

# Device Modeling Report

COMPONENTS:  
DIODE/ SCHOOTKY RECTIFIER / STANDARD  
PART NUMBER: DF10SC6  
MANUFACTURER: SHINDENGEN

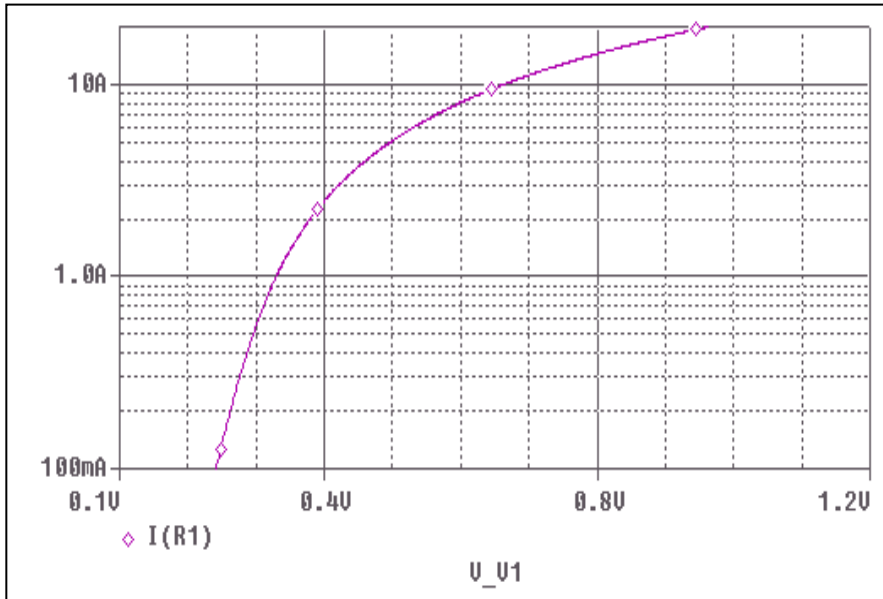


**Bee Technologies Inc.**

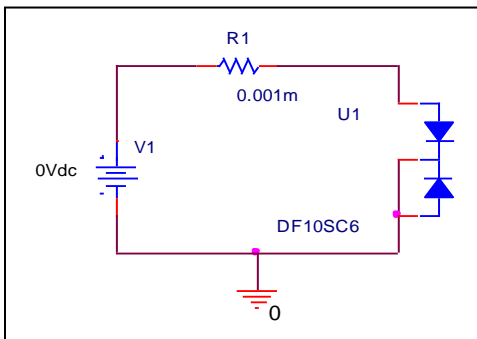
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

# Forward Current Characteristic

## Circuit Simulation Result

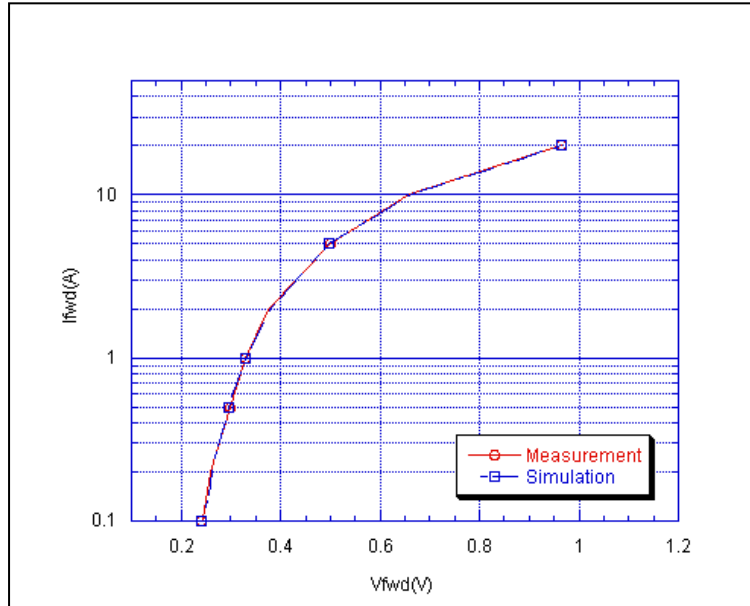


## Evaluation Circuit



# Comparison Graph

## Circuit Simulation Result

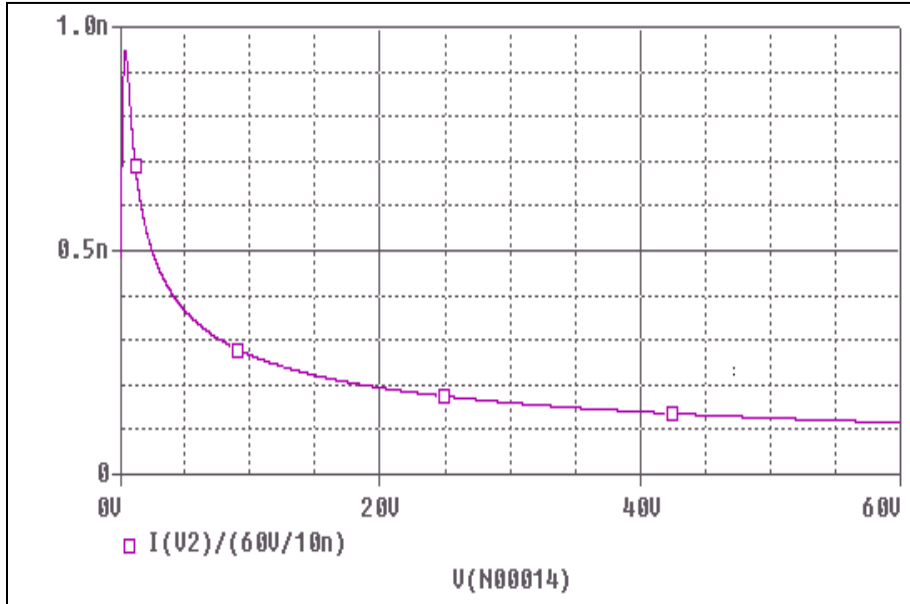


## Simulation Result

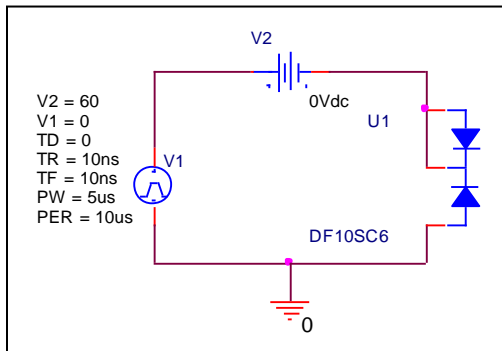
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.240	0.241	0.38
0.2	0.260	0.262	0.77
0.5	0.300	0.295	-1.53
1	0.330	0.330	0.06
2	0.375	0.377	0.59
5	0.500	0.496	-0.78
10	0.660	0.662	0.36
20	0.965	0.966	0.05

# Junction Capacitance Characteristic

## Circuit Simulation Result

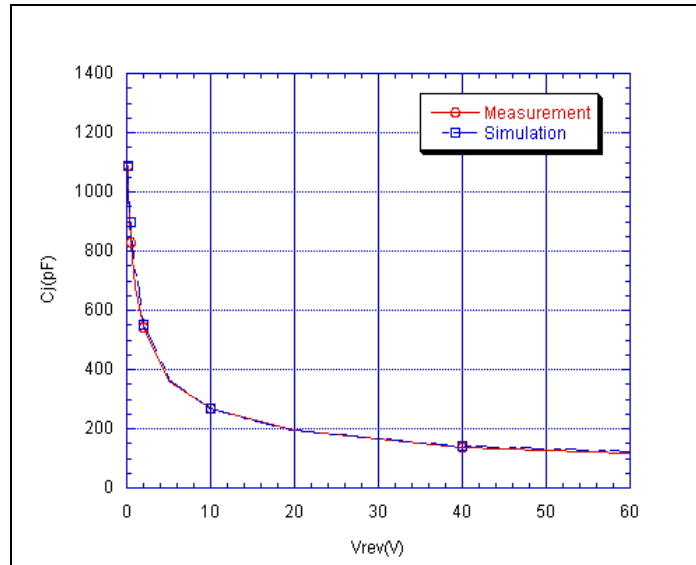


## Evaluation Circuit



# Comparison Graph

## Circuit Simulation Result



## Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.1	1100.00	1090.00	-0.91
0.2	1050.00	1000.00	-4.76
0.5	910.00	900.00	-1.10
1	720.00	730.00	1.39
2	540.00	550.60	1.96
5	360.00	366.50	1.81
10	270.00	267.30	-1.00
20	193.00	193.70	0.36
60	111.00	116.00	4.50