

# Device Modeling Report

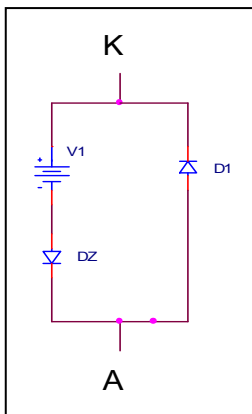
COMPONENTS: DIODE/ZENER DIODE / STANDARD  
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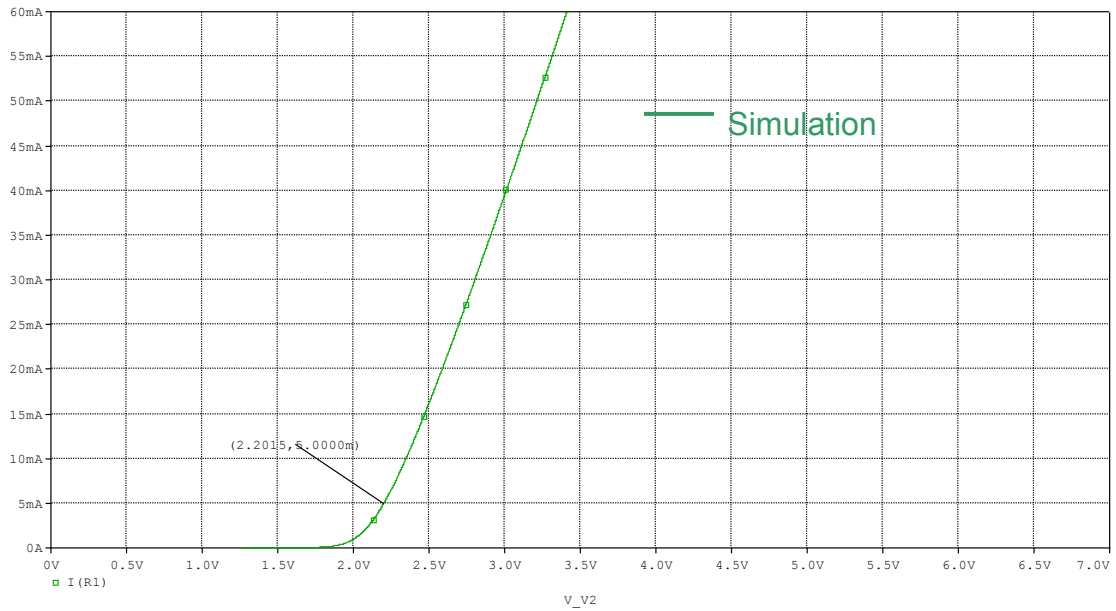
**Bee Technologies Inc.**

Pspice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
TT	Transit Time

### Equivalent circuit



## Iz(Zener Current) vs. Vz(Zener Voltage) Characteristics



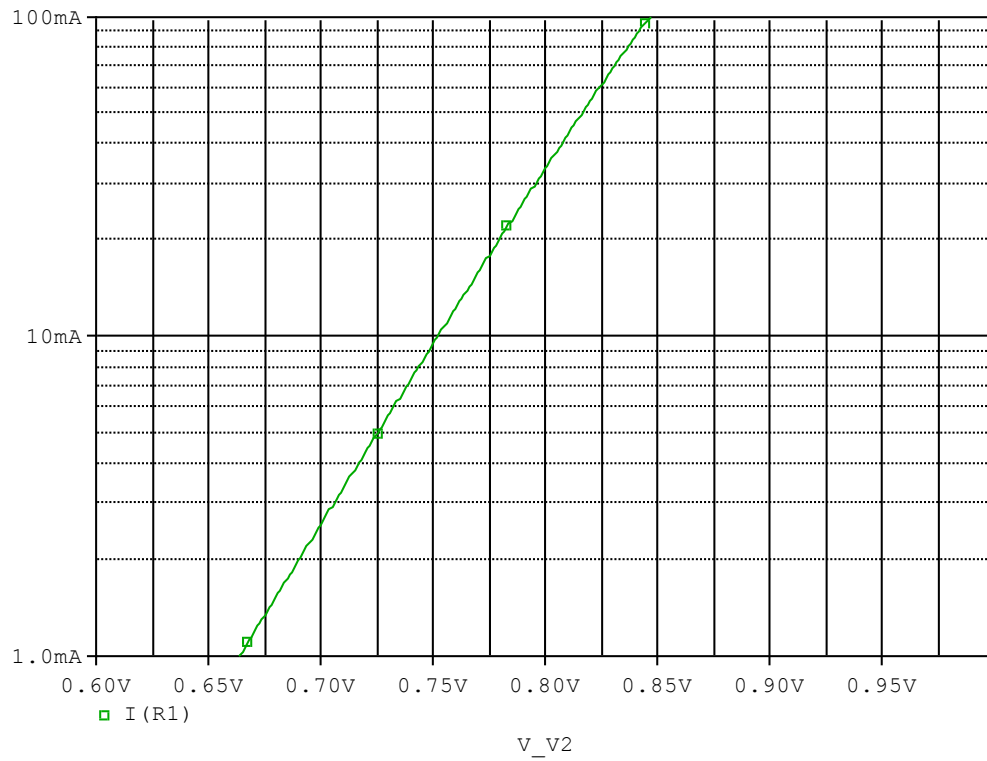
### Simulation Result

Vz =  $V_z = 2.2015(V)$  at  $I_z = 5.000m(A)$

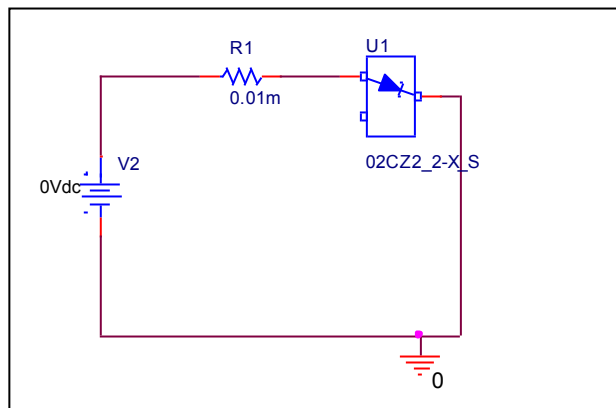
SPEC: Vz = 2.05(V) to 2.26(V) at  $I_z = 5.000m(A)$

# Forward Characteristic

## Circuit Simulation result

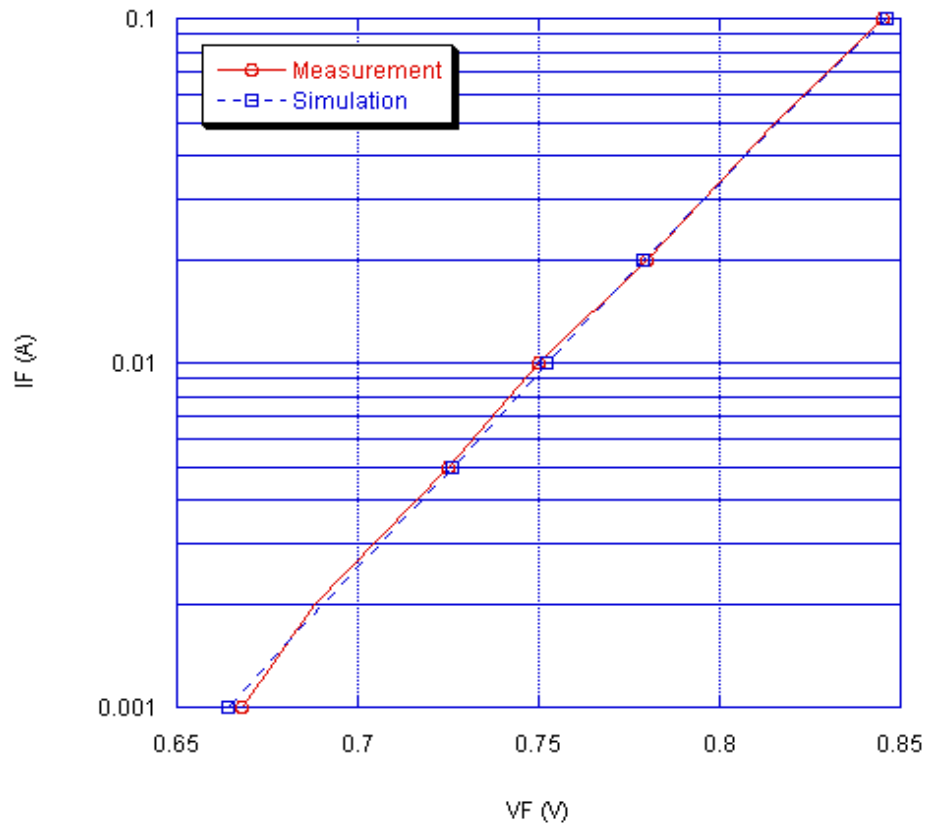


## Evaluation circuit



## Comparison Graph

### Circuit Simulation Result



### Simulation Result

$I_F$ (A)	$V_F$ (V)		Error (%)
	Measurement	Simulation	
1m	0.668	0.664	-0.567
2m	0.688	0.690	0.392
5m	0.725	0.726	0.081
10m	0.750	0.752	0.323
20m	0.780	0.779	-0.124
50m	0.815	0.816	0.163
100m	0.845	0.846	0.171