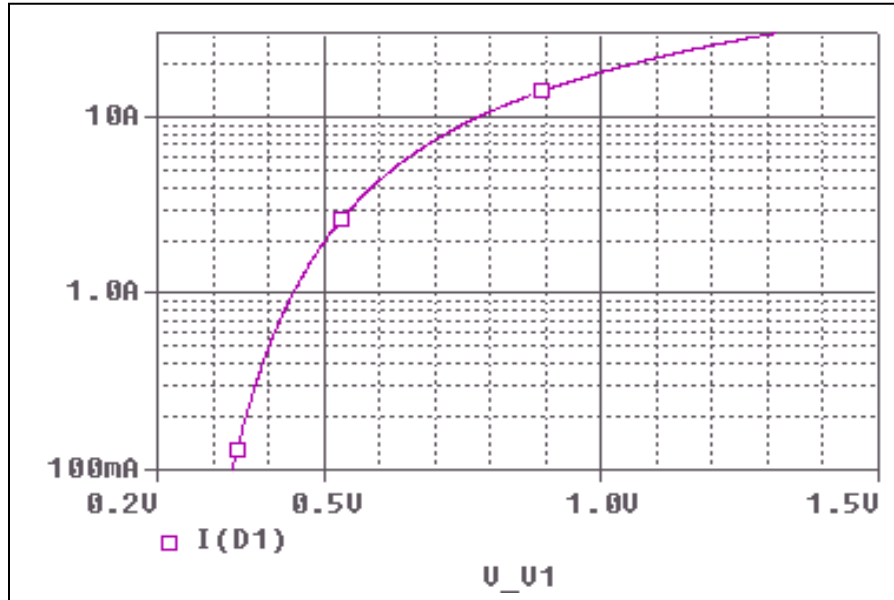


Bee Technologies Inc.

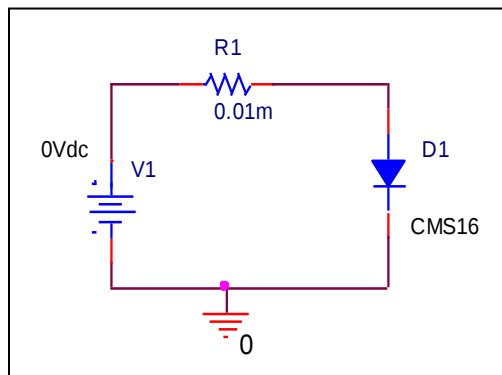
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

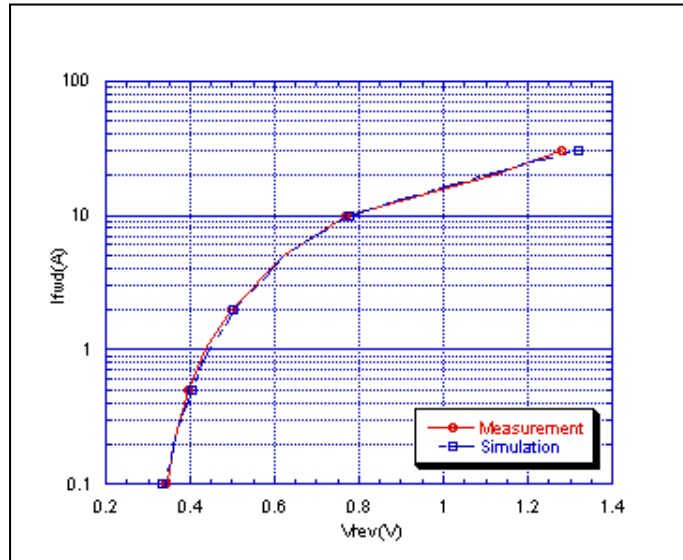


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

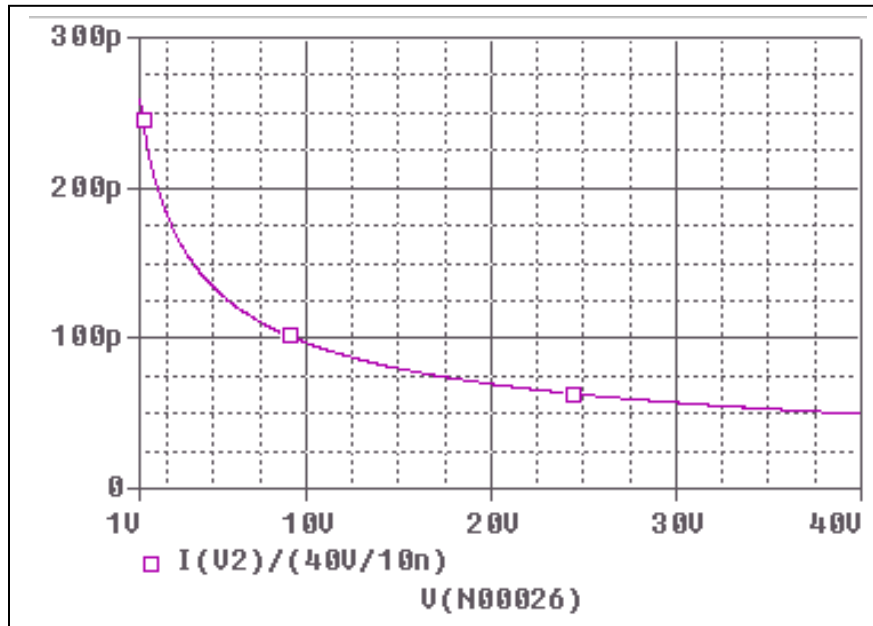


Simulation Result

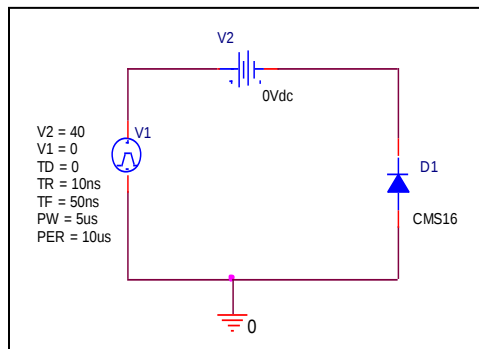
I_{fwd} (A)	V_{fwd} (V) Measurement	V_{fwd} (V) Simulation	%Error
0.1	0.340	0.336	-1.32
0.2	0.360	0.360	-0.08
0.5	0.395	0.406	2.68
1	0.435	0.446	2.48
2	0.500	0.503	0.58
5	0.620	0.623	0.44
10	0.770	0.779	1.13
20	1.120	1.100	-1.79
30	1.280	1.321	3.19

Junction Capacitance Characteristic

Circuit Simulation Result

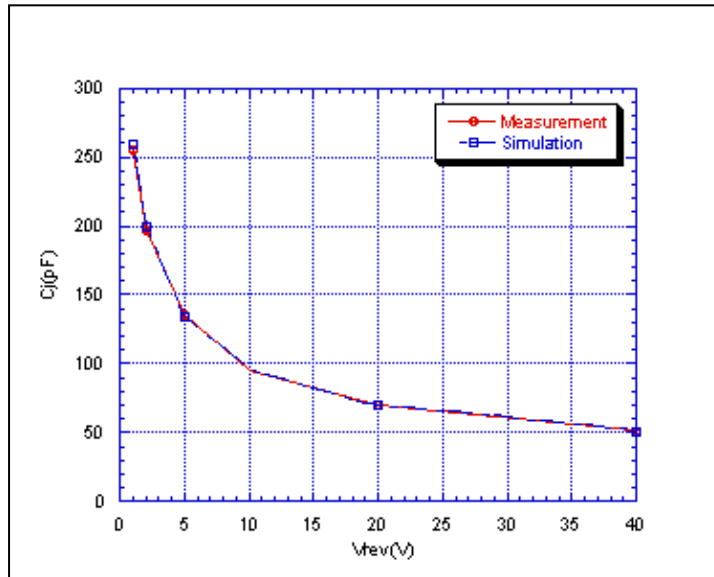


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	255.00	259.30	1.69
2	197.00	199.10	1.07
5	135.00	133.80	-0.89
10	95.00	97.00	2.11
20	70.00	69.60	-0.57
40	50.00	49.70	-0.60