

MACOMTM

Partners in RF & Microwave

SPICE Model



MA4P7435NM-1091 rev B

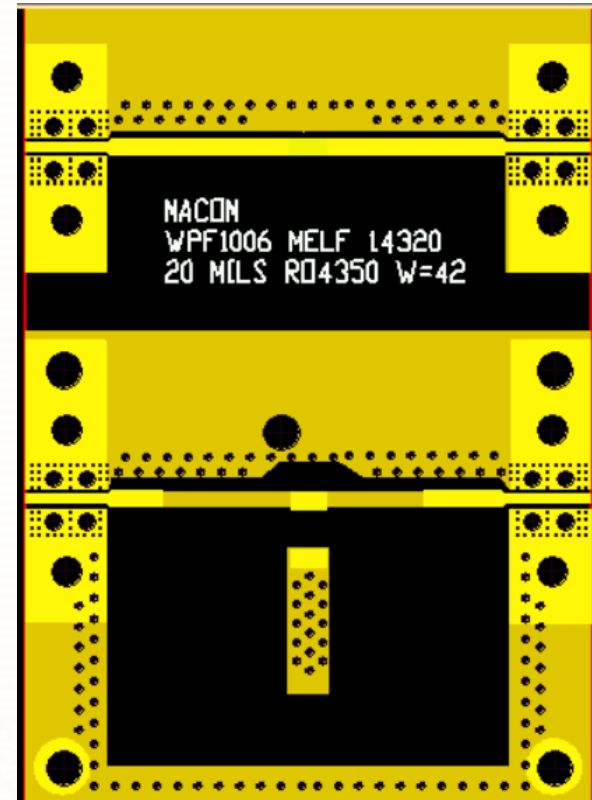
Jan 22, 2021

Contents

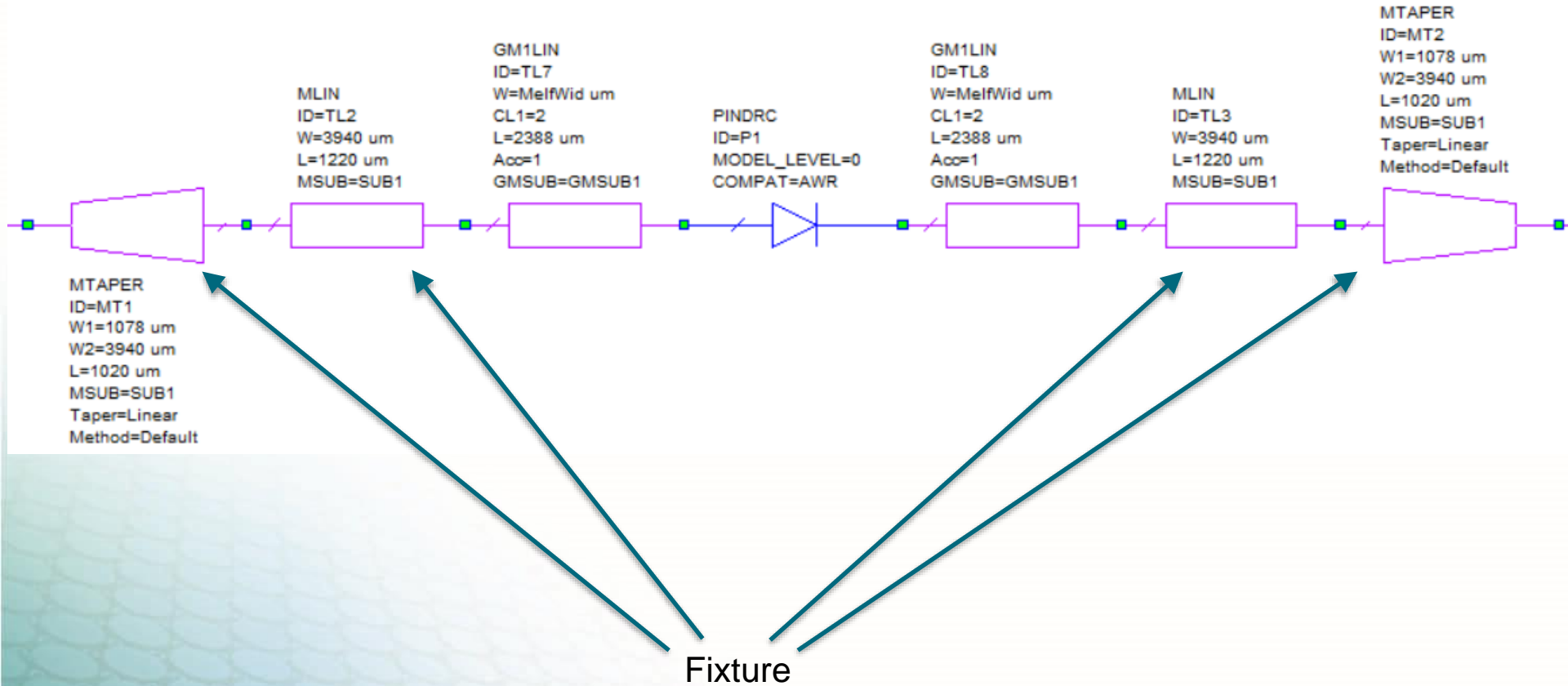
- **Test Fixture**
- **Package**
- **Diode**
- **Results**
 - IV Curve
 - Series 100 mA
 - Series -40 V
 - Shunt 100 mA
 - Shunt -40 V

Test Fixture Series and Shunt

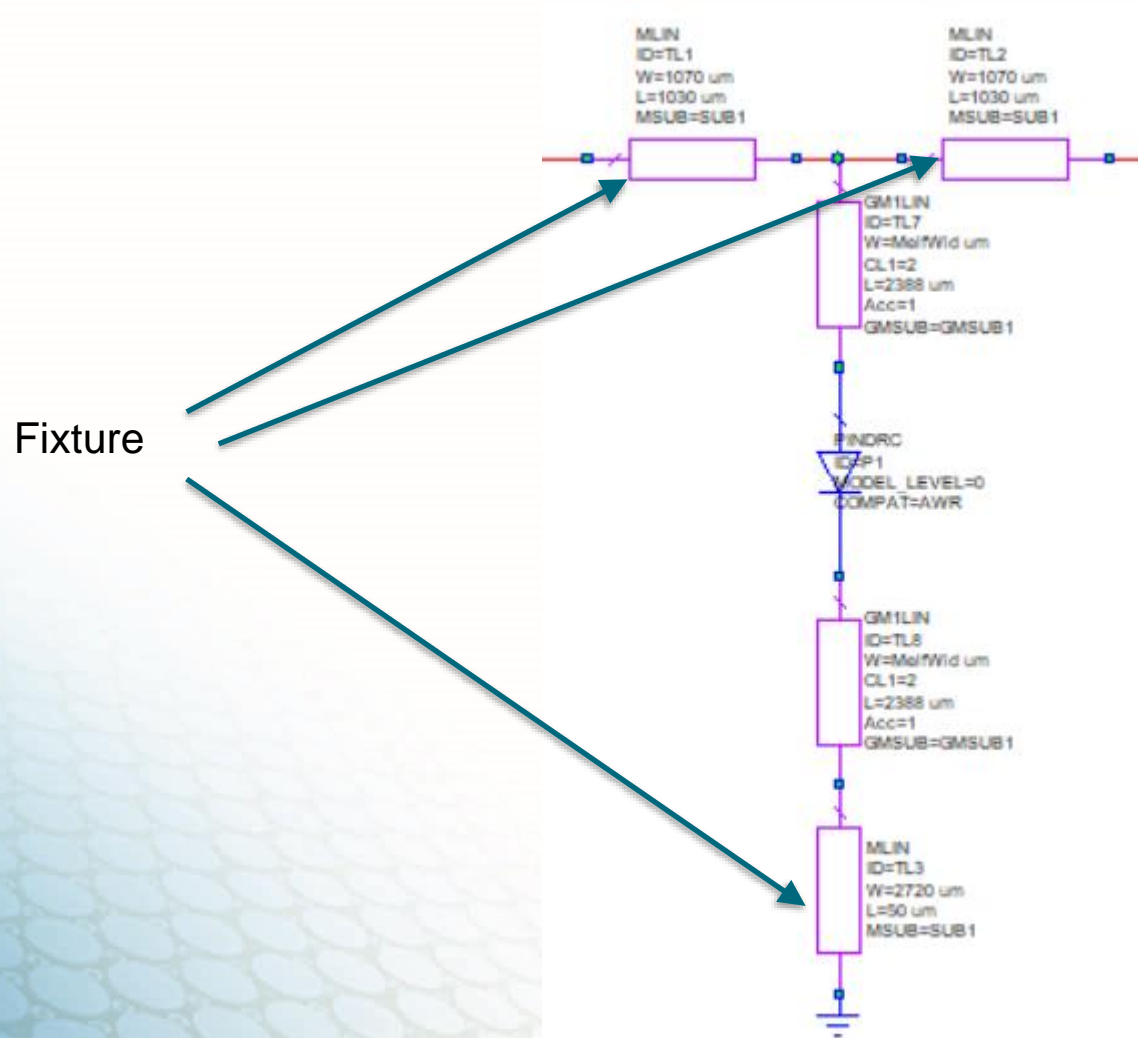
- 20 mils Rogers RO4350 with 1 oz copper
- S-parameters measured with port extensions such that the reference plane is set to the beginning of the transmission line taper for the series MELF and set to the edge of the package for the shunt MELF



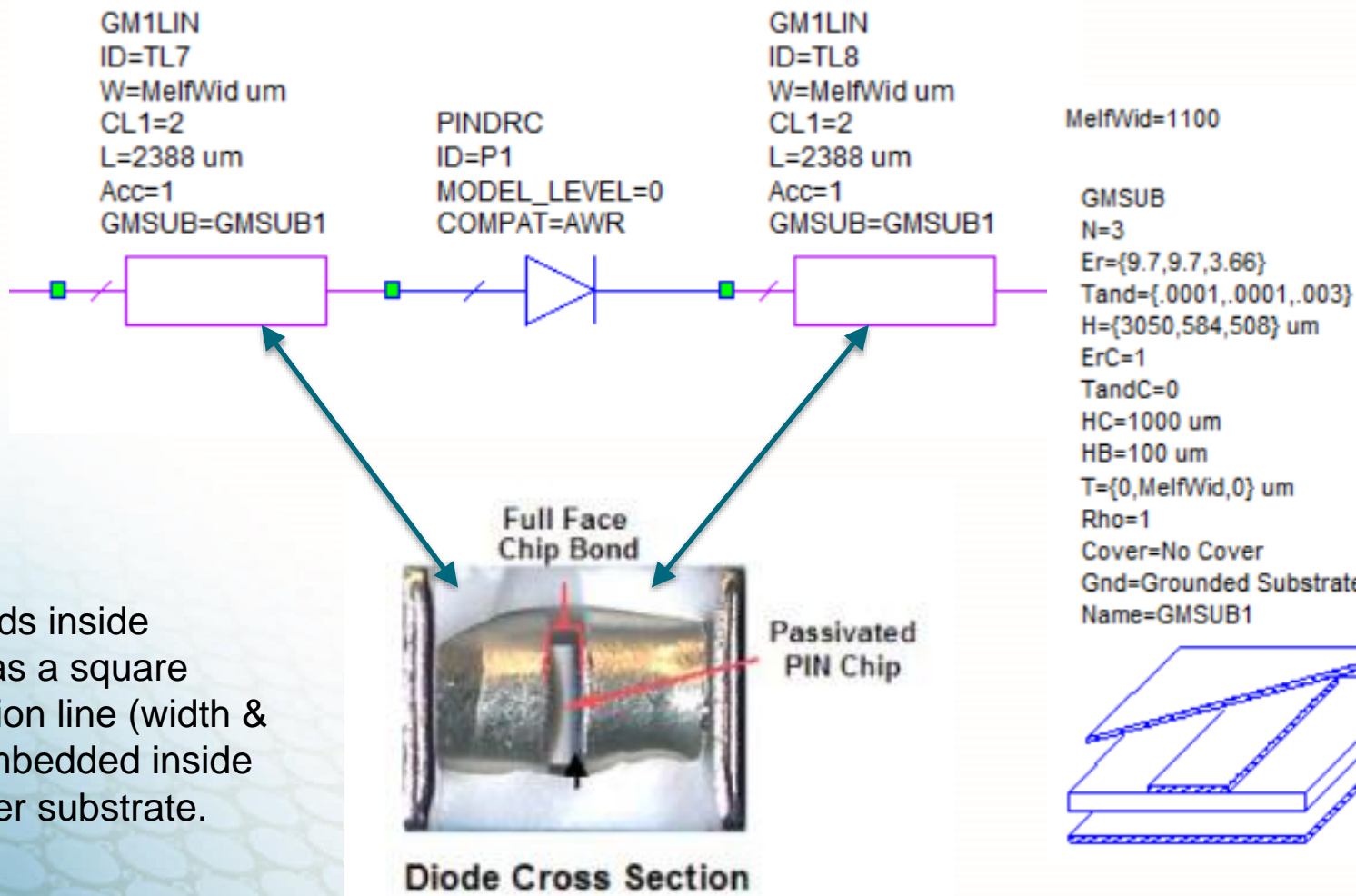
Test Fixture Series



Test Fixture Shunt

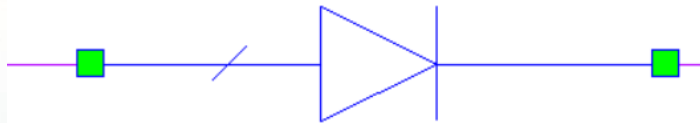


Package



Robert Caverly PIN Diode Model

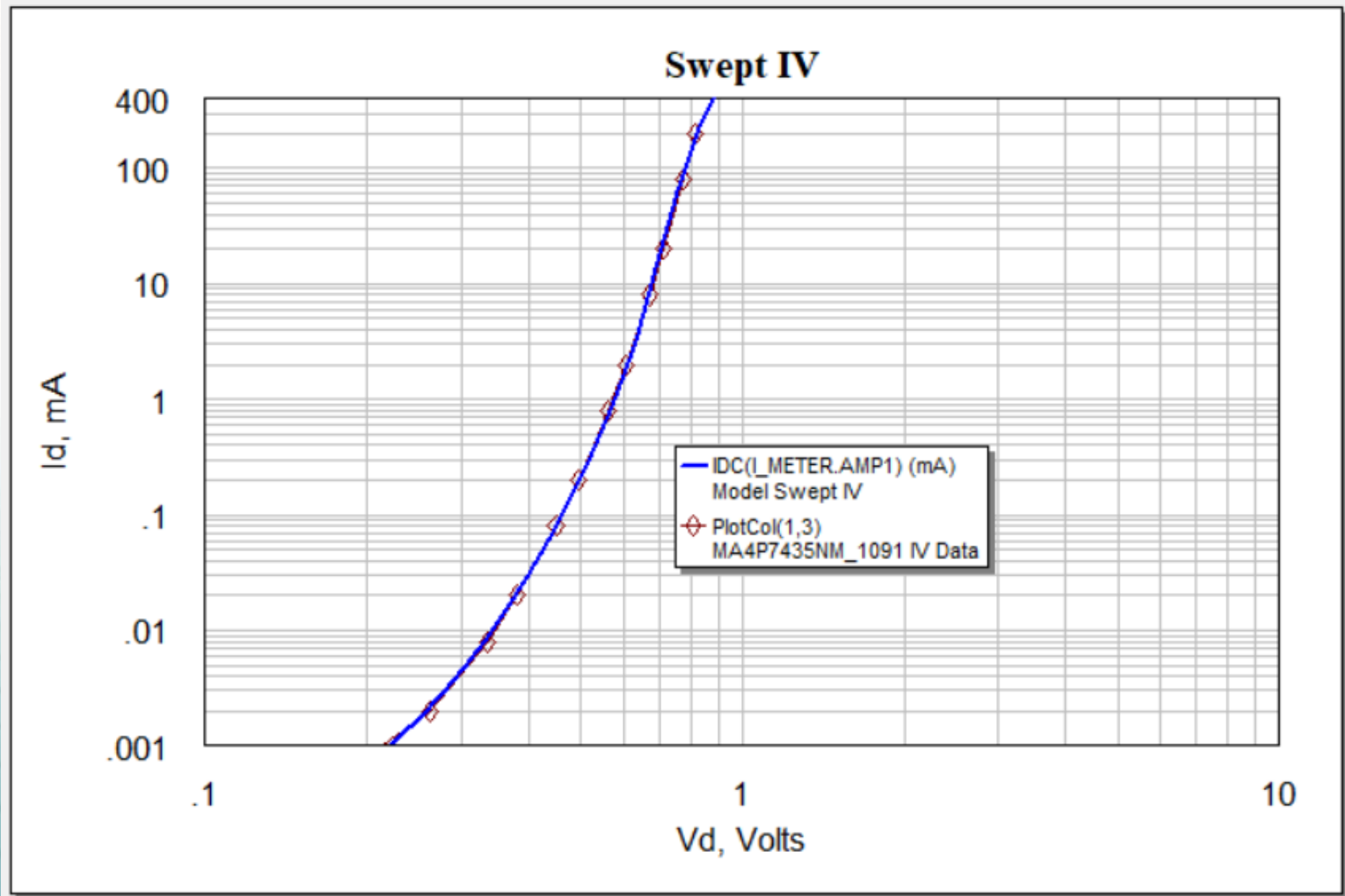
PINDRC
ID=P1
MODEL_LEVEL=0
COMPAT=AWR



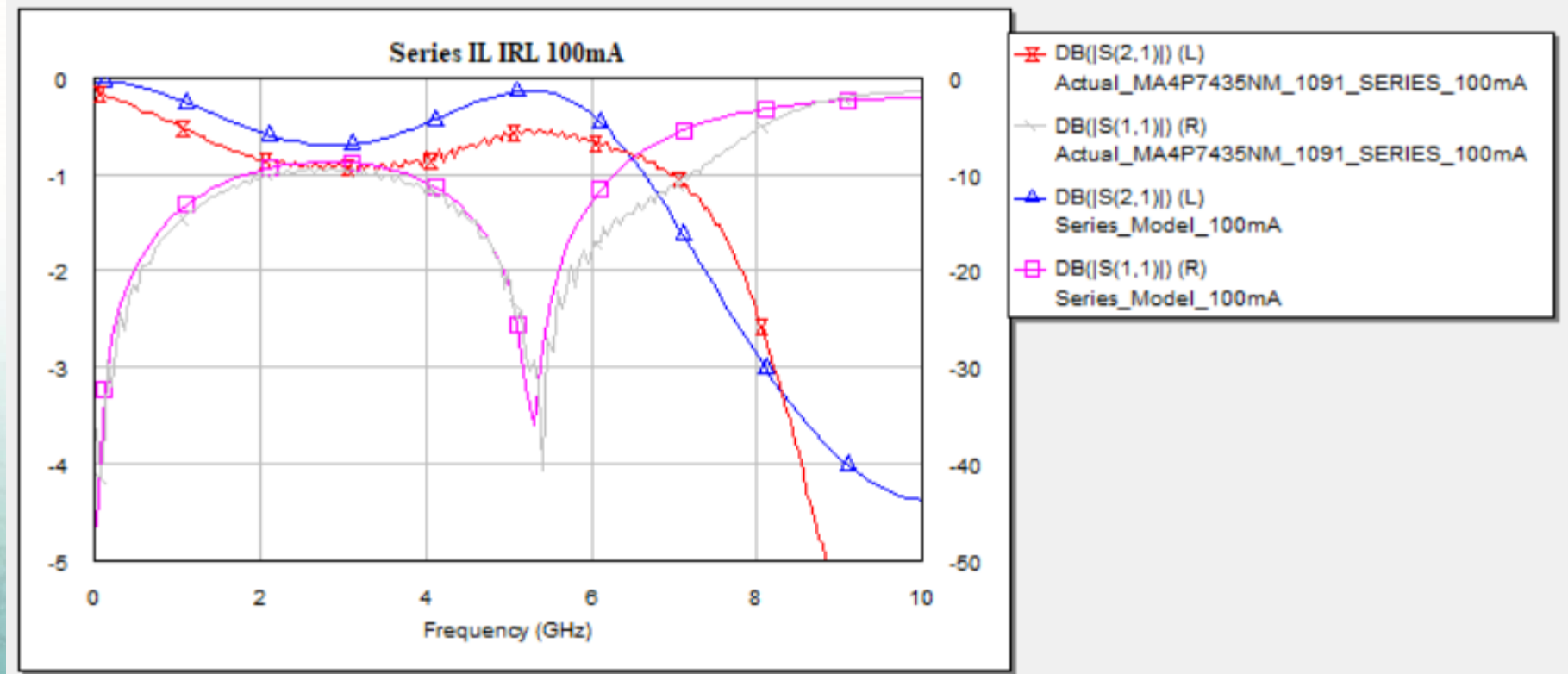
| Name | Value | Unit |
|-------------|-----------|------|
| ID | P1 | |
| IS | Is | mA |
| IKNEE | Iknee | mA |
| N | Npin | |
| RLIM | Rlim | Ohm |
| REPI | Repi | Ohm |
| CJ | Cj | pF |
| CPKG | Cpkg | pF |
| TAU | LT | ns |
| W | W | |
| B | 3 | |
| LBOND | Lpkg | nH |
| TNOM | 26.85 | DegC |
| TEMP | 26.85 | DegC |
| AREA | 1 | |
| NFLAG | Noise Off | |
| MODEL_LEVEL | 0 | |
| COMPAT | AWR | |

Is=1.59e-05
Iknee=10
Npin=1
Repi=4000
LT=13900
W=140
Cj=1.4
Rlim=0.12
Cpkg=0.44
Lpkg=0.13

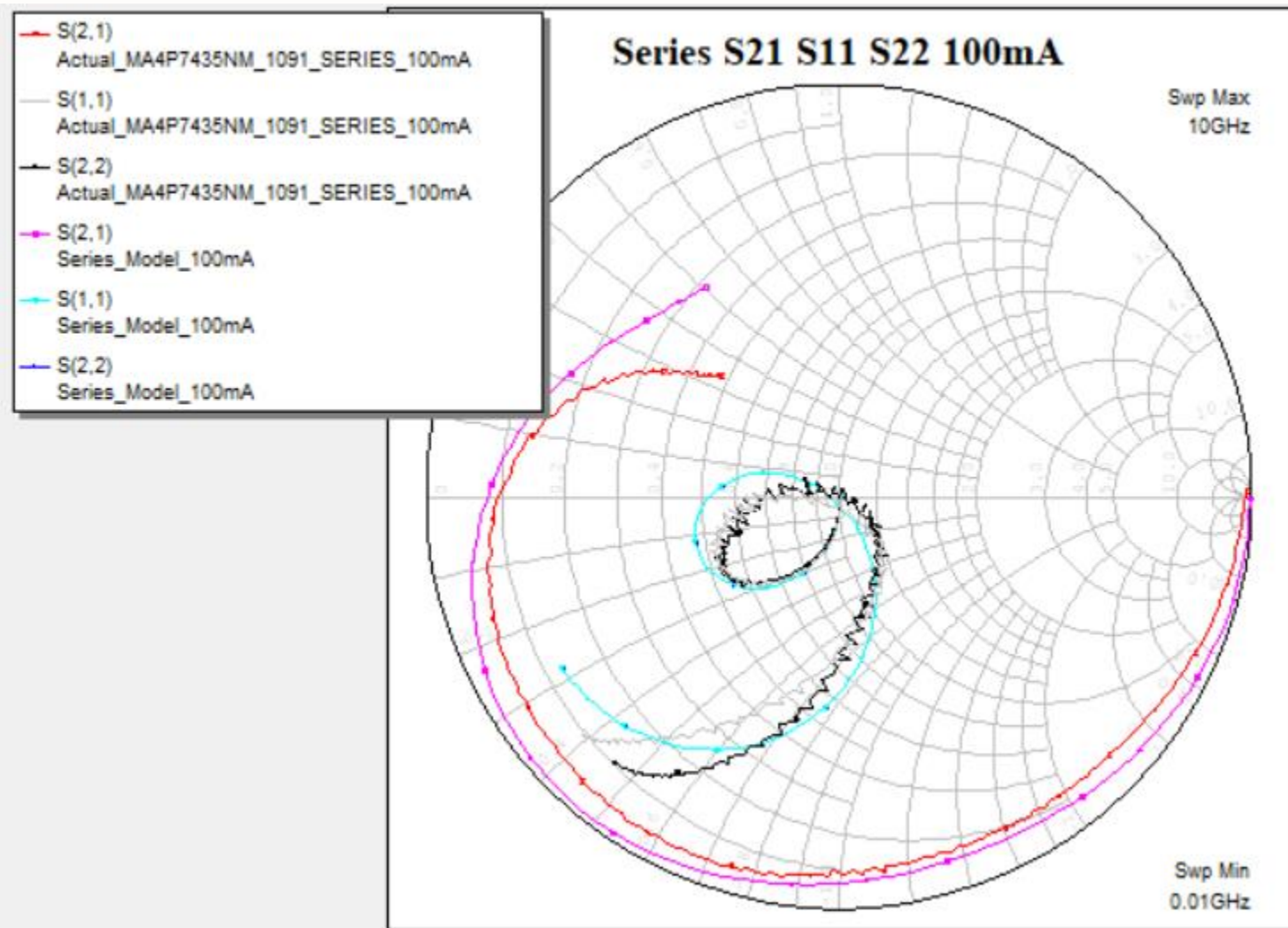
IV Curve



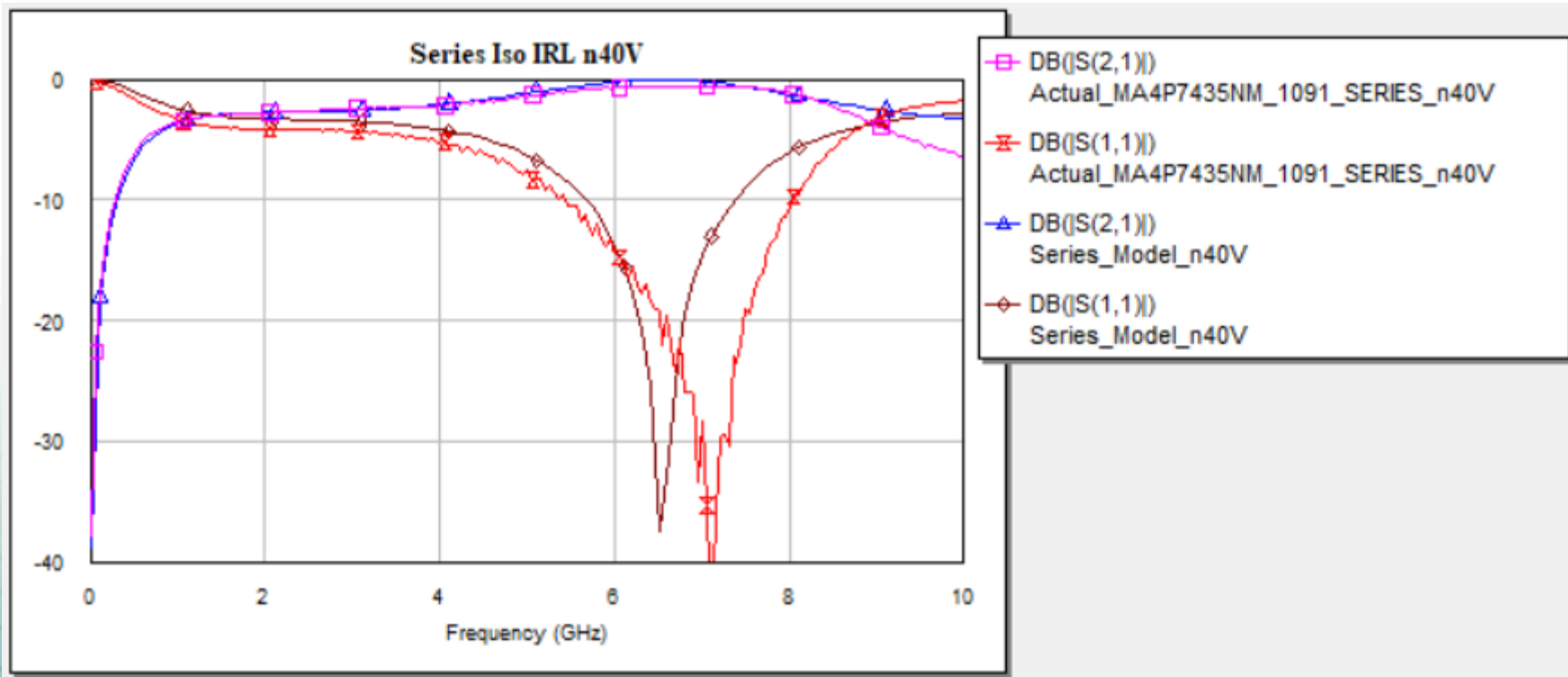
Series 100 mA



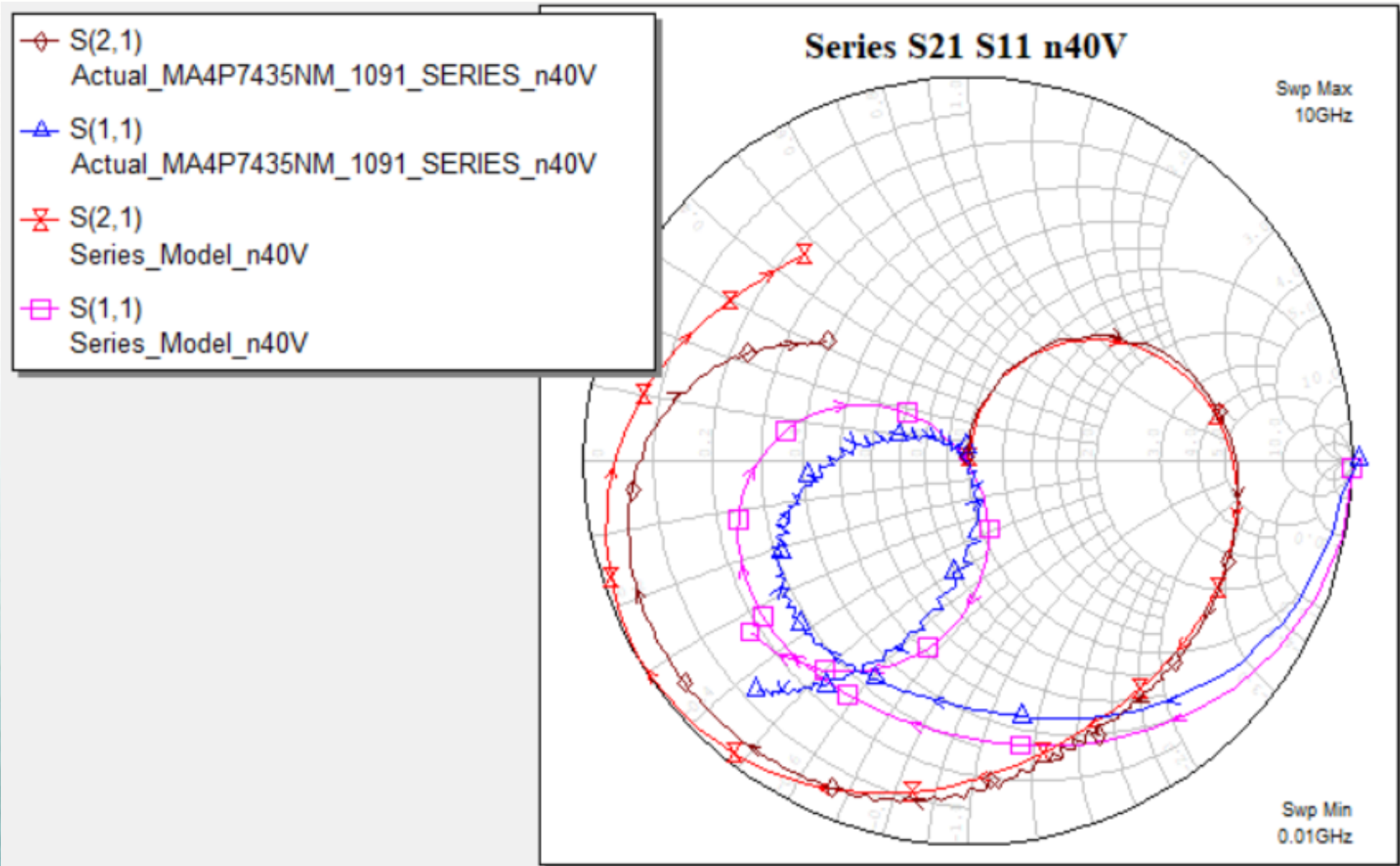
Series 100 mA



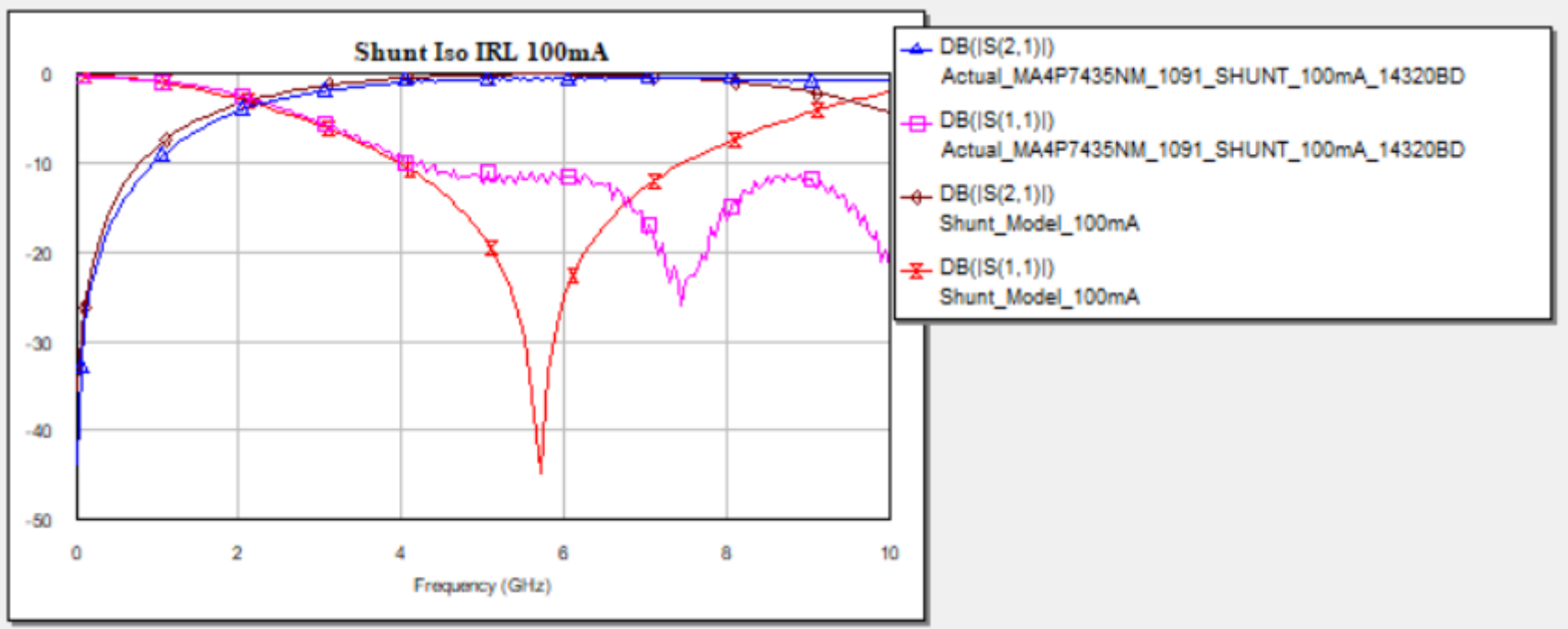
Series -40 V



Series -40 V

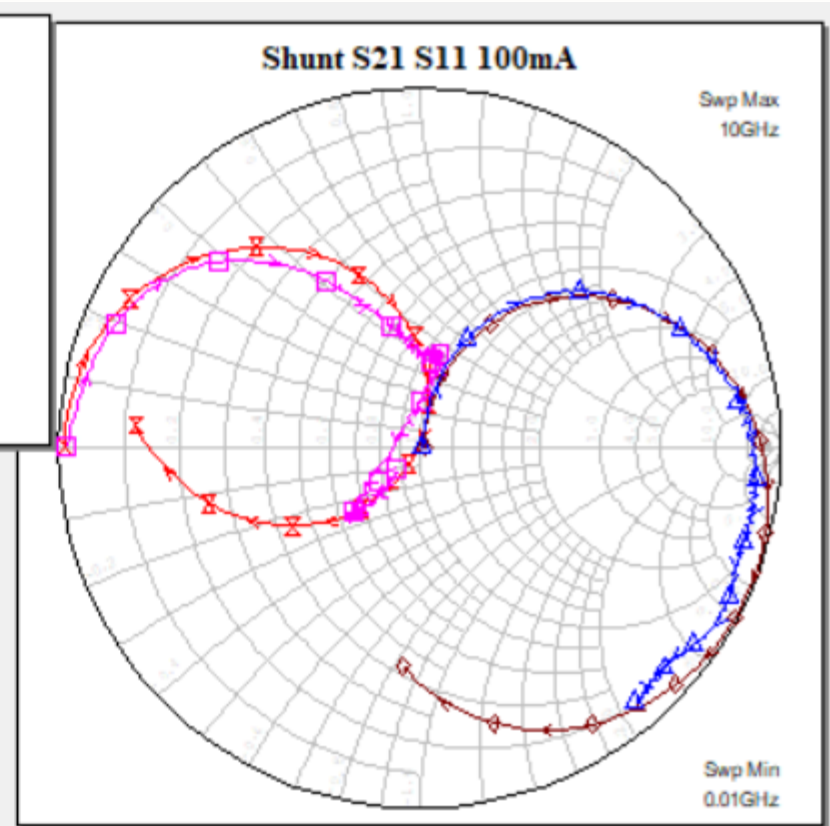


Shunt 100 mA

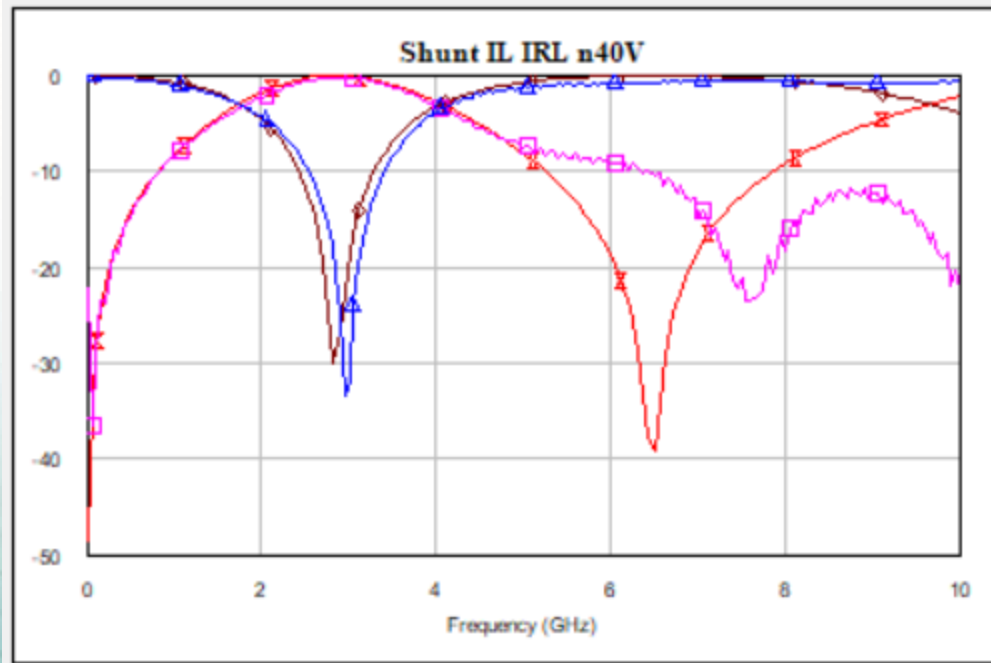


Shunt 100 mA

- ▲ S(2,1)
Actual_MA4P7435NM_1091_SHUNT_100mA_14320BD
- S(1,1)
Actual_MA4P7435NM_1091_SHUNT_100mA_14320BD
- ◇ S(2,1)
Shunt_Model_100mA
- ⊠ S(1,1)
Shunt_Model_100mA



Shunt -40 V



- DB(|S(2,1)|)
Actual_MA4P7435NM_1091_SHUNT_n40V_14320BD
- DB(|S(1,1)|)
Actual_MA4P7435NM_1091_SHUNT_n40V_14320BD
- DB(|S(2,1)|)
Shunt_Model_n40V
- DB(|S(1,1)|)
Shunt_Model_n40V

Shunt -40 V

