

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER /STANDARD
PART NUMBER: KSQ30A06
MANUFACTURER: NIEC

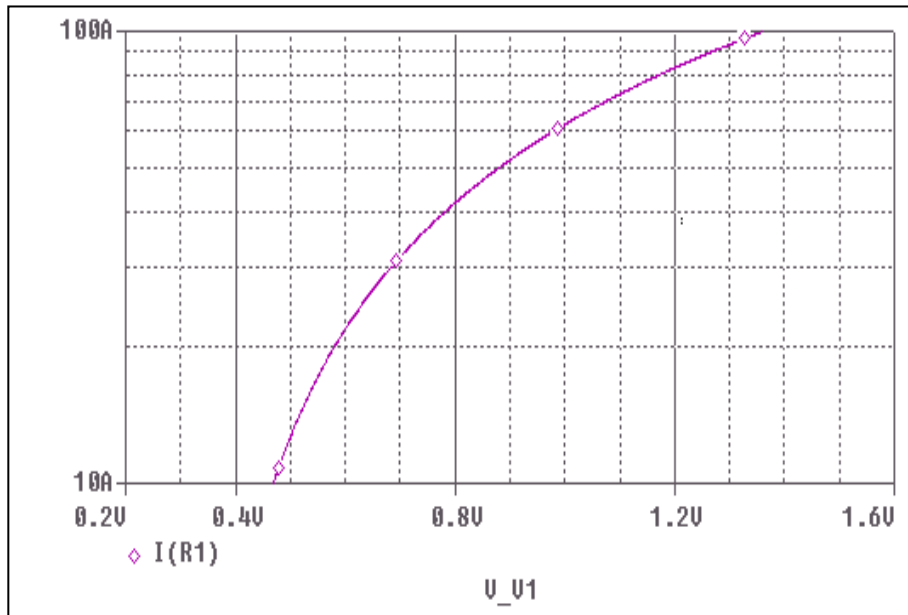


Bee Technologies Inc.

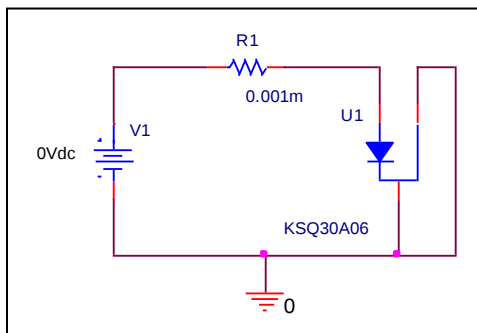
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

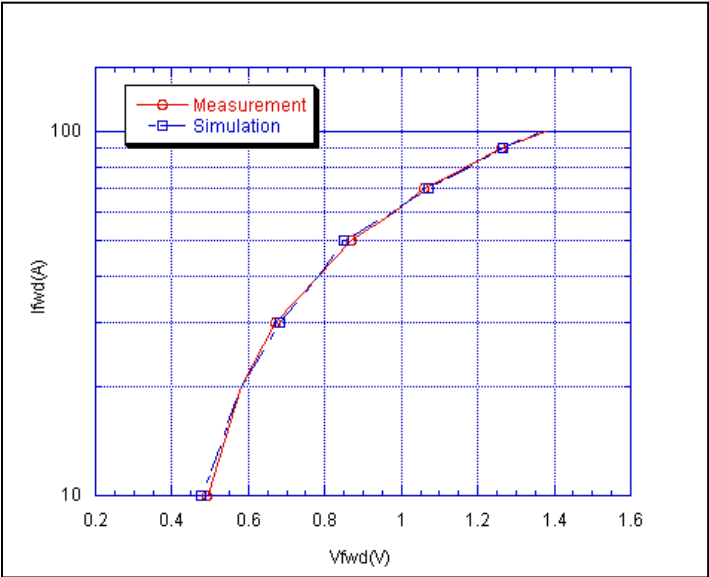


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

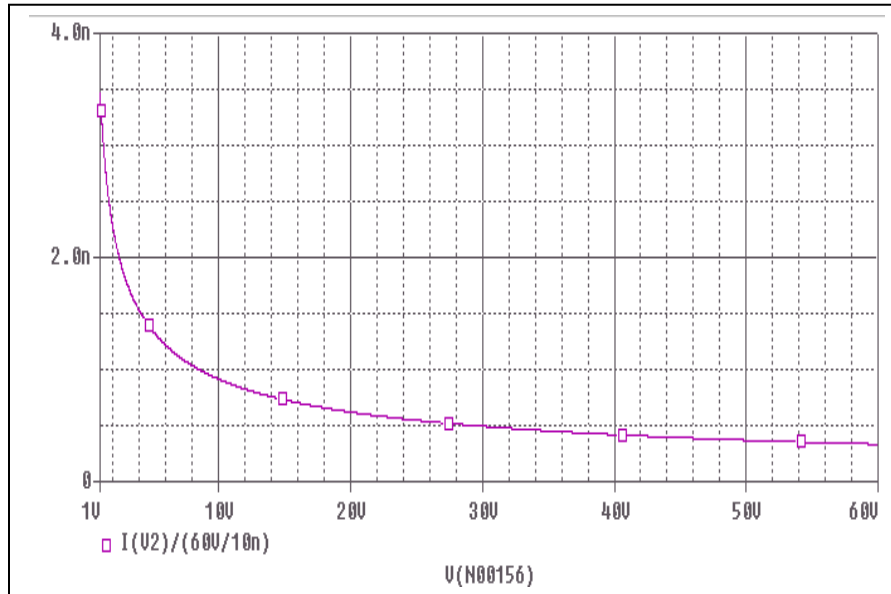


Simulation Result

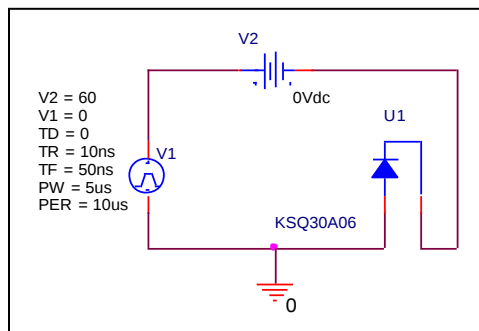
$I_{fwd}(A)$	$V_{fwd}(V)$ Measurement	$V_{fwd}(V)$ Simulation	%Error
10	0.490	0.475	-3.06
20	0.580	0.577	-0.52
50	0.870	0.851	-2.18
70	1.060	1.070	0.94
100	1.380	1.362	-1.30

Junction Capacitance Characteristic

Circuit Simulation Result

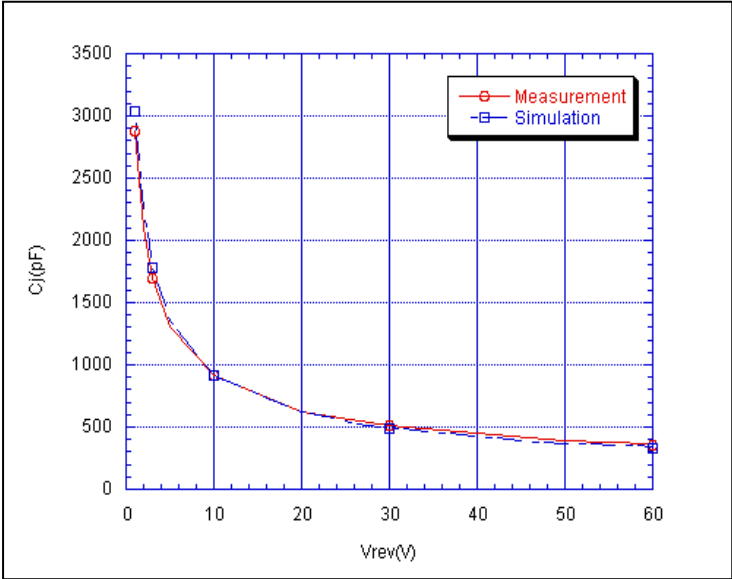


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	2970.000	3041.000	2.39
2	2170.000	2211.000	1.89
5	1330.000	1350.000	1.50
10	910.000	912.000	0.22
20	620.000	619.000	-0.16
50	381.000	370.000	-2.89