solar_module_2.ebe

Attributes

```
ebe name=solar_module_2
Jacobian: variable
nodes: p n
state_vars:
aux_vars: i_solar
aux_vars_startup: i_solar_s
# Nc         number of cells in series (only series is allowed, not parallel)
# t_C        ambient temperature in deg C
# g_rad      irradiation in W/m2
# t_C_ref    ref temperature in deg C
# g_rad_ref  ref irradiation in W/m2
# Voc_ref    Voc at t_C_ref
# Isc_ref    Isc at t_C_ref
# Vm_ref     Vm at t_C_ref, max power point being (Vm, Im)
# Im_ref     Im at t_C_ref
# coef_Isc   % change in Isc with temperature (e.g., 0.05 %/degC)
# coef_Voc   % change in Voc with temperature (e.g., -0.32 %/degC)
# Eg         energy gap
#
rparms:
+  Nc=1
+  t_C=25
+  t_C_ref=25
+  g_rad=1000
+  g_rad_ref=1000
+  Voc_ref=0.8
+  Isc_ref=1.0
+  Vm_ref=0.6
+  Im_ref=0.8
+  coef_Isc=0.05
+  coef_Voc=-0.32
+  Eg=1.11
outparms: i v p
endebe
```

Description

solar_module_2.ebe is a behavioral model of a PV module. The model parameters and their default values are given in the element template. The current, voltage, and power of the module are made available as output variables.