

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER / STANDARD
PART NUMBER: DF15JC10
MANUFACTURER: SHINDENGEN

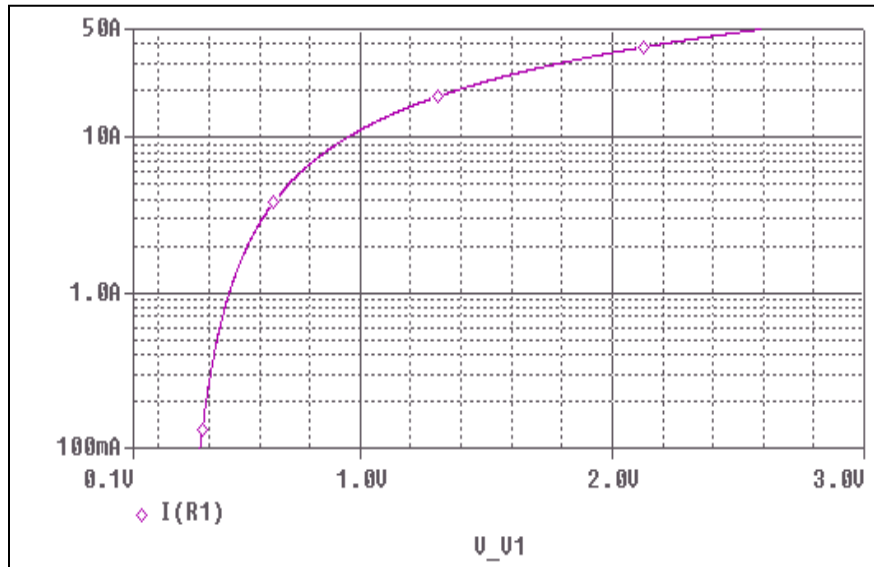


Bee Technologies Inc.

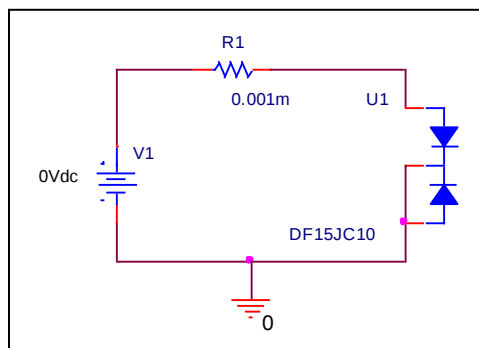
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

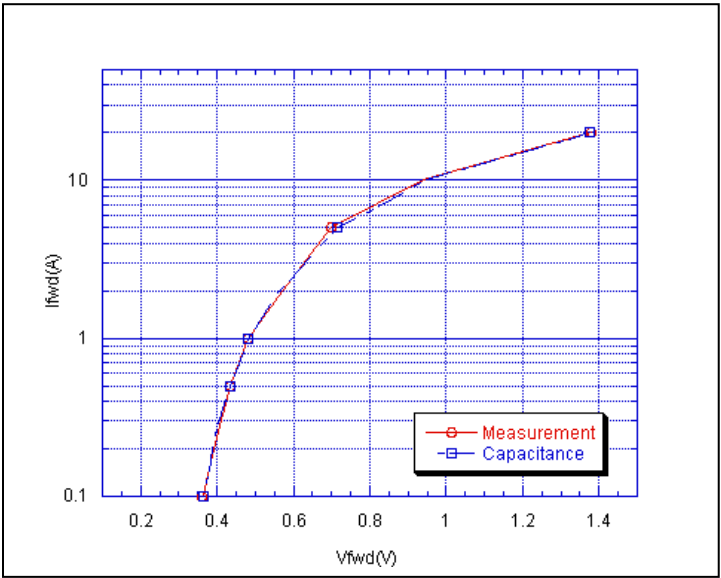


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

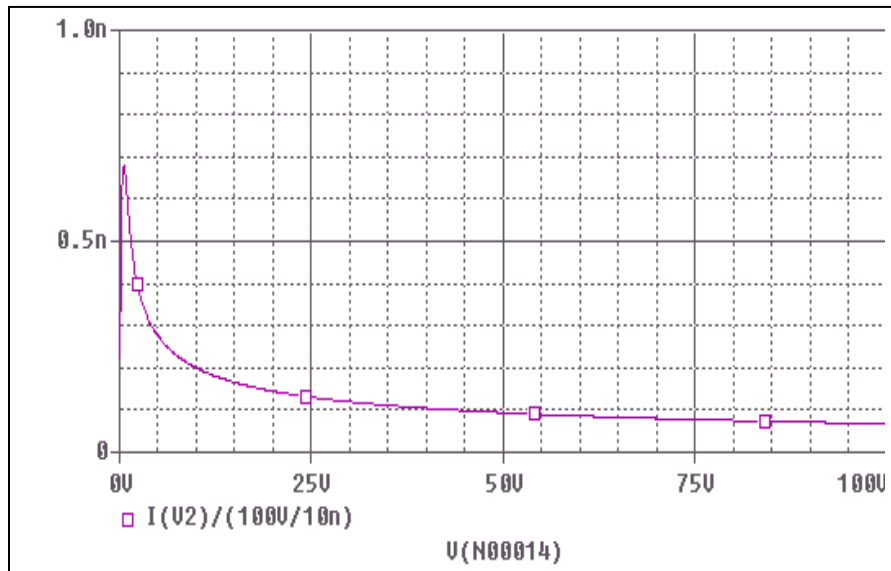


Simulation Result

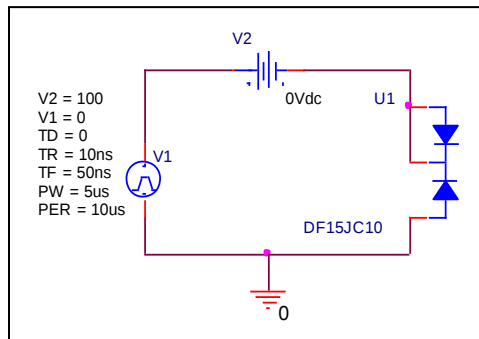
$I_{fwd}(A)$	$V_{fwd}(V)$ Measurement	$V_{fwd}(V)$ Simulation	%Error
0.1	0.360	0.364	1.17
0.2	0.390	0.389	-0.31
0.5	0.435	0.433	-0.39
1	0.480	0.480	0.00
2	0.570	0.564	-1.14
5	0.700	0.716	2.24
10	0.940	0.947	0.74
20	1.380	1.375	-0.37

Junction Capacitance Characteristic

Circuit Simulation Result

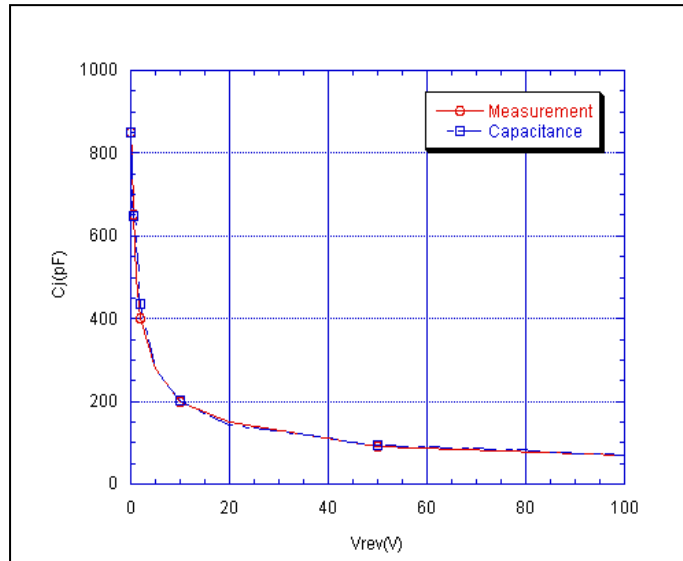


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

$V_{rev}(V)$	$C_j(pF)$ Measurement	$C_j(pF)$ Simulation	%Error
0.1	851.00	850.00	-0.12
0.2	792.00	790.00	-0.25
0.5	650.00	649.00	-0.15
1	620.00	625.50	0.89
2	430.00	434.00	0.93
5	280.00	277.70	-0.82
10	200.00	200.70	0.35
20	147.00	144.60	-1.63
50	91.00	92.50	1.65
100	68.00	67.60	-0.59