

Device Modeling Report

COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER / STANDARD
PART NUMBER: M1FS4
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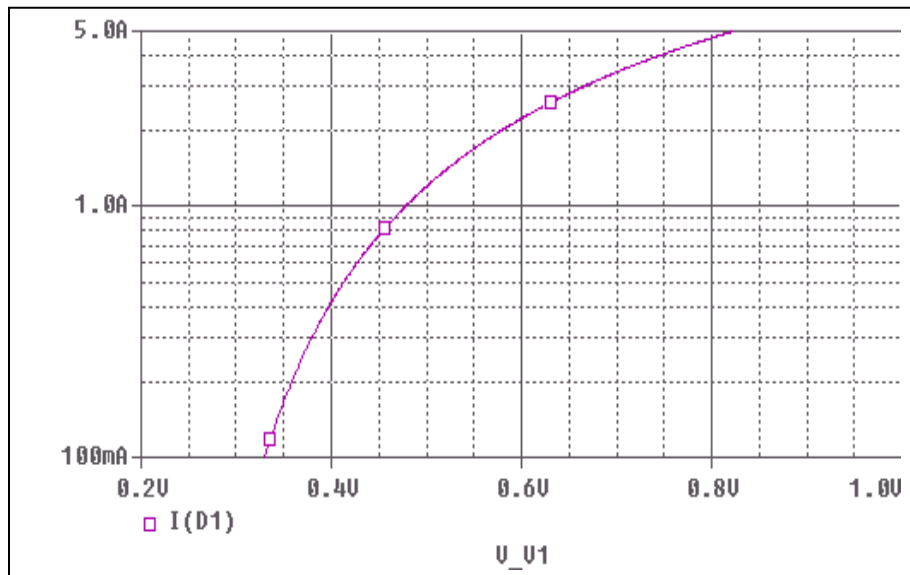


Bee Technologies Inc.

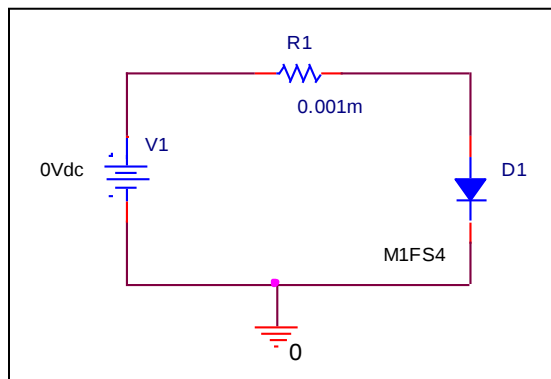
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

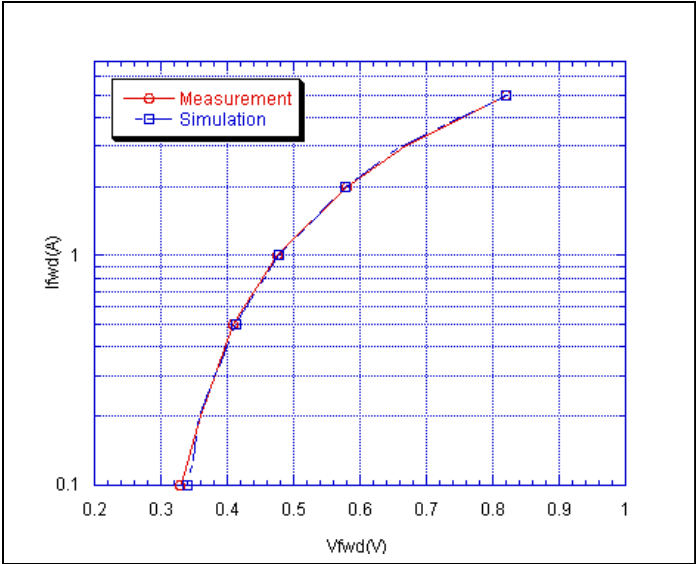


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

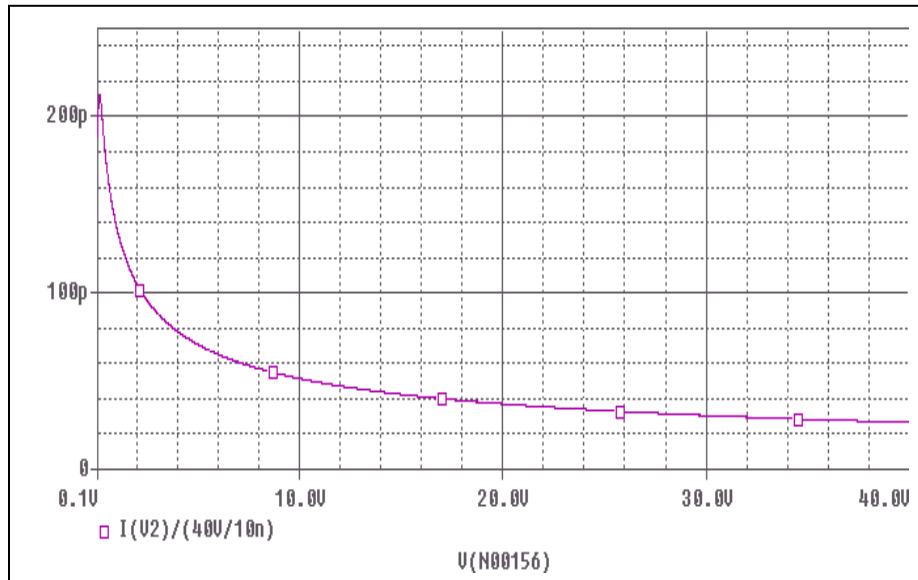


Simulation Result

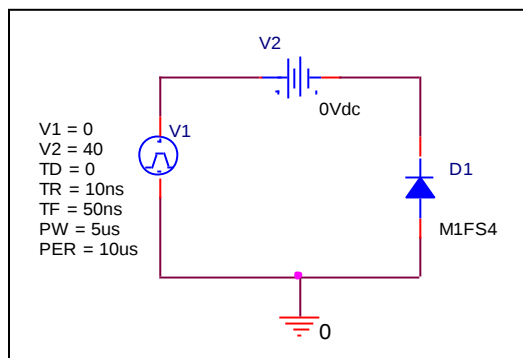
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.330	0.340	3.03
0.2	0.360	0.358	-0.56
0.5	0.410	0.413	0.73
1	0.475	0.477	0.42
2	0.580	0.577	-0.52
5	0.820	0.821	0.12

Junction Capacitance Characteristic

Circuit Simulation Result

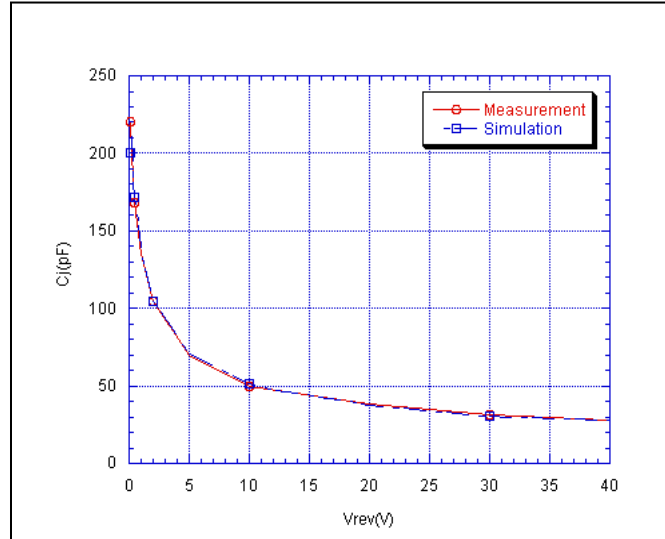


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.1	210.00	200.00	-4.76
0.2	205.00	212.00	3.41
0.5	168.00	172.00	2.38
1	135.00	137.00	1.48
2	107.00	105.00	-1.87
5	70.00	70.90	1.29
10	51.00	51.70	1.37
20	38.00	37.30	-1.84
40	27.00	26.70	-1.11