

Device Modeling Report

COMPONENTS:

DIODE/ SCHOTTKY RECTIFIER / STANDARD

PART NUMBER: KSQ15A06B

MANUFACTURER: NIEC

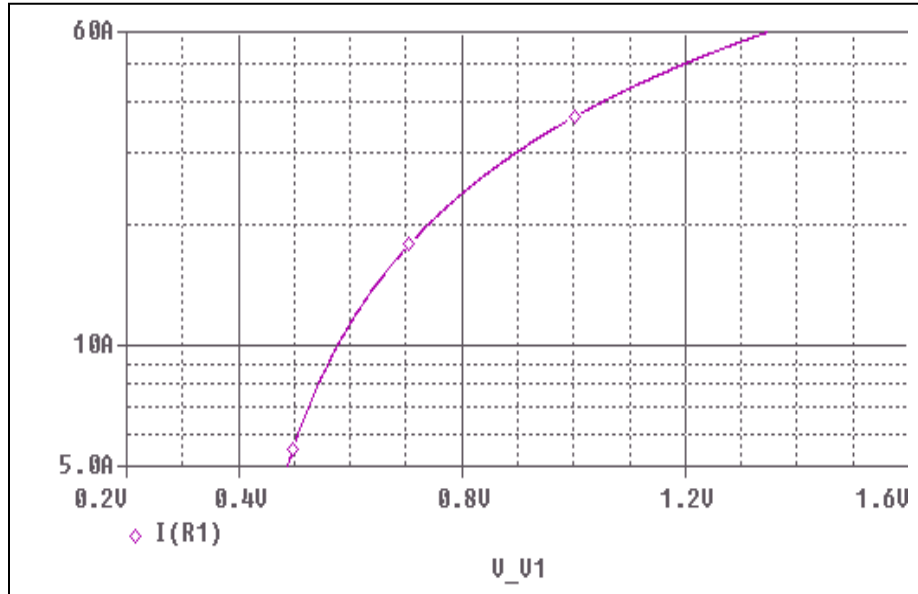


Bee Technologies Inc

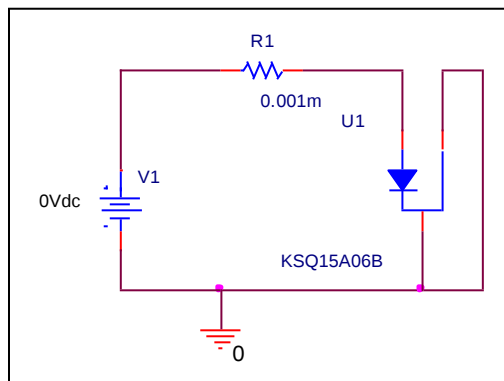
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

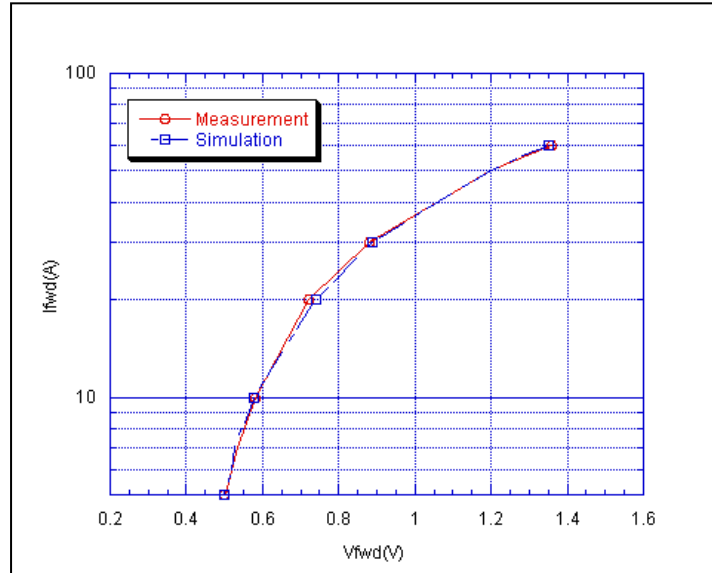


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

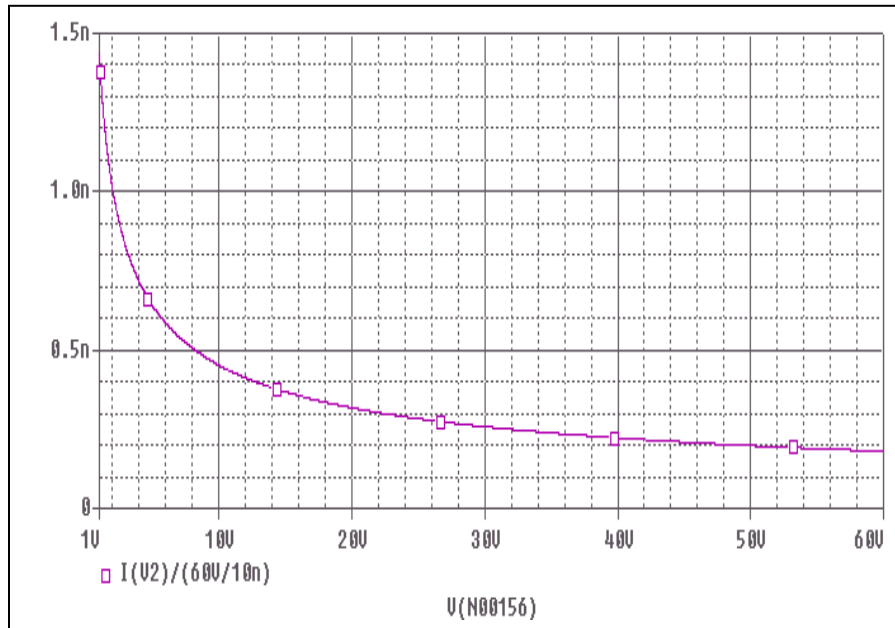


Simulation Result

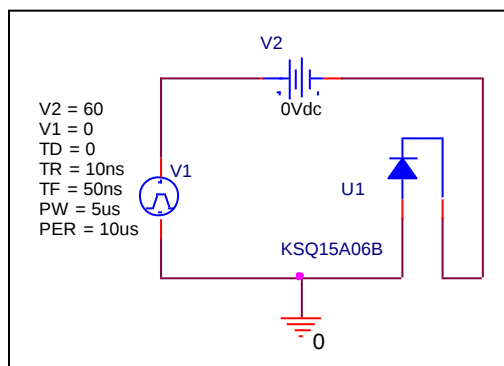
I_{fwd} (A)	V_{fwd} (V) Measurement	V_{fwd} (V) Simulation	%Error
5	0.510	0.500	-1.96
10	0.580	0.578	-0.34
20	0.720	0.740	2.78
30	0.880	0.890	1.14
50	1.185	1.200	1.27
60	1.360	1.350	-0.74

Junction Capacitance Characteristic

Circuit Simulation Result

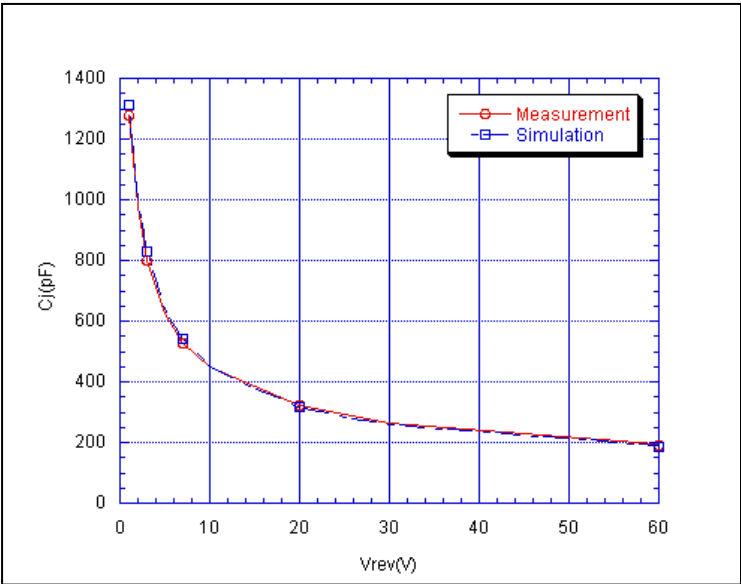


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	1280.000	1314.000	2.66
2	980.000	1006.000	2.65
5	625.000	637.000	1.92
10	451.000	450.000	-0.22
20	320.000	319.000	-0.31
60	190.000	185.000	-2.63