

# Device Modeling Report

COMPONENTS:  
DIODE/ SCHOTTKY RECTIFIER / STANDARD  
PART NUMBER: 10FWJ2C47M  
MANUFACTURER: TOSHIBA

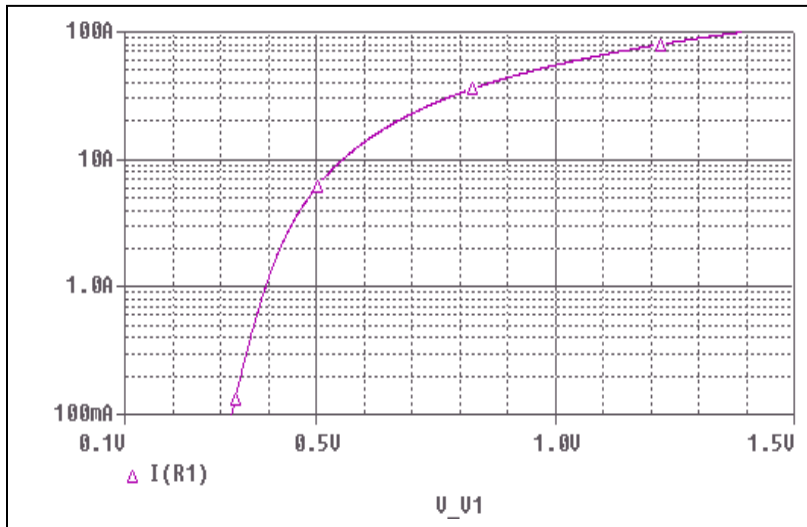


**Bee Technologies Inc.**

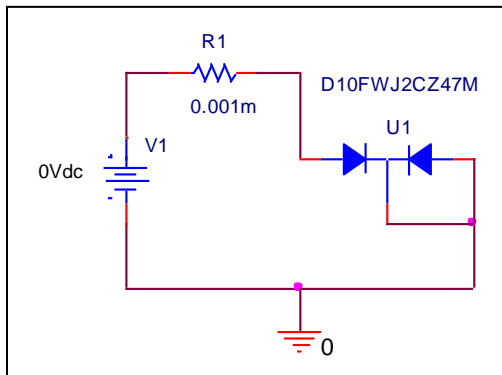
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

# Forward Current Characteristic

## Circuit Simulation Result

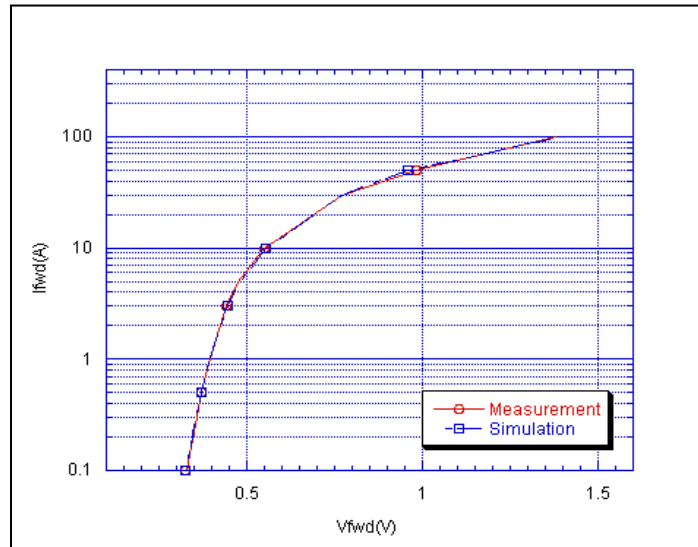


## Evaluation Circuit



# Comparison Graph

## Circuit Simulation Result

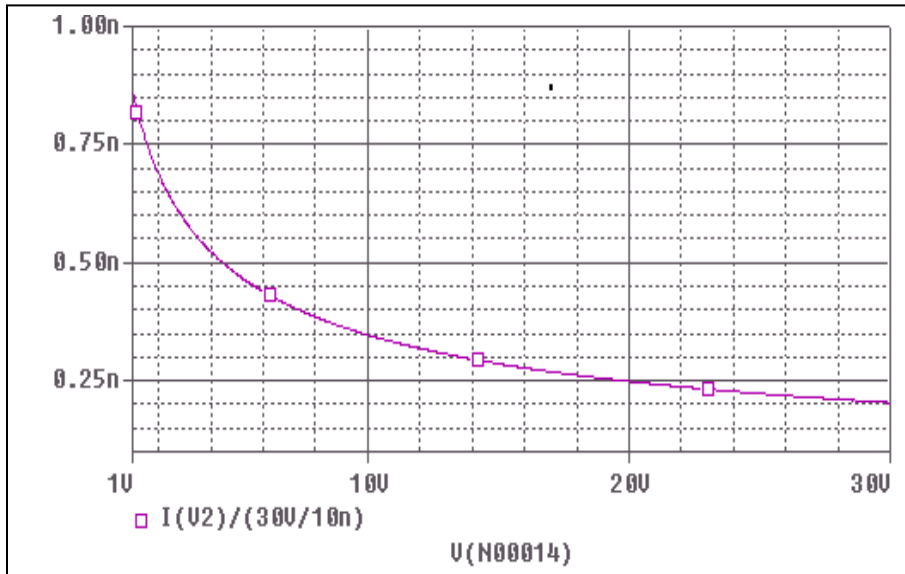


## Simulation Result

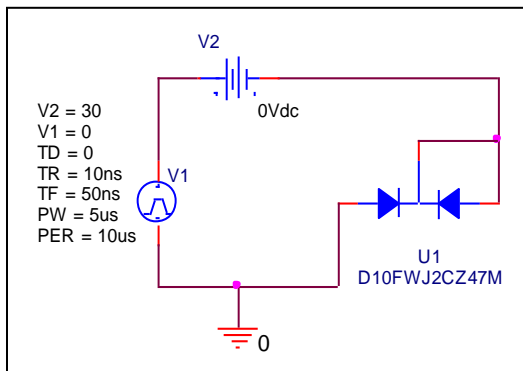
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.325	0.324	-0.43
0.3	0.360	0.354	-1.58
0.5	0.370	0.371	0.16
1	0.395	0.394	-0.20
3	0.440	0.447	1.68
5	0.475	0.481	1.26
10	0.550	0.555	0.91
30	0.770	0.771	0.17
50	0.985	0.957	-2.83
100	1.380	1.390	0.72

# Junction Capacitance Characteristic

## Circuit Simulation Result

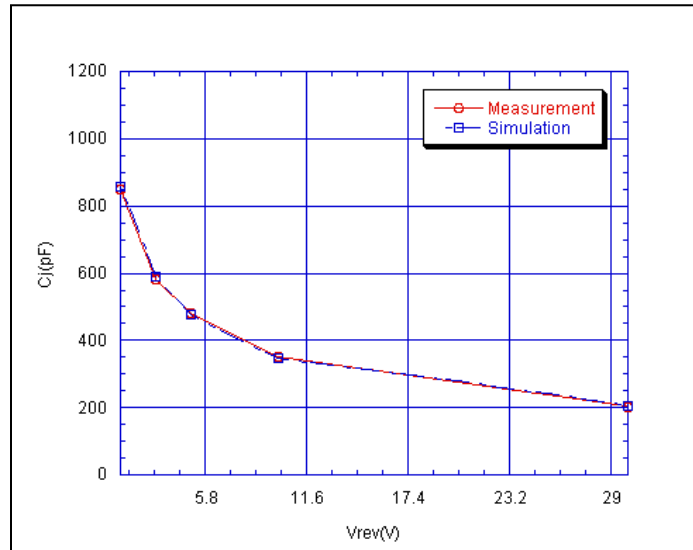


## Evaluation Circuit



# Comparison Graph

## Circuit Simulation Result



## Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	850.000	858.600	1.01
3	580.000	589.100	1.57
5	480.000	475.300	-0.98
10	350.000	346.900	-0.89
30	200.000	203.600	1.80