

Device Modeling Report

COMPONENTS:

DIODE/ SCHOOTKY RECTIFIER / STANDARD

PART NUMBER: KSQ15A04

MANUFACTURER: NIEC

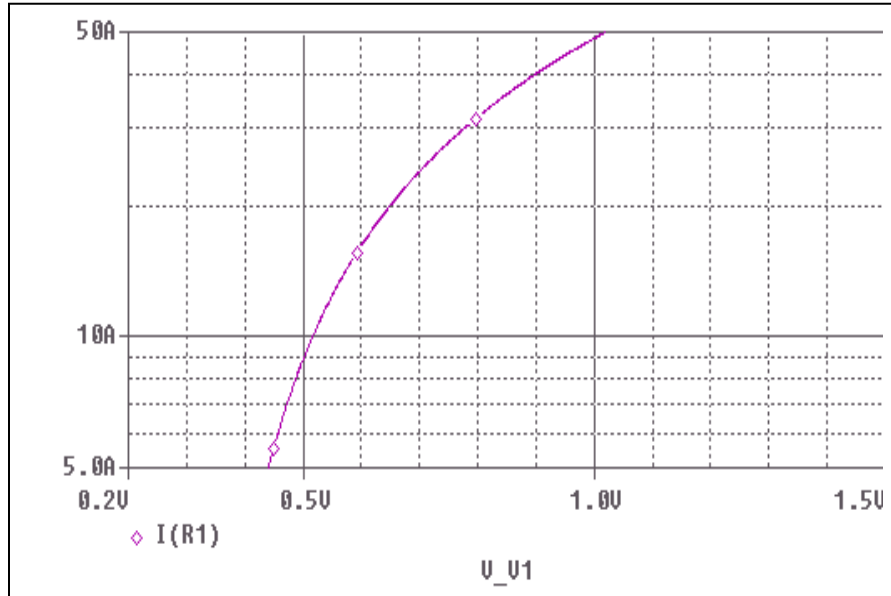


Bee Technologies Inc.

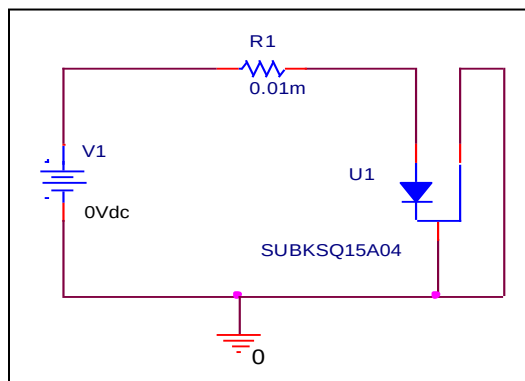
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

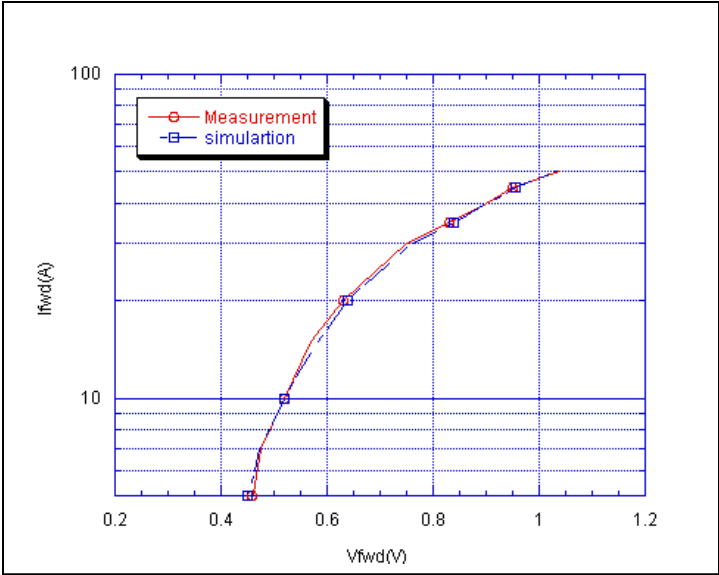


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

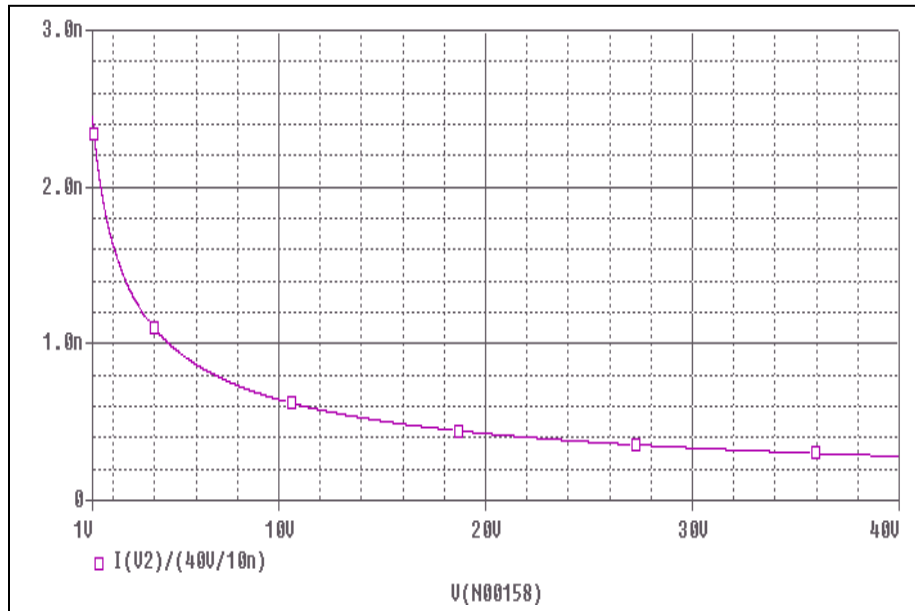


Simulation Result

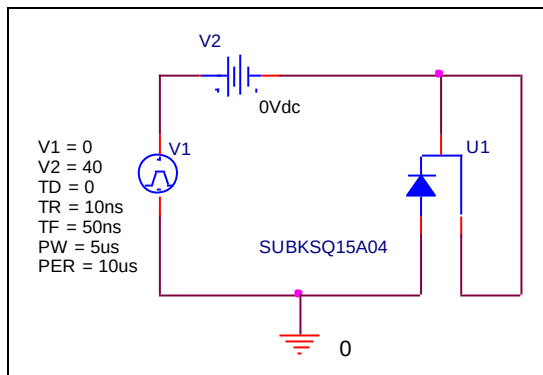
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
5	0.458	0.450	-1.75
10	0.520	0.515	-0.96
20	0.630	0.640	1.59
30	0.750	0.760	1.33
40	0.900	0.899	-0.11
50	1.040	1.030	-0.96

Junction Capacitance Characteristic

Circuit Simulation Result

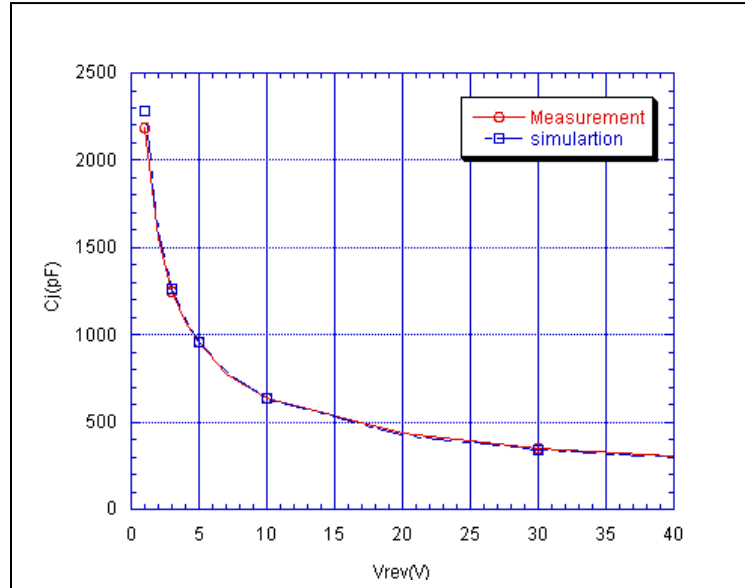


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
1	2190.00	2280.00	4.11
2	1550.00	1600.00	3.23
5	960.00	957.00	-0.31
10	640.00	639.80	-0.03
20	440.00	430.00	-2.27
30	350.00	340.00	-2.86
40	300.00	290.00	-3.33