

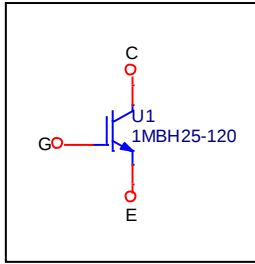
Device Modeling Report

COMPONENTS: Insulated Gate Bipolar Transistor (IGBT)
PART NUMBER: 1MBH25-120
MANUFACTURER: Fuji Electric



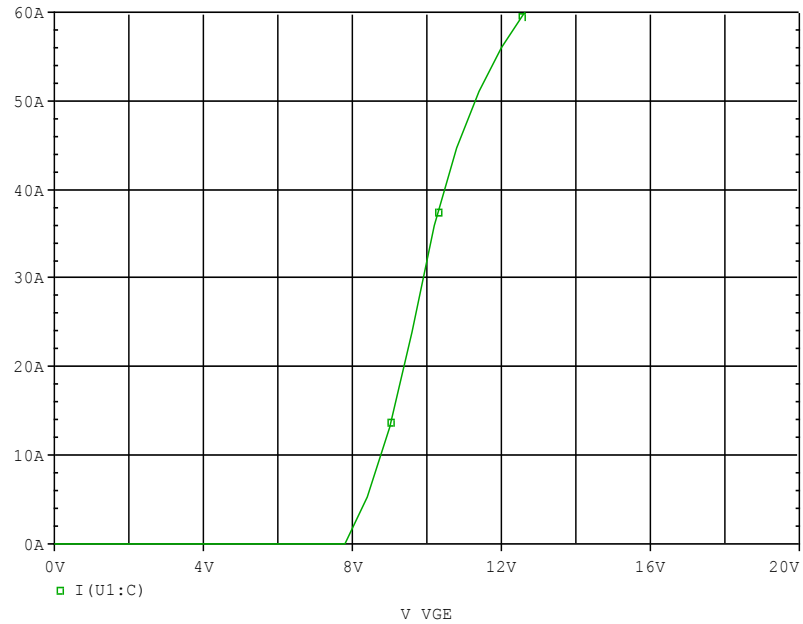
Bee Technologies Inc.

Circuit Configuration

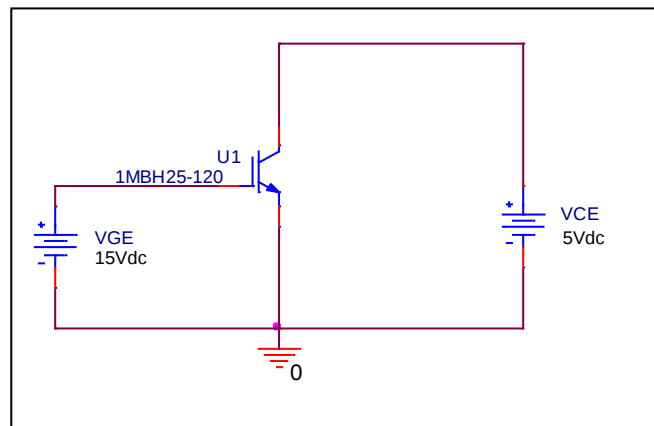


Transfer Characteristics

Circuit Simulation result

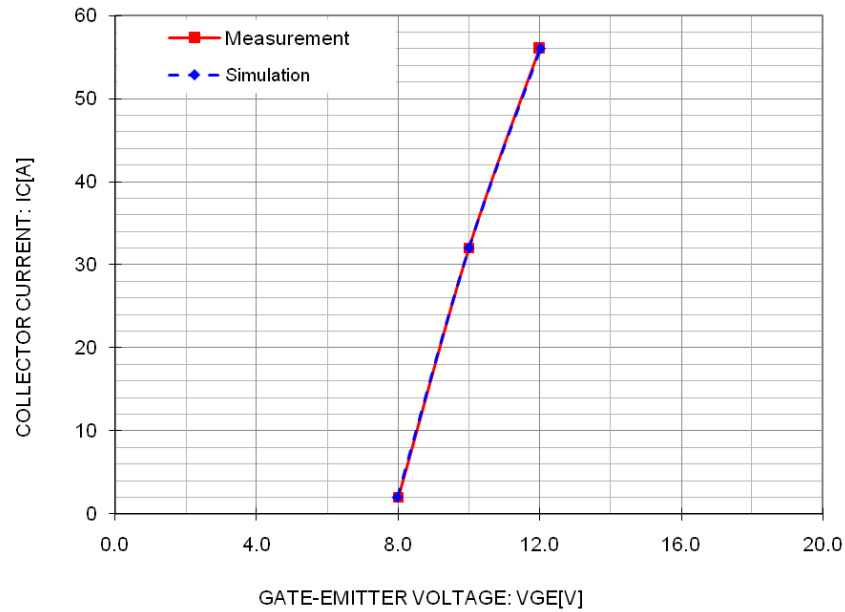


Evaluation circuit



Comparison Graph

Simulation result



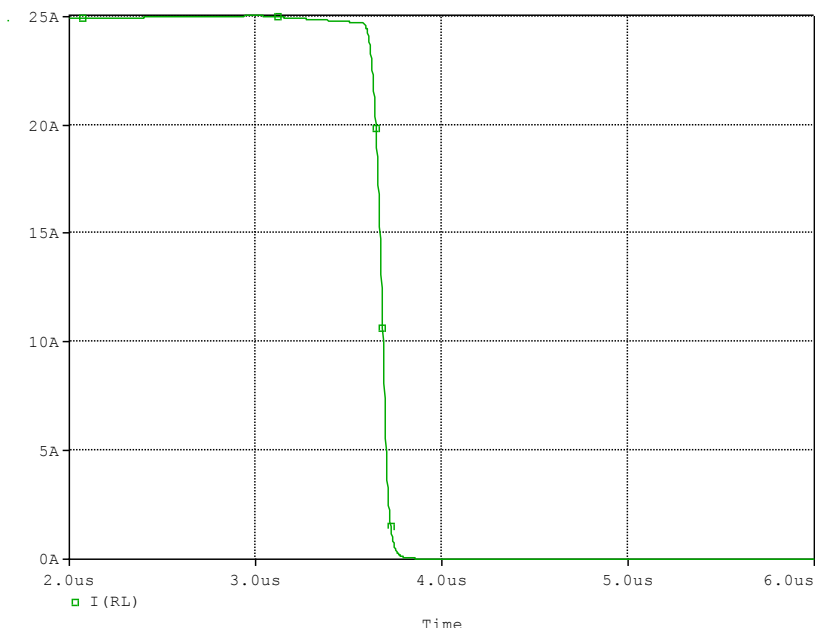
Comparison table

Test condition: $V_{CE} = 5$ (V)

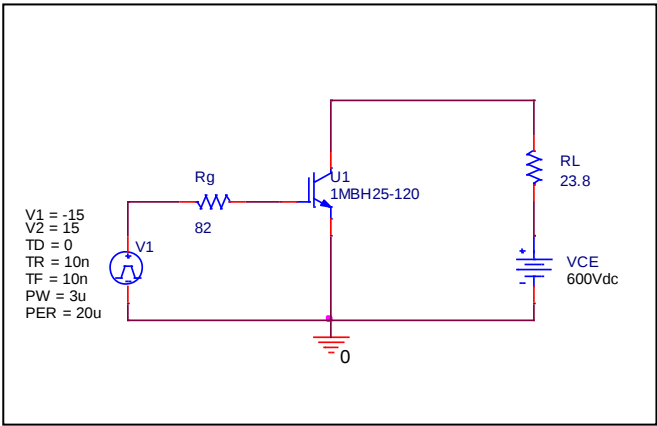
IC (A)	VGE (V)		%Error
	Measurement	Simulation	
2.000	8.000	8.026	0.33
32.000	10.000	10.005	0.05
56.000	12.000	12.005	0.04

Fall Time Characteristics

Circuit Simulation result



Evaluation circuit

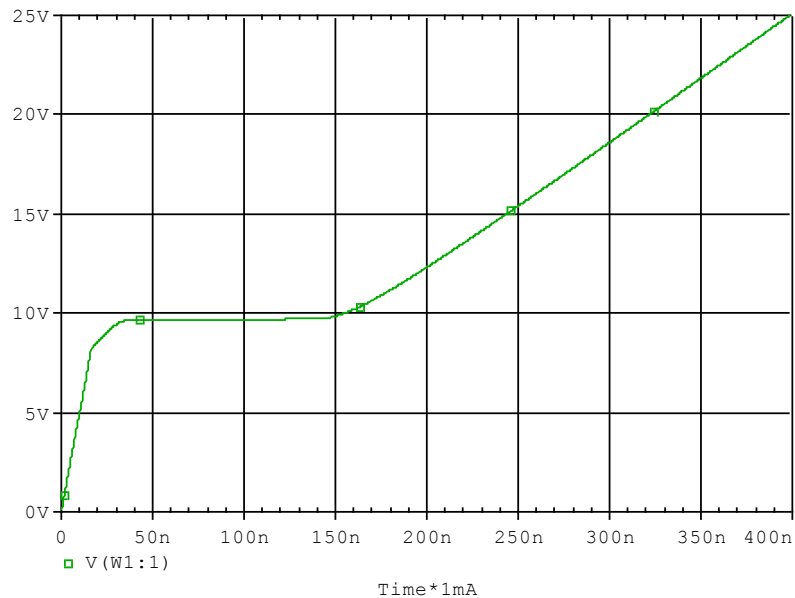


Test condition: $I_C=25\text{ (A)}$, $V_{CC}=600\text{ (V)}$

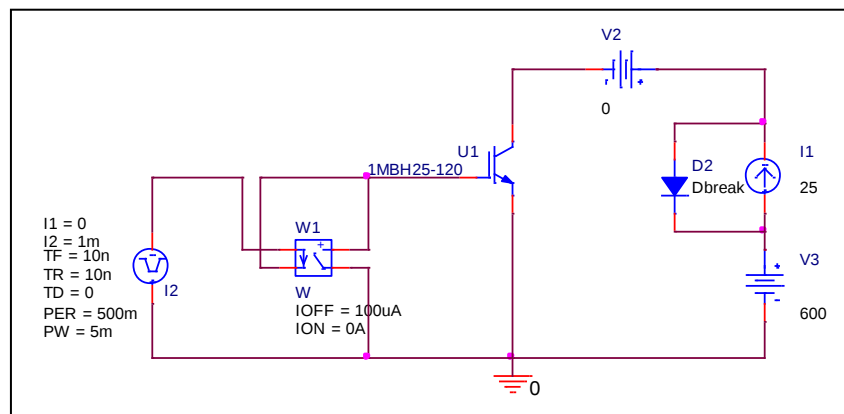
Parameter	Unit	Measurement	Simulation	%Error
tf	us	0.086	0.087	1.437

Gate Charge Characteristics

Circuit Simulation result



Evaluation circuit

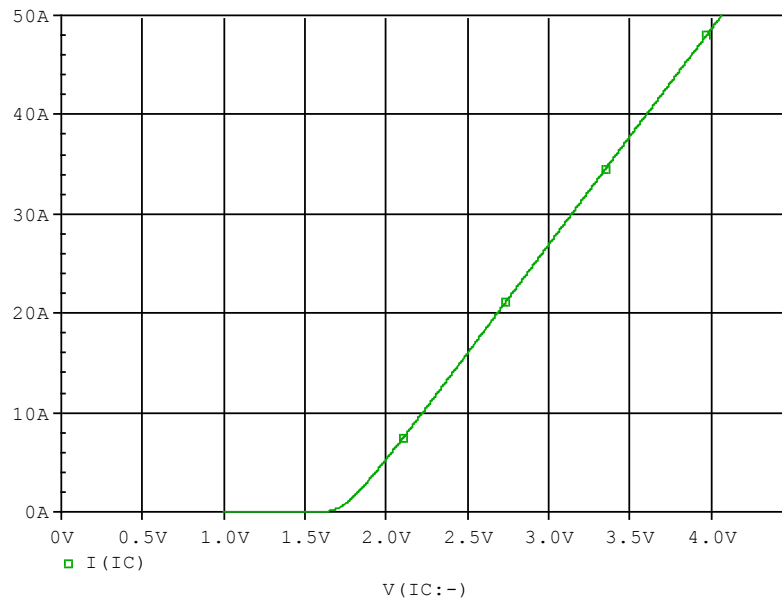


Test condition: $V_{CC}=600$ (V), $I_C=25$ (A), $V_{GE}=15$ (V)

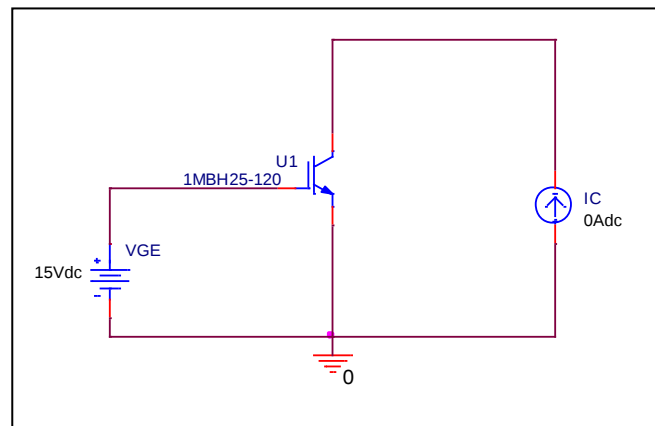
Parameter	Unit	Measurement	Simulation	%Error
Qge	nc	25.000	25.044	0.18
Qgc	nc	135.000	132.870	-1.58
Qg	nc	240.000	243.652	1.52

Saturation Characteristics

Circuit Simulation result

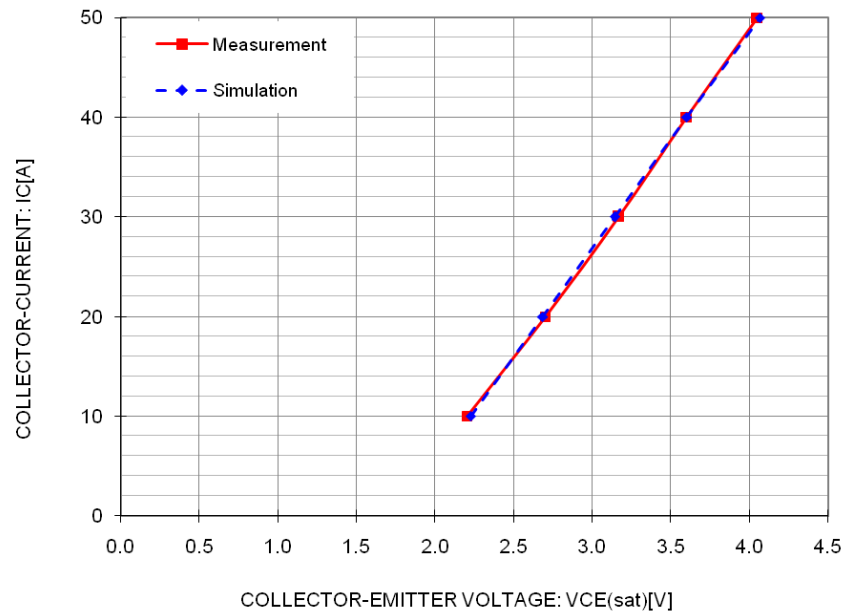


Evaluation circuit



Comparison Graph

Simulation result



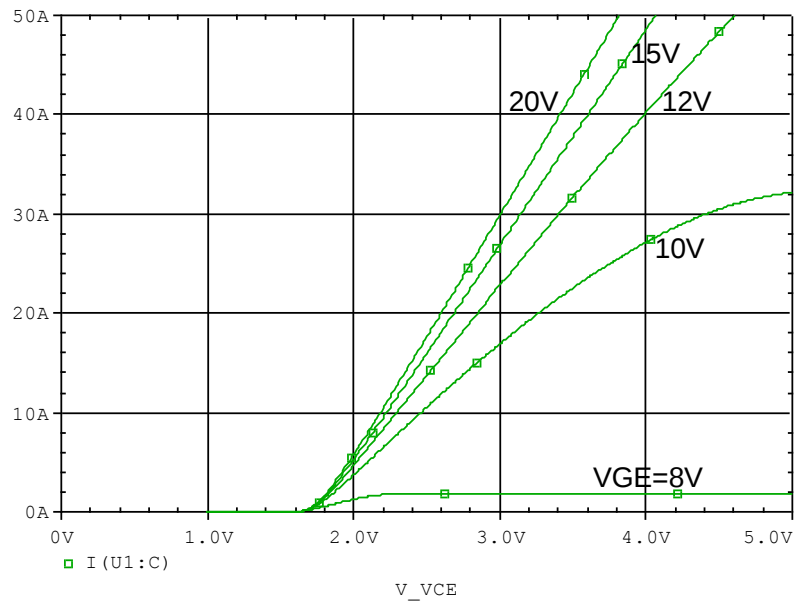
Comparison table

Test condition: $V_{GE} = 15$ (V)

Ic(A)	VCE (V)		%Error
	Measurement	Simulation	
10.0	2.200	2.225	1.12
20.0	2.700	2.685	-0.55
30.0	3.170	3.142	-0.87
40.0	3.600	3.602	0.05
50.0	4.050	4.066	0.40

Output Characteristics

Circuit Simulation result



Evaluation circuit

