

Proposal of Standardization of passive components model

JEITA EDA W.G.

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FUJISHIRO Yoshikazu

Activities of JEITA EDA standards W.G.

- JEITA will standardize passive component models in ECALS dictionary.
- There are two types of models

1. Equivalent circuit = SPICE netlist

- Circuit diagram
- Comparison data between measured and modeled simulator where the netlist can work

2. S-parameter = Touchstone format (Text file)

- Graph (frequency characteristics)
- measurement condition

3. **IBIS ?** I think IBIS has a great possibility to describe passive component models.

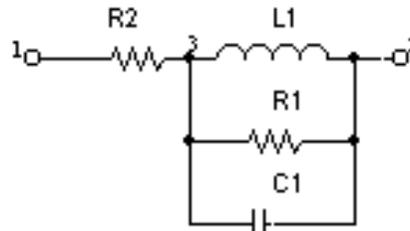
Example of Passive Component Models

1. Equivalent circuit

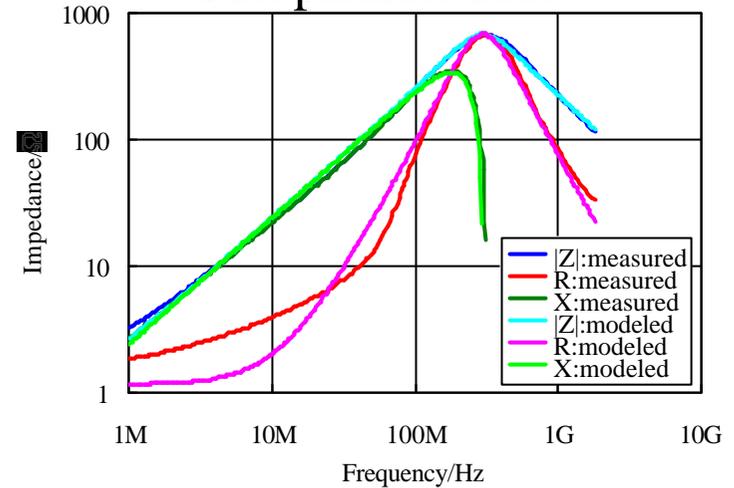
SPICE netlist

```
* B300
.SUBCKT B300 1 2
R2 1 3 1ohm
L1 3 2 100uH
R1 3 2 10kohm
C1 3 2 1pF
.ENDS B300
```

Circuit diagram



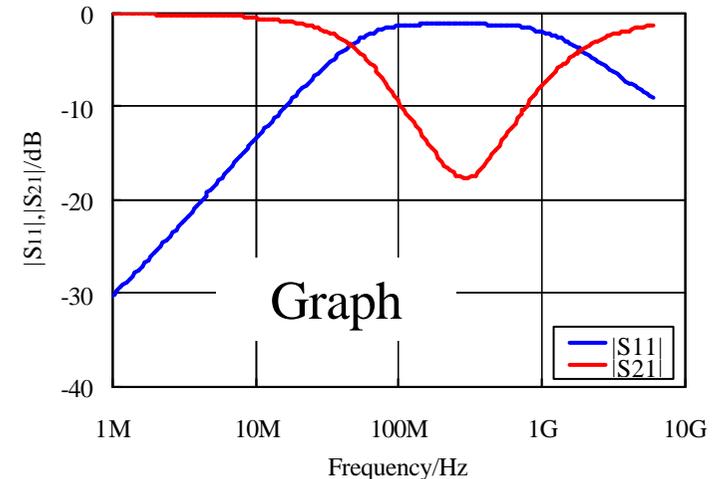
Comparison data



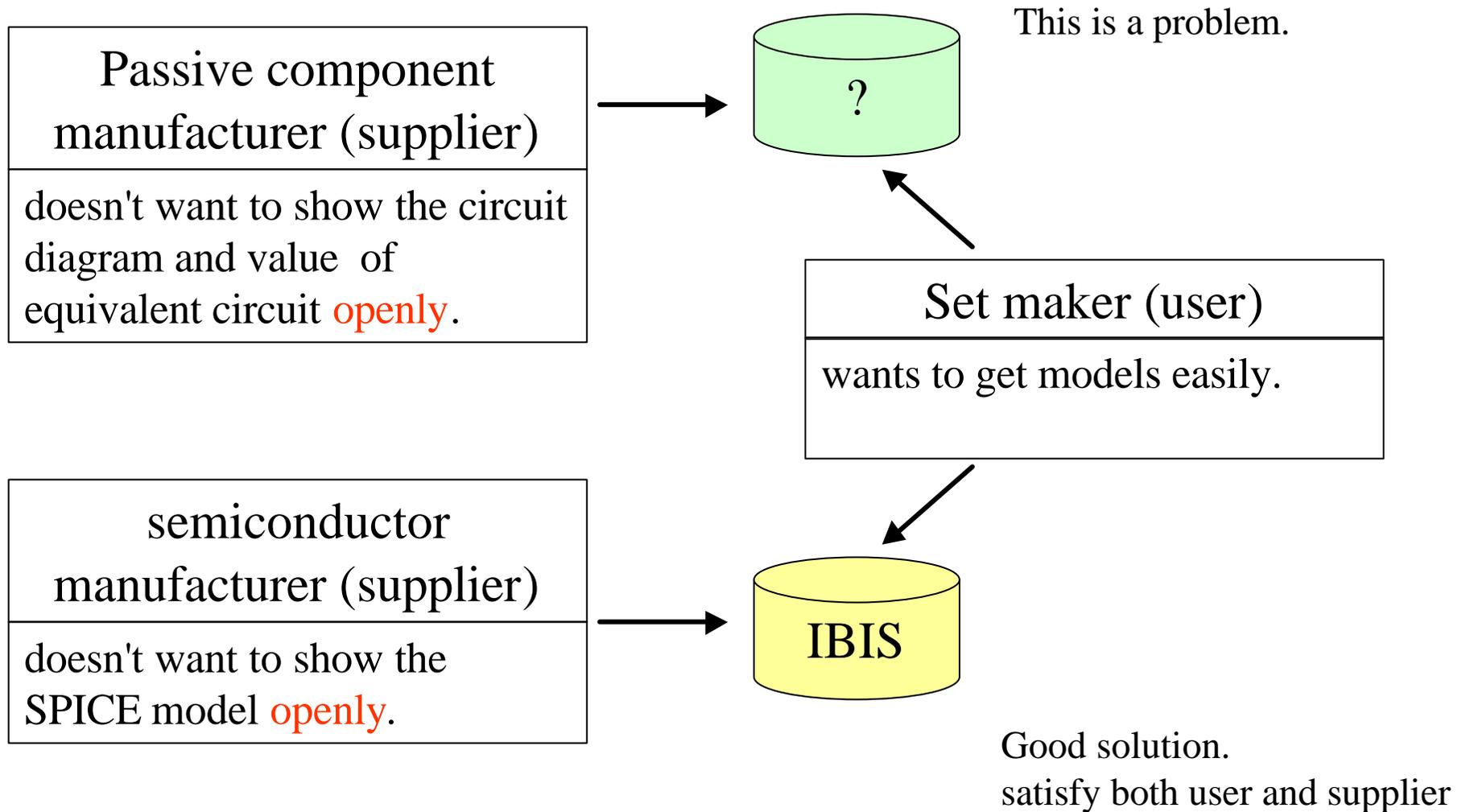
2. S-parameter

Text file

```
# MHz S MA R 50
0.30000 0.01594 34.1538 0.98689 -0.52142 0.98753 -0.51077 0.01597
0.31523 0.01625 35.6382 0.98683 -0.53988 0.98684 -0.51983 0.01629
0.33123 0.01658 36.5980 0.98664 -0.55659 0.98694 -0.59540 0.01660
.....
6000.00 0.35434 -82.8386 0.85336 -8.40015 0.85235 -8.58238 0.33692
```



Distribution



We would like to investigate what is the best solution for a passive component model.

END