2-port MMIC die with variable base temperature (for interface matching and a single averaged surface heating element thermal2mmic

Form: `thermal2mmic:`⟨`instance name`⟩ n_1 n_2 n_3 ⟨`parameter list`⟩
n_1, n_2 and n_3 are the element nodes.
Parameters:

Parameter	Type	Default value	Required?
ntimesteps: Number of time steps in transient simulation	INTEGER	0	no
dt: Length of timestep (s)	DOUBLE	0	no
tambient: Ambient temperature (K)	DOUBLE	300	no
time_d: Flag, if true, calculate in the time domain.	BOOLEAN	false	no
read_input: Flag, read_input thermal resistance matrices from file.	BOOLEAN	false	no
l: Substrate x-dimension in meters.	DOUBLE	0.0004	no
w: Substrate y-dimension in meters.	DOUBLE	0.0004	no
d: Substrate z-dimension in meters.	DOUBLE	0.0004	no
xl: x-coordinate of left edge of heating element.	DOUBLE	0.00022	no
xr: x-coordinate of right edge of heating element.	DOUBLE	0.00018	no
yu: y-coordinate of upper edge of heating element.	DOUBLE	0.00022	no
yd: y-coordinate of lower edge of heating element.	DOUBLE	0.00018	no
ks: Thermal conductivity of die material (W/m.K).	DOUBLE	46	no
rho: Density of die material (kg.m-3).	DOUBLE	5320	no
c: Specific heat of die material (J/kg.K).	DOUBLE	350	no
nfingers: Number of power transistor fingers	INTEGER	1	no
b: Exponent in power law temperature dependence of thermal conductivity	DOUBLE 1.22 no		

Example:

```
thermal2mmic: t3 103 203 200 model="t2"
.model t2 thermal2mmic (Ntimesteps=nsteps dt=deltat Tambient=temp time_d=1 nfingers = 1)
```

Notes:
There is no equivalent SPICE element.

Version:
2000.09.01

Credits:

Name	Affiliation	Date	Links
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