

Device Modeling Report

COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER / STANDARD
PART NUMBER: CMS02
MANUFACTURER: TOSHIBA

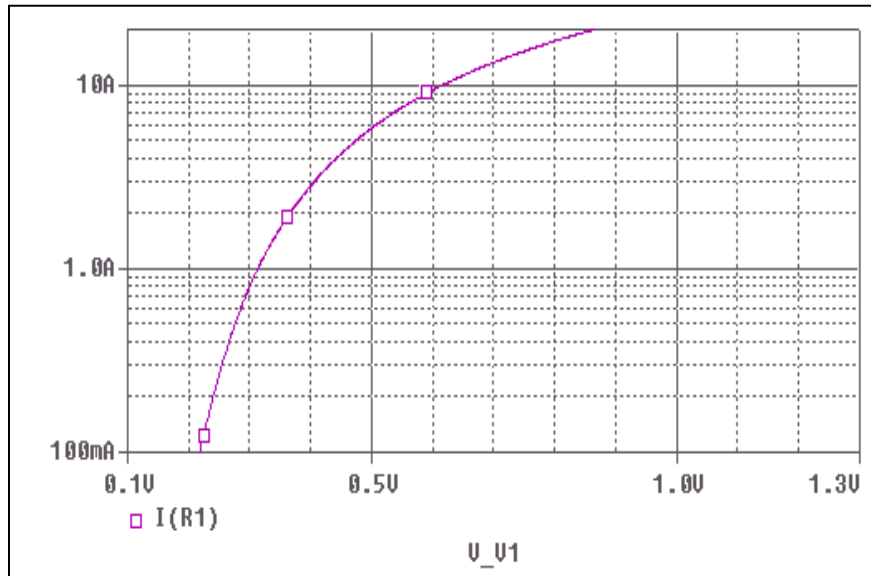


Bee Technologies Inc.

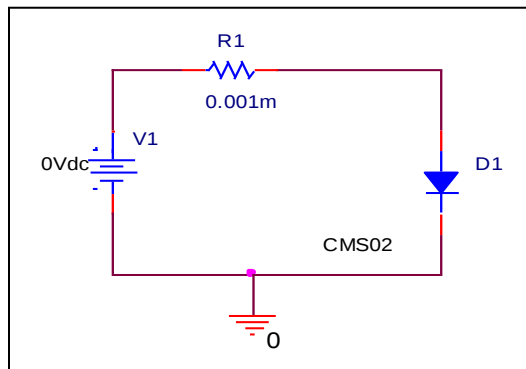
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

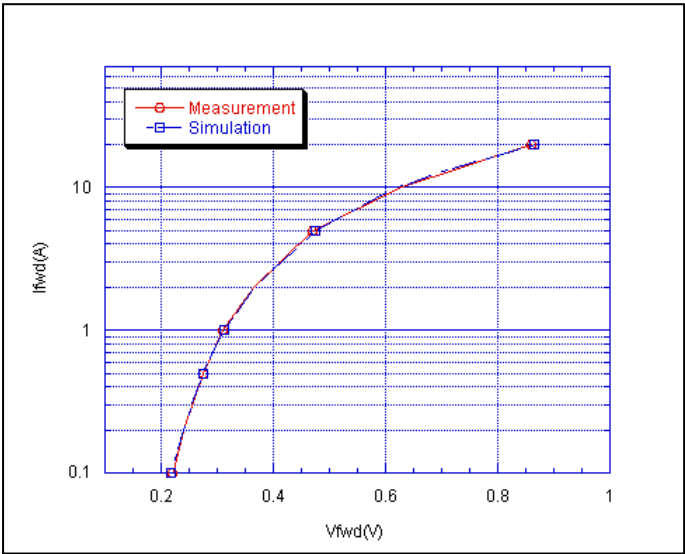


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

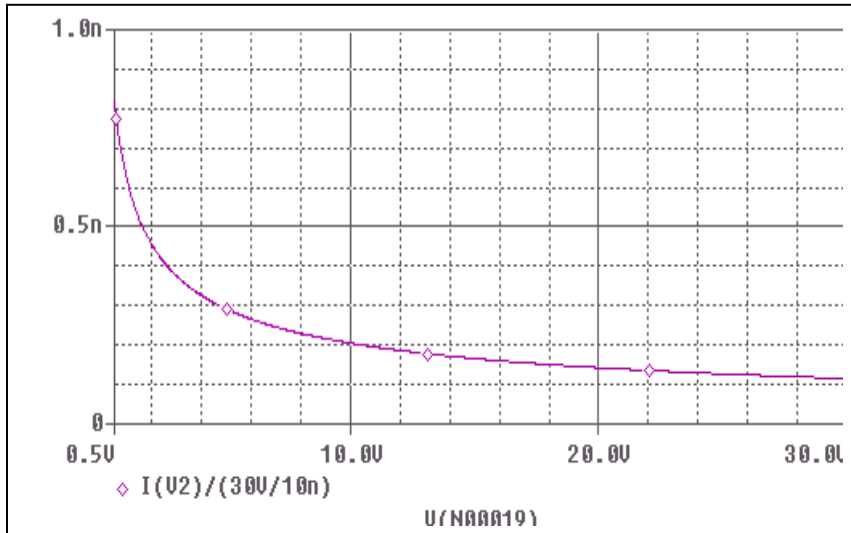


Simulation Result

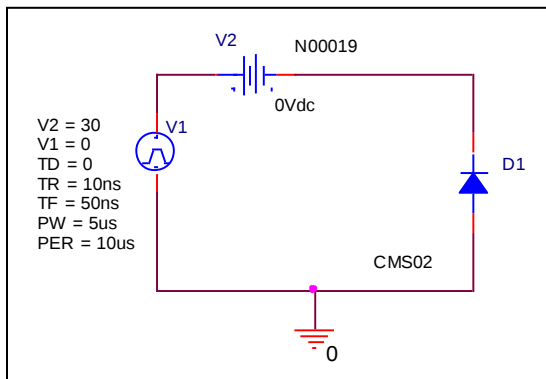
$I_{fwd}(A)$	$V_{fwd}(V)$ Measurement	$V_{fwd}(V)$ Simulation	%Error
0.1	0.220	0.218	-1.00
0.2	0.240	0.240	-0.04
0.5	0.275	0.276	0.33
1	0.310	0.313	1.06
2	0.365	0.366	0.22
5	0.470	0.475	1.09
10	0.630	0.618	-1.98
20	0.860	0.865	0.58

Junction Capacitance Characteristic

Circuit Simulation Result

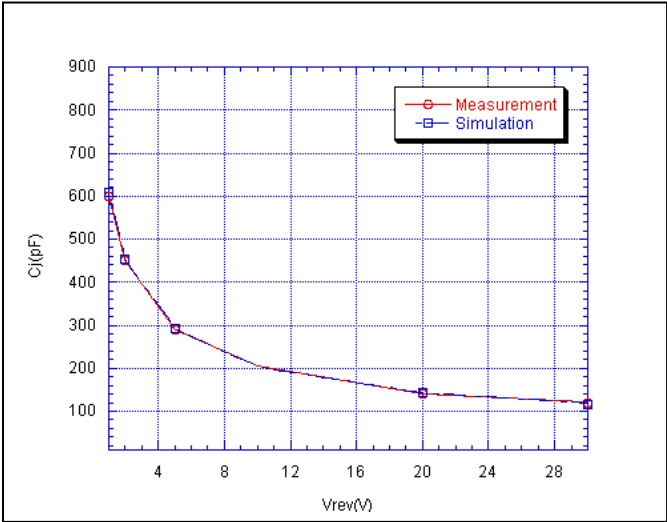


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	600.00	609.76	1.63
2	450.00	455.12	1.14
5	290.00	291.70	0.59
10	205.00	204.85	-0.07
20	140.00	142.72	1.95
30	118.00	116.42	-1.34