

Device Modeling Report

COMPONENTS:

DIODE/ SCHOOTTKY RECTIFIER / STANDARD

PART NUMBER: M2FM3

MANUFACTURER: SHINDENGEN

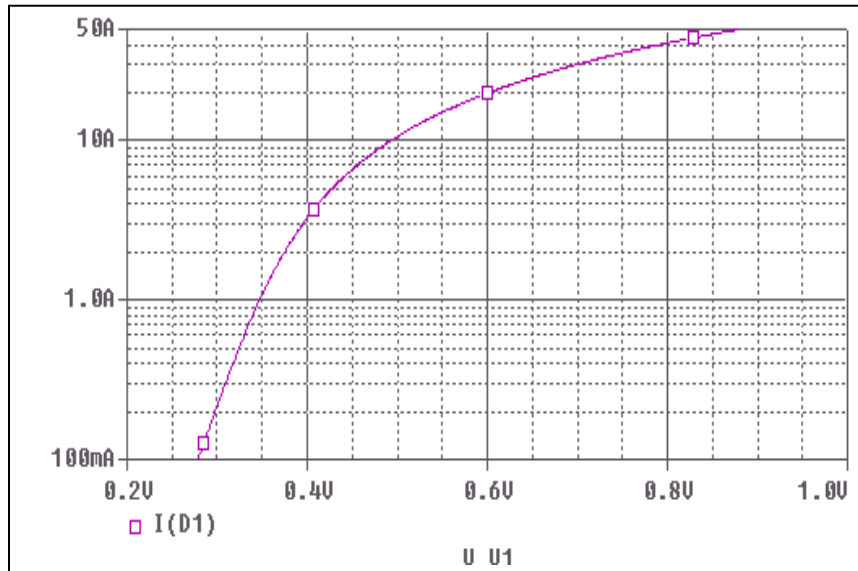


Bee Technologies Inc.

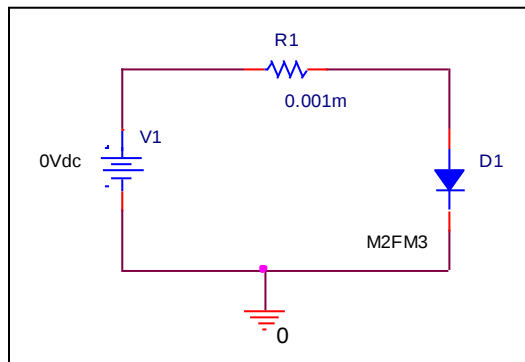
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

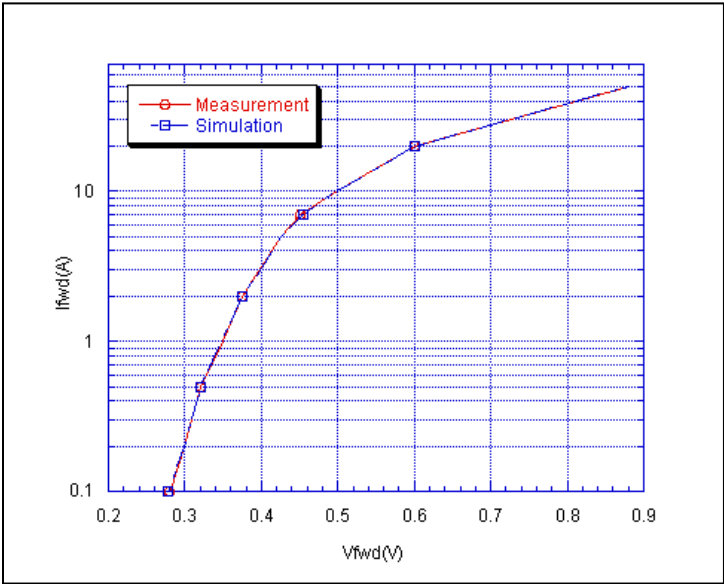


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

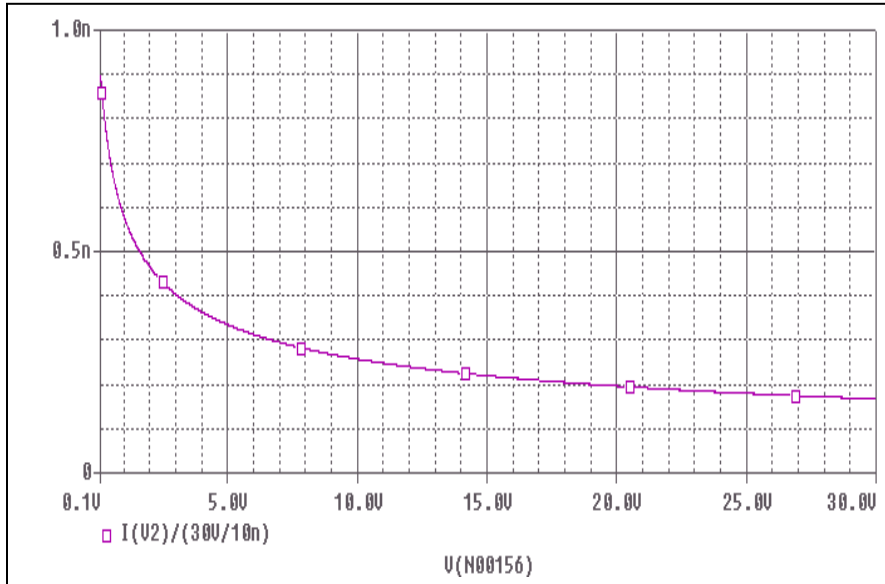


Simulation Result

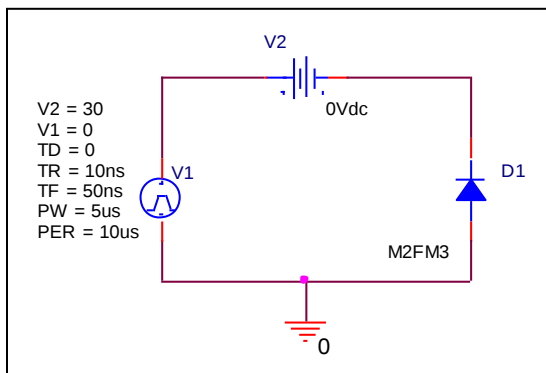
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.280	0.278	-0.71
0.2	0.300	0.299	-0.33
0.5	0.320	0.321	0.31
1	0.350	0.348	-0.57
2	0.378	0.375	-0.79
5	0.425	0.426	0.24
10	0.500	0.499	-0.20
20	0.600	0.601	0.17
50	0.885	0.880	-0.56

Junction Capacitance Characteristic

Circuit Simulation Result

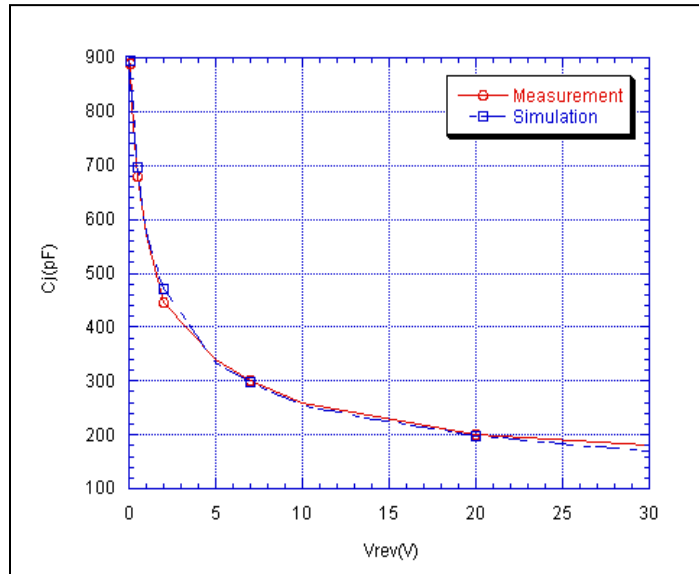


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.1	890.00	895.00	0.56
0.2	810.00	830.00	2.47
0.5	680.00	697.00	2.50
1	570.00	577.00	1.23
2	450.00	470.00	4.44
5	340.00	334.00	-1.76
10	260.00	257.00	-1.15
20	200.00	197.00	-1.50