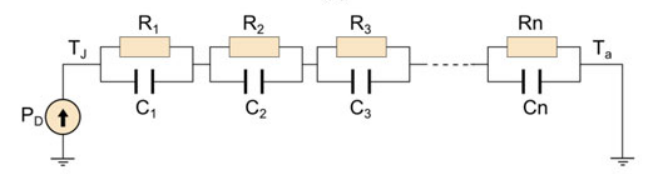
**Estimation of R(Tj) from ASC test data**

Forster thermal model:



In the same way we can formulate the temperature drop across the other elements in the foster chain and write in the state space matrix form.

With

,

, , ,

The discrete state space model can be written as

With

Since A is diagonal

And

Where is the sampling time

**Modelling of Rds on as function of Tj and Id based on VI-Curve measurement and Thermal model.**

Given are the measurements vector the corresponding current vector and the corresponding time vector

With the losses vector and thermal model the junction temperature can be calculated and the junction temperature can be given as

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| n |  |  |  |  |
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|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

The VI curve was measured at 3 temperatures

The general model is polynomial 3 order:

Where are

We also define that:

Assuming that:

What we have is:

We would like to have:

