Below is an example of the HSPICE model for a BGA Socket Adapter on 0.50mm terminal pitch. Following is a 20-pole rational polynomial description of the device parasitics. This is implemented as a sub-circuit call with 8 nodes -- read "wires" -- numbered 1 through 8. The header contains the mapping information of each node in terms of signals S1+ through S2- and whether it is the male or female terminal end.

The following data is provided as a representative example only and has been purposely truncated to suit that purpose.

```
* 4x3 Array Setup:
*
* GND GND GND GND
* S1+ S1- S2+ S2-
* GND GND GND GND

* Circuit-Node vs. Pin Assignments:
*
* Node 1 = S1+ female
* Node 2 = S1- male
* Node 3 = S2+ female
* Node 4 = S2- male
* Node 5 = S1+ male
* Node 6 = S1- female
* Node 7 = S2+ male
* Node 8 = S2- female

.subckt socket_adapter_05mm 1 2 3 4 5 6 7 8
* This netlist is compatible with META-SOFTWAREL HSPICE H93A.02.
V1 1 9
E1 9 0 10 0 7.071067811865476e+000
F1 0 10 V1 7.071067811865476e+000
E2 11 12 13 0 1.0
G1 0 13 10 0 0.5
V2 13 14
H1 12 0 V2 1.0
V3 10 11
F2 0 13 V3 -0.5
G2 14 0 LAPLACE 14 0
+  1.12344527832082
+  -6.27740184117425e-008
+  -2.31329036665136e-019
+  -4.56306148622343e-030
+  -4.71110920392639e-042
+  /
+  3245.85956696068
+  1.25136668699898e-007
+  1.6219753145192e-018
+  1.53188442888775e-029
+  8.00654229158954e-041
+  3.125e-052
G3 14 0 LAPLACE 21 0
+  -2.59061283009484
+  -1.76026378282403e-008
++++++++++++++++++Balance of data purposely deleted to End...
```

Below is an example of the IBIS model for a BGA Socket Adapter on 0.50mm terminal pitch. This file contains the header information which enables an IBIS-ICM version 1.1 compatible simulator to interpret the s-parameter matrix. The header contains the mapping information of each port in the s-parameter matrix in terms of signals S1+ through S2-, and whether the port looks into the male or female terminal end.

The following data is provided as a representative example only and has been purposely truncated to suit that purpose.

```
[Begin ICM Section] Socket_Adapter_05mm
[Derivation Method] Lumped
[ICM S-parameter]
File_name socket_adapter_05mm.s8p
Port_assignment
Port Node
1    S1+_female
2    S1-_male
3    S2+_female
4    S2-_male
5    S1+_male
6    S1-_female
7    S2+_male
8    S2-_female
[End ICM Section]
```

Below is an example of the s-parameter matrix in the Touchstone, (raw data), format for a BGA Socket Adapter on 0.50mm terminal pitch. This file may be imported into either HSPICE or IBIS model solvers.

The following data is provided as a representative example only and has been purposely truncated to suit that purpose.

```
# hz S ma R 50
! 8 Port Network Data from ACDATA_socket_0 block
! freq  magS11  angS11  magS12  angS12  magS13  angS13  magS14  angS14
!       magS15  angS15  magS16  angS16  magS17  angS17  magS18  angS18
!       magS21  angS21  magS22  angS22  magS23  angS23  magS24  angS24
!       magS25  angS25  magS26  angS26  magS27  angS27  magS28  angS28
!       magS31  angS31  magS32  angS32  magS33  angS33  magS34  angS34
!       magS35  angS35  magS36  angS36  magS37  angS37  magS38  angS38
!       magS41  angS41  magS42  angS42  magS43  angS43  magS44  angS44
!       magS45  angS45  magS46  angS46  magS47  angS47  magS48  angS48
!       magS51  angS51  magS52  angS52  magS53  angS53  magS54  angS54
!       magS55  angS55  magS56  angS56  magS57  angS57  magS58  angS58
!       magS61  angS61  magS62  angS62  magS63  angS63  magS64  angS64
!       magS65  angS65  magS66  angS66  magS67  angS67  magS68  angS68
!       magS71  angS71  magS72  angS72  magS73  angS73  magS74  angS74
!       magS75  angS75  magS76  angS76  magS77  angS77  magS78  angS78
!       magS81  angS81  magS82  angS82  magS83  angS83  magS84  angS84
!       magS85  angS85  magS86  angS86  magS87  angS87  magS88  angS88
!
                0       0.00371639              -180       0.000906056              -180       0.000338724              -180
0.000152765              -180
                        0.995712      4.45703e-017       0.000493179              -180       0.000101037              -180
1.26677e-005             -180
                     0.000855292              -180        0.00312613              -180        0.00104214              -180
0.000269834              -180
                     0.000593569              -180           0.99224      4.73185e-017       0.000168136              -180
3.92959e-005             -180
                     0.000279816              -180       0.000638161              -180        0.00583046              -180
0.000528065              -180
                     0.000262471              -180       0.000747247              -180          0.995315      4.78917e-017
0.000104744              -180
                    4.34658e-005              -180      5.56468e-005              -180       0.000320223              -180
0.00393258               -180
                     0.000218504              -180       0.000200411              -180       0.000182546              -180
0.994899      4.40333e-017
                        0.994331      4.45685e-017       0.000124773              -180        0.00014548              -180
8.30236e-006             -180
                       0.0024646              -180        0.00101784              -180       0.000272085              -180
0.000122201              -180
                     0.000867332              -180          0.995036      4.73218e-017       0.000495093              -180
3.12238e-005             -180
                     0.000466919              -180        0.00550447              -180       0.000902165              -180
0.000199604              -180
                     0.000356871              -180       0.000524781              -180          0.991946      4.78901e-017
8.40256e-005             -180
                     0.000137963              -180       0.000795363              -180        0.00289533              -180
++++++++++++++++++Balance of data purposely deleted to End...
```