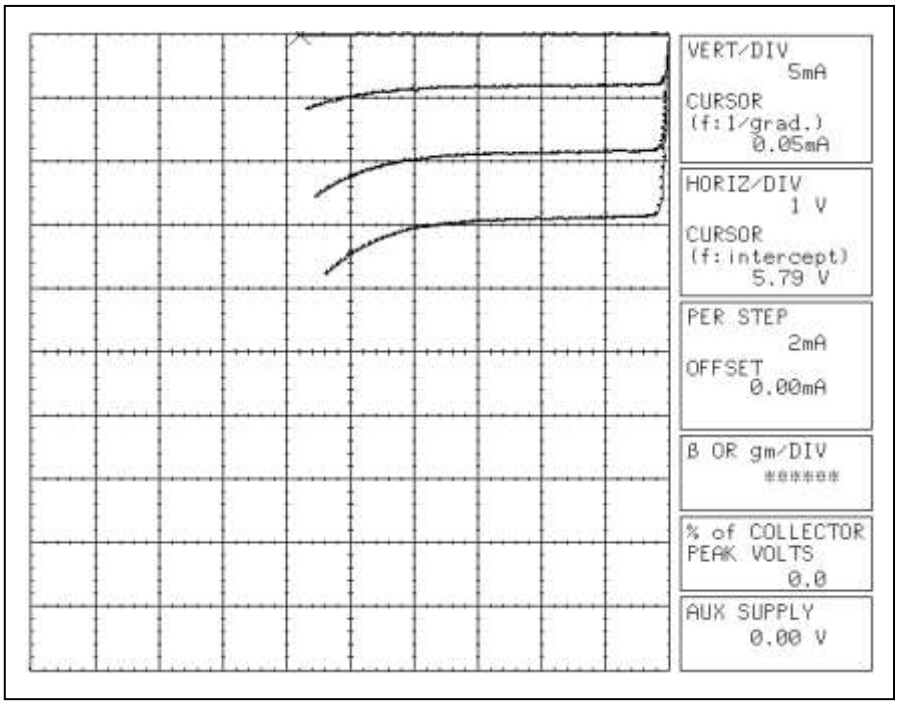
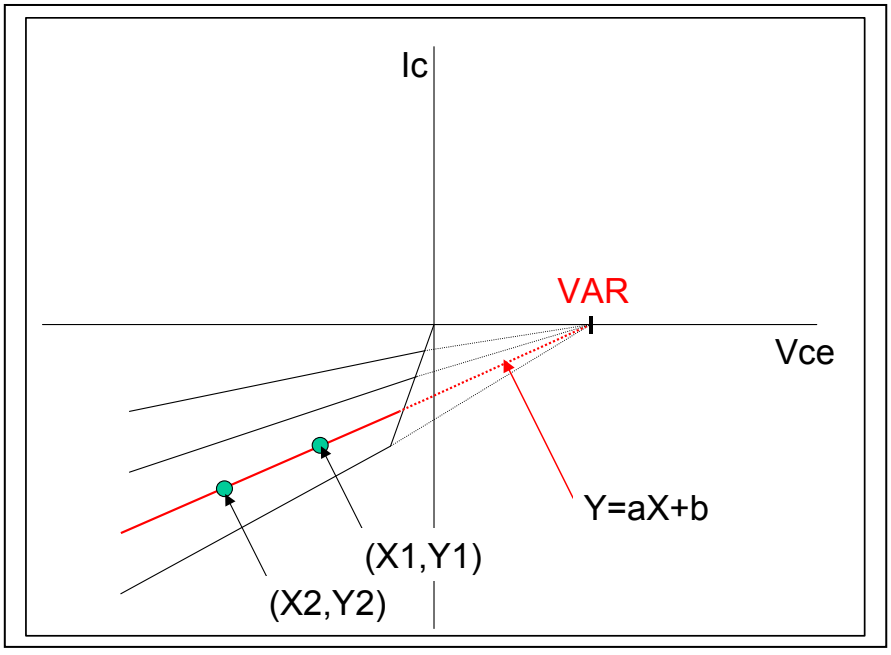
Device Modeling Report

COMPONENTS:BIPOLAR JUNCTION TRANSISTOR
PART NUMBER:2SC945
MANUFACTURER:NEC

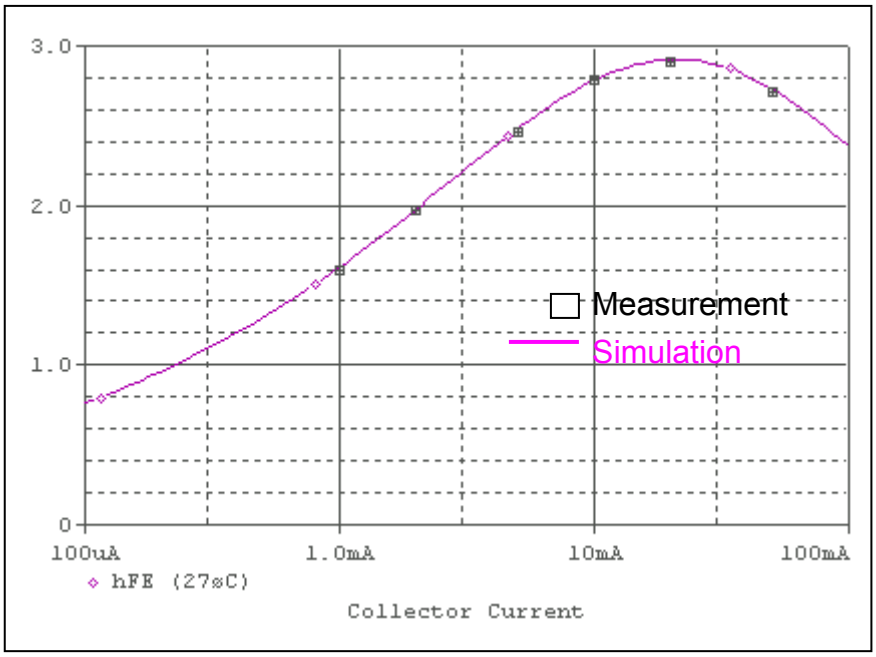
Bee Technologies Inc.

Characteristic



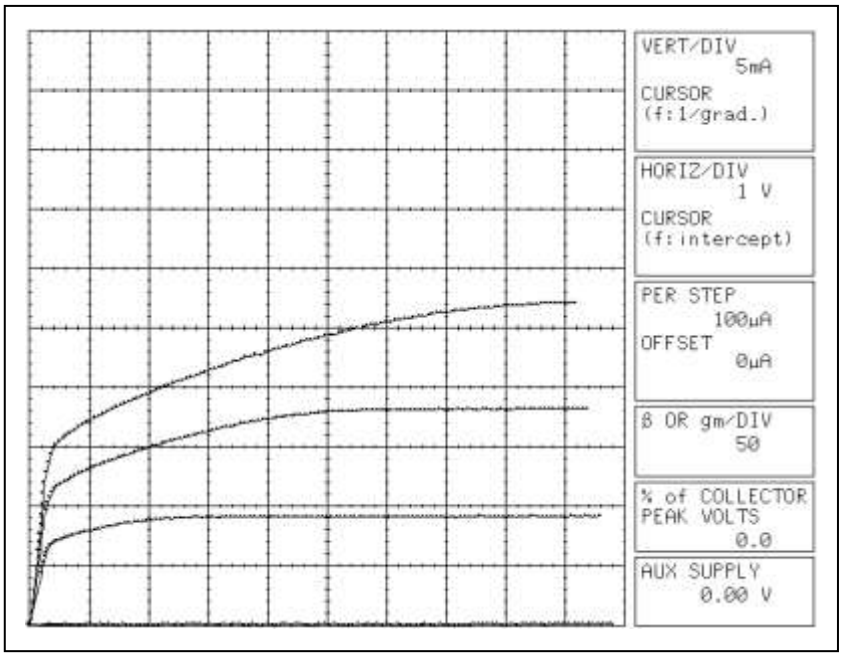


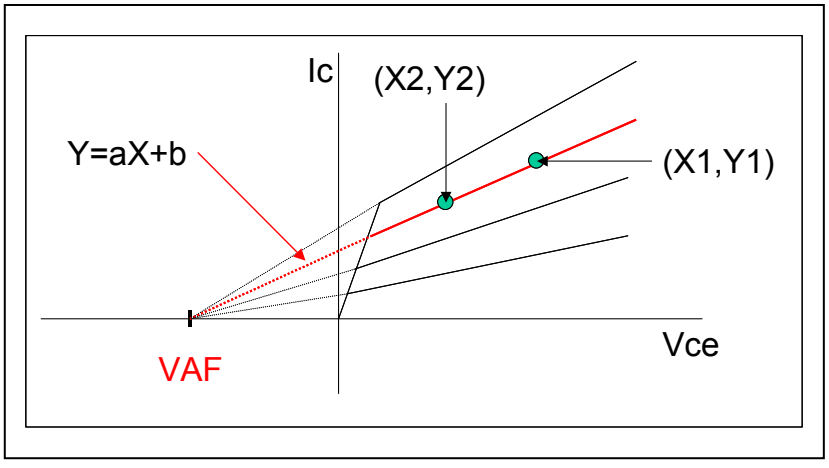
Reverse DC Beta Characteristic (Ie vs. h_{FE})



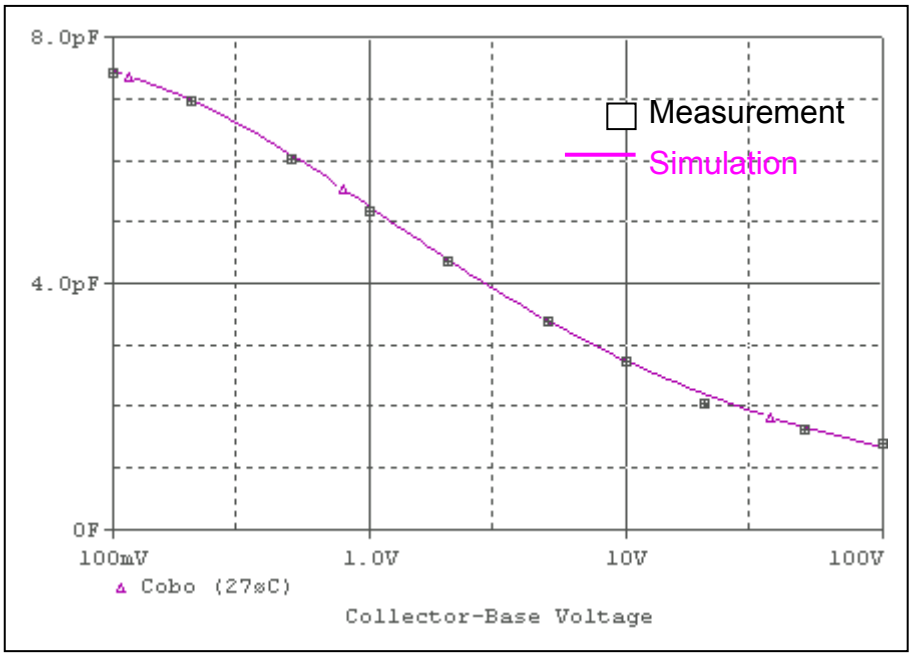
Forward

Forward Early Voltage Characteristic

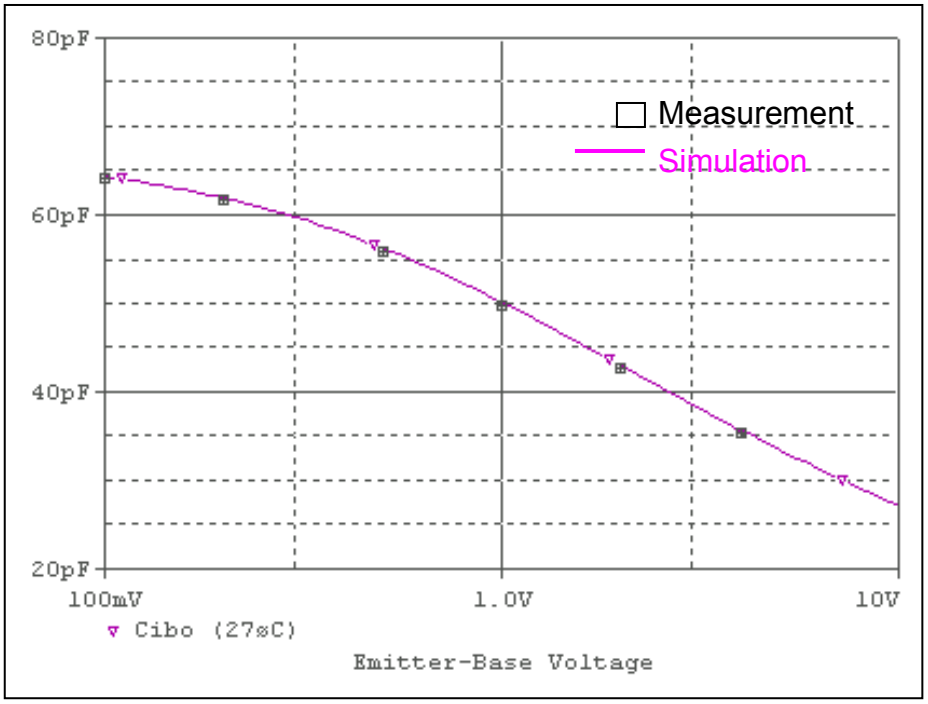




C-B Capacitance Characteristic

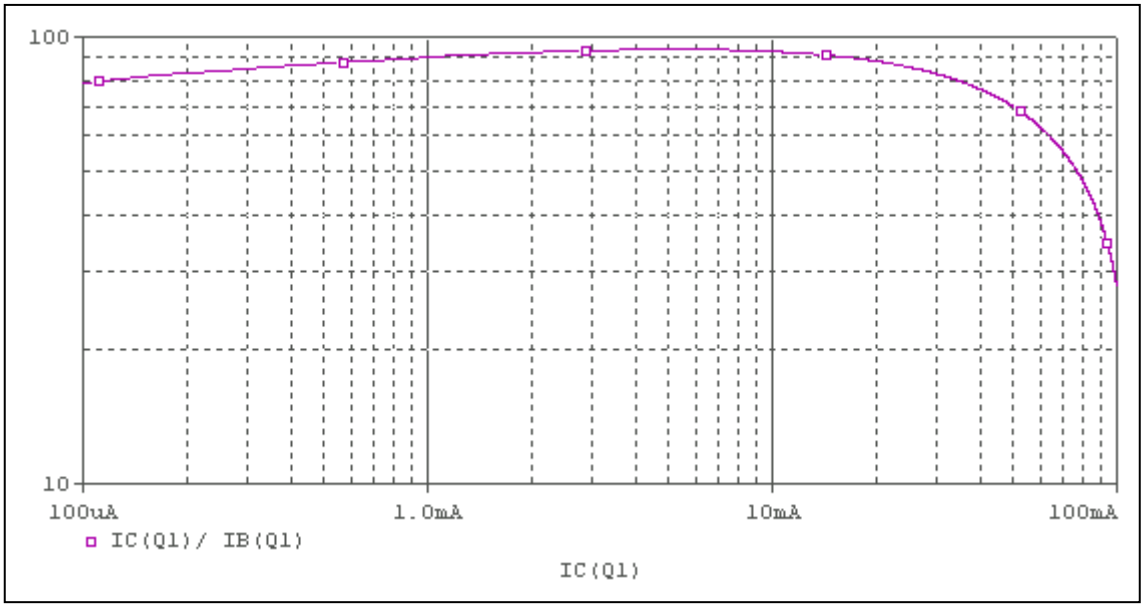


E-B Capacitance Characteristic

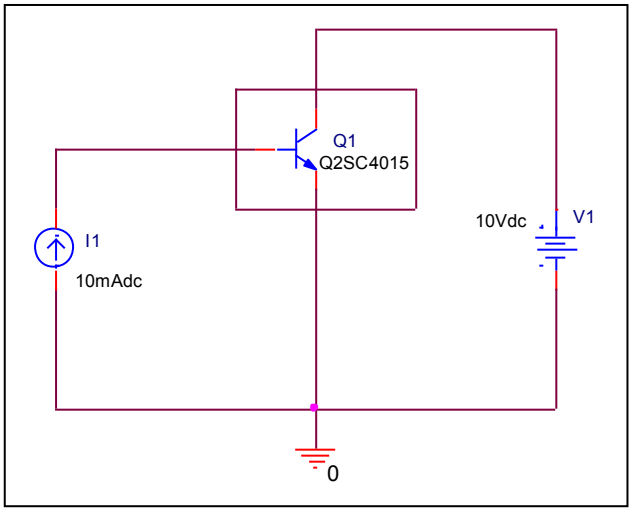


BJT Ic-hFE characteristics

Circuit simulation result

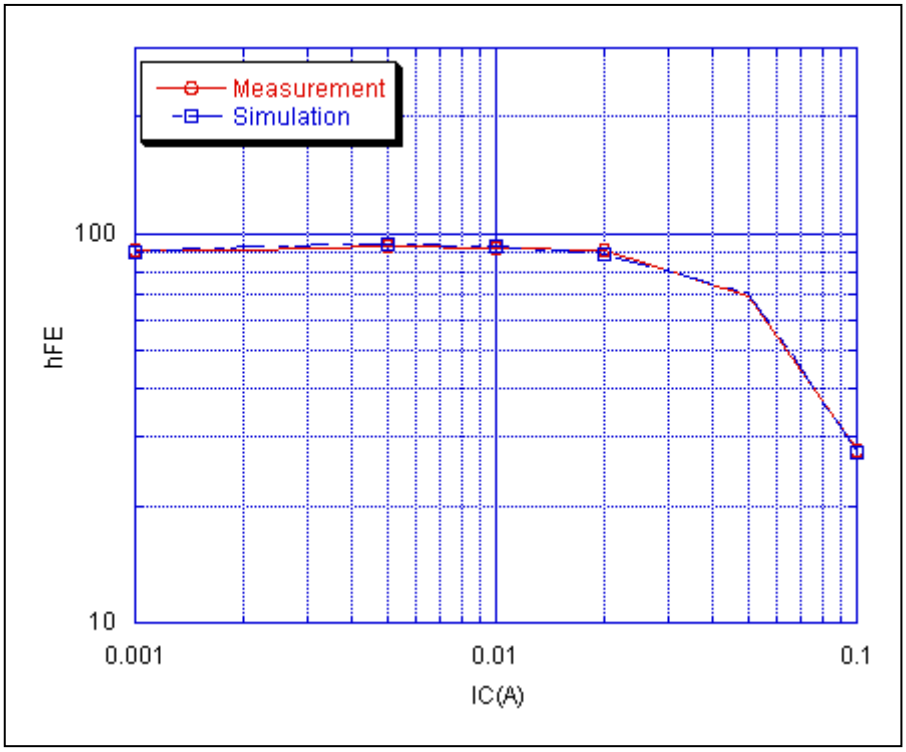


Evaluation circuit



Comparison Graph

Circuit simulation result

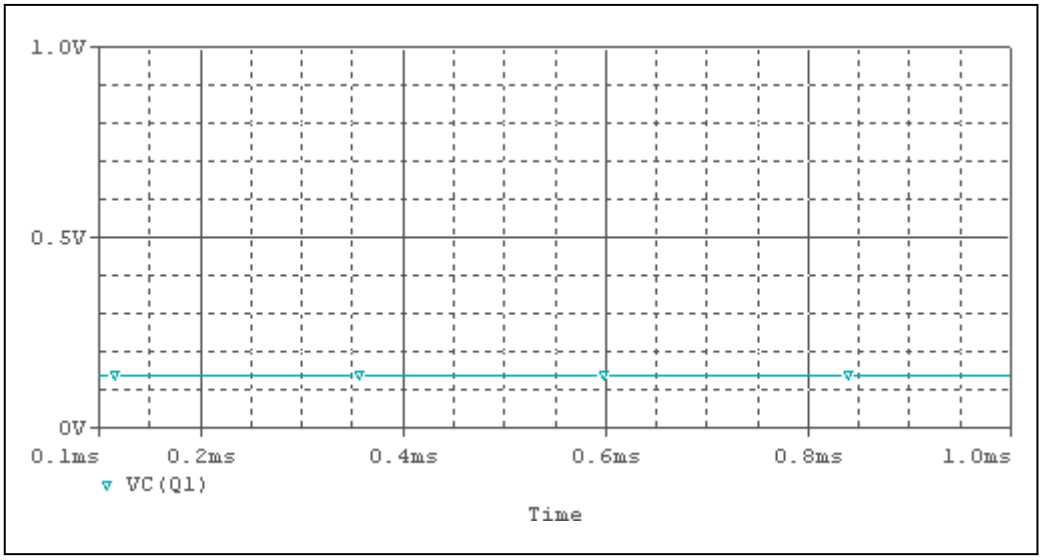


Simulation result

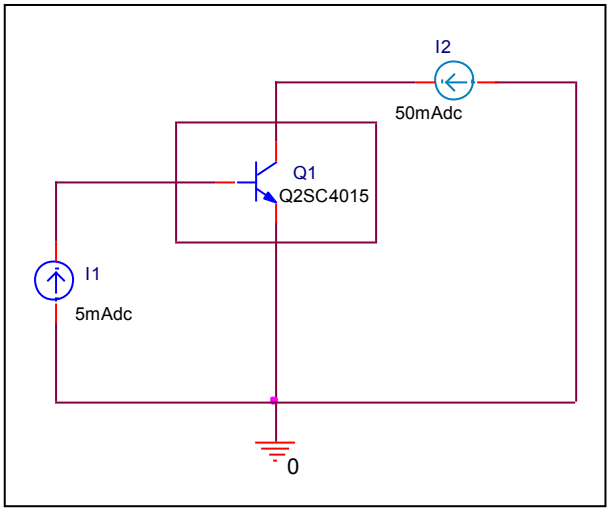
Ic(A)	hFE		%Error
	Measurement	Simulation	
0.001	90.909	90.103	0.886600887
0.002	90.909	92.317	1.548801549
0.005	92.592	93.76	1.261448073
0.01	91.743	92.807	1.159761508
0.02	90.324	88.291	2.250786059
0.05	69.252	69.61	0.516952579
0.1	27.855	27.481	1.342667385

BJT Vce(sat) voltage Characteristics

Circuit simulation result



Evaluation circuit



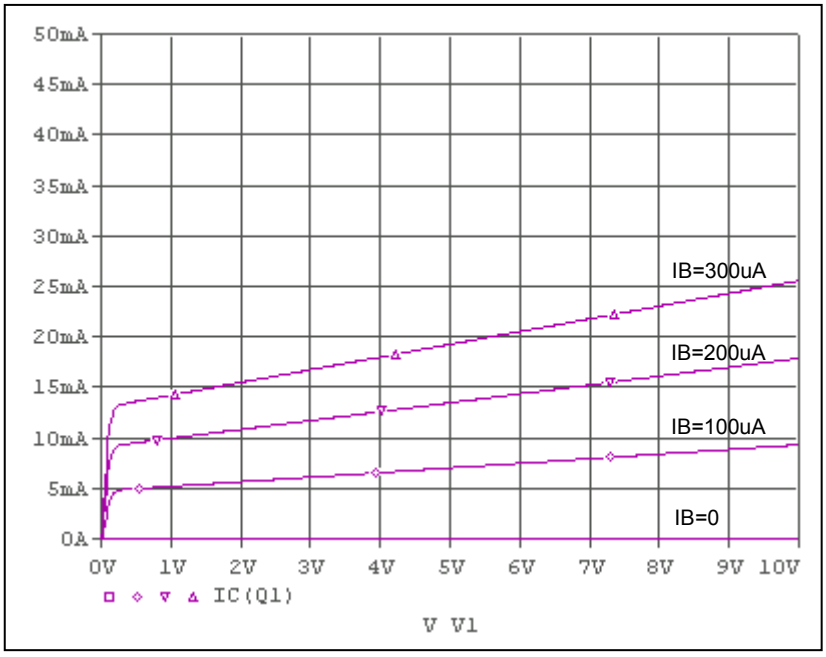
Simulation result

Test condition: IC/IB = 10, IC=100mA

Vce(sat)(V)			Vbe(sat)(V)		
Measurement	**Simulation**	**Error(%)**	**Measurement**	**Simulation**	**Error(%)**
1[max]	**107.051m**	**-**	**1[max]**	**719.436m**	**-**

Output Characteristics

Circuit simulation result



Evaluation circuit