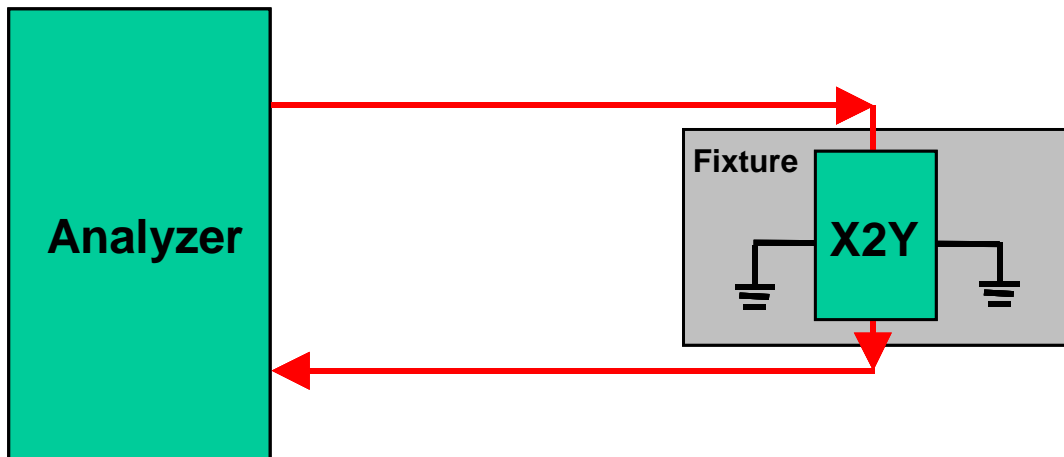
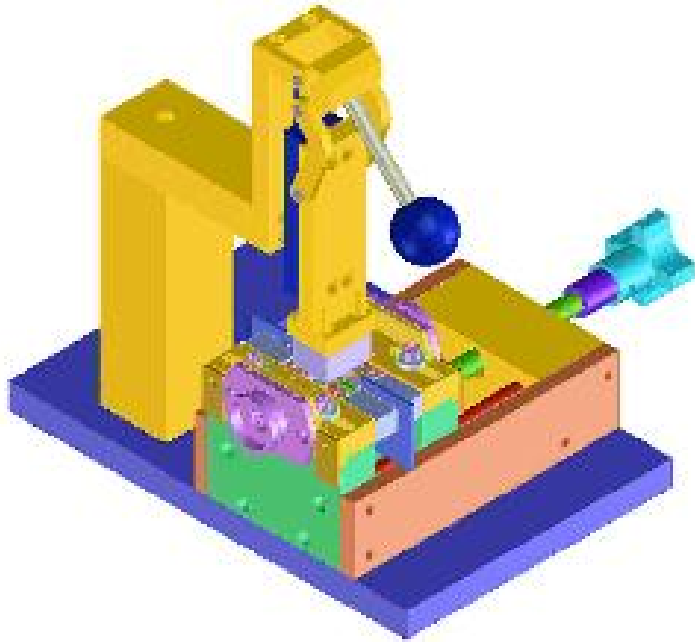


# X2Y Testing



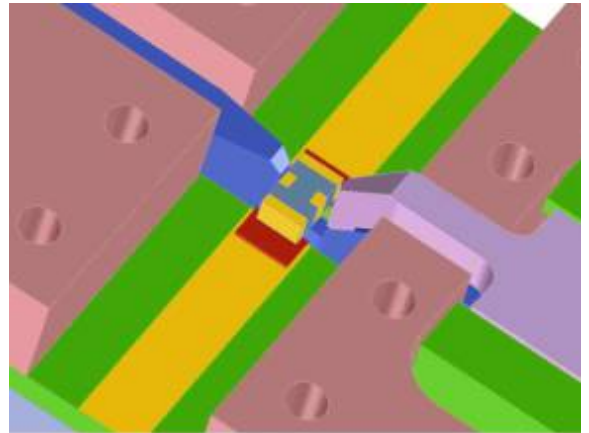
# Test Fixture Operation and Calibration

The Inter-Continental Microwave ([ICM](#)) Test Fixture A0134552A is designed for testing 4 terminal devices. The fixture is designed to operate over a frequency range of DC-3GHz over Room Temperature.

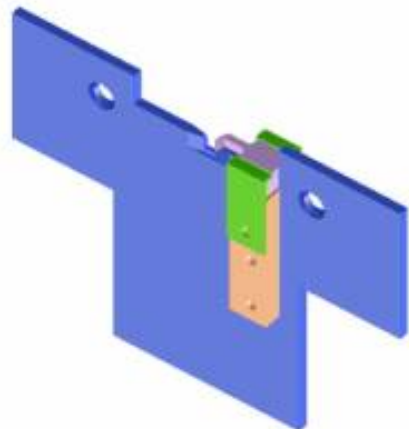
**Note:** The X2Y test fixture is designed to operate from DC to 10GHz



For testing, the DUT is placed onto 2 microstrip launches with DURA contacts.

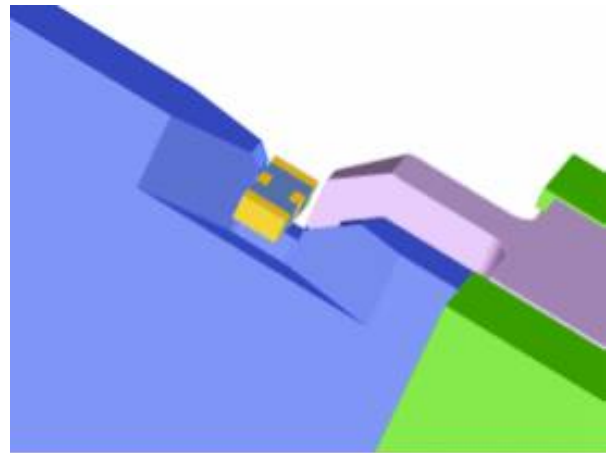


A midsection is inserted into the Test Fixture. The size of the midsection determines the size of the DUT to be tested. The midsection assembly has 2 guide holes for alignment with the test fixture. The chamfered side of the alignment holes are towards the input side of the test fixture on all midsections.

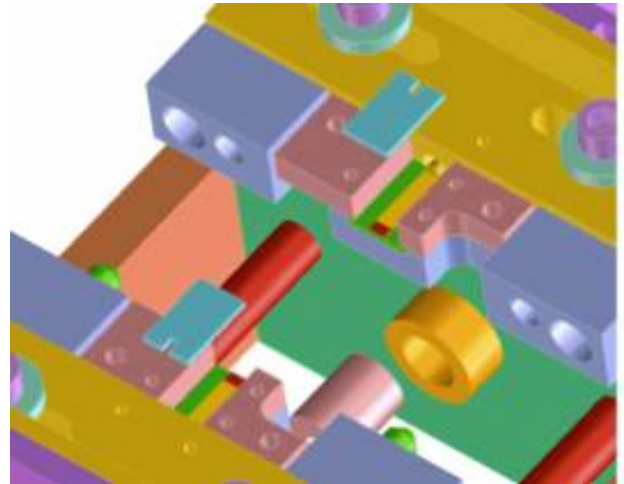


# Test Fixture Operation and Calibration

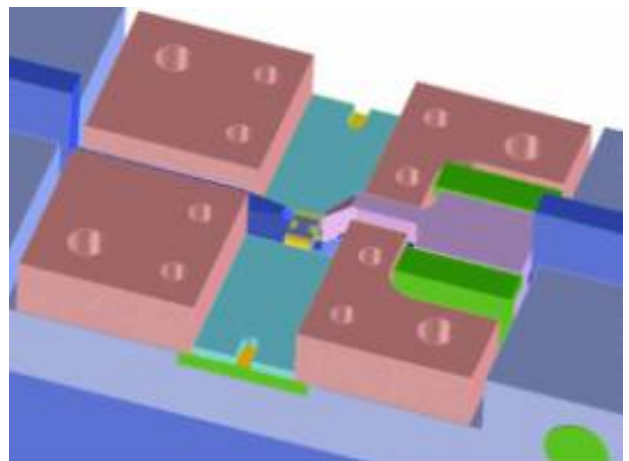
The Midsection has a fixed and a movable ground contact. The movable ground contact slides down a 45 degree ramp. As it slides down, it moves toward the DUT and makes ground contact. The brass push pin of the pusher assembly pushes the movable ground contact on the midsection. The movable ground contact is automatically retracted when the brass pushpin moves up.

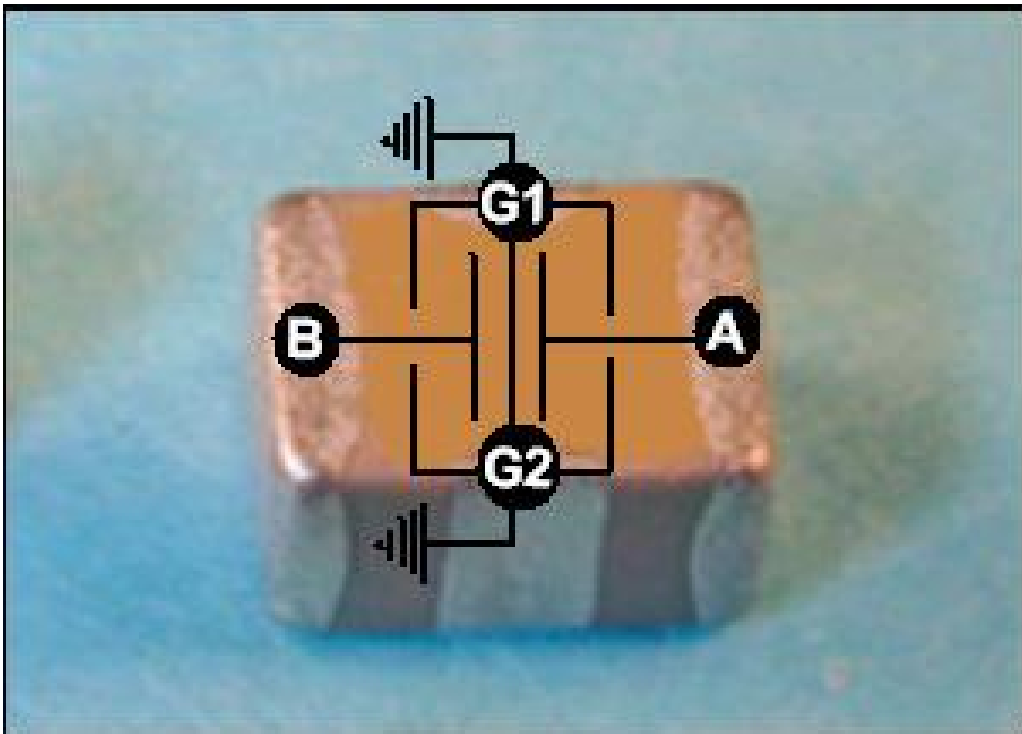


2 DUT guides help place the DUT evenly onto the RF-contacts (DUT guides are shown in blue).



DUT guides shown in place with the DUT and the midsection. The DUT guides are removed during calibration.





## DATA OVERVIEW

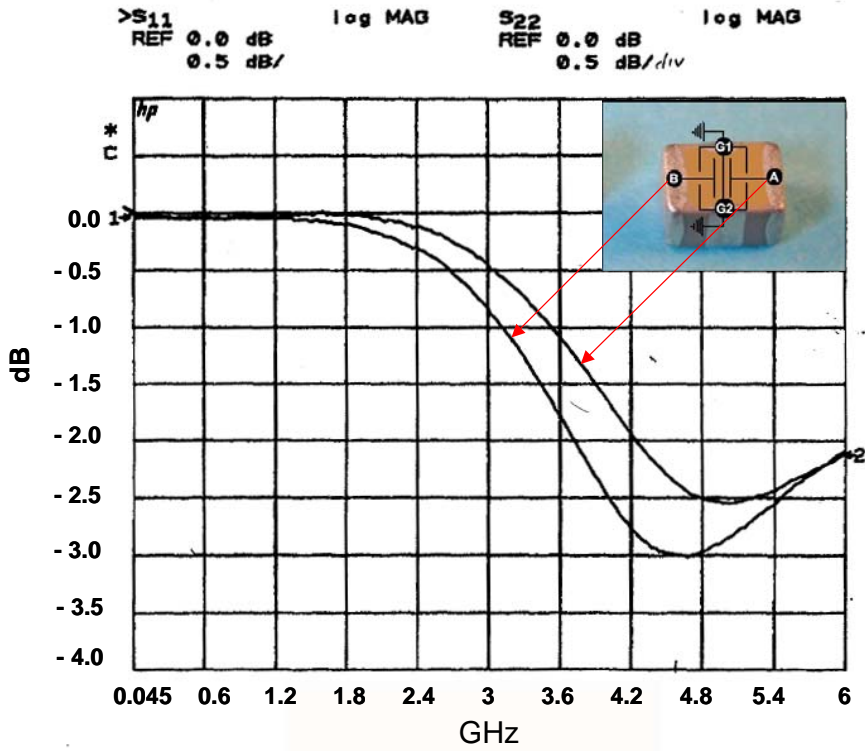
1) Each graph starts with a **Balance Measurement** on the two internal Y caps of the X2Y capacitor. The next graph below shows the **Insertion Loss Measurement** with a corresponding change in the dB scale.

2) Each **Insertion Loss** graph has a **Balance** reference left on from the graph above.

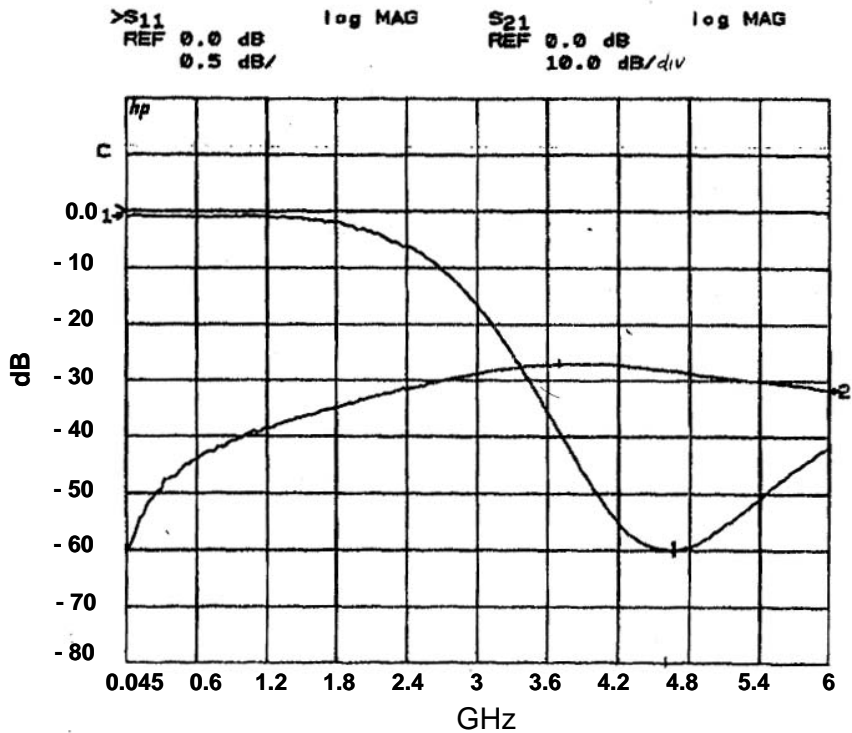
3) Measurements were taken by Inter-Continental Microwave, <http://www.icmicrowave.com/>.

Note: Scales and heading were added to data plots.

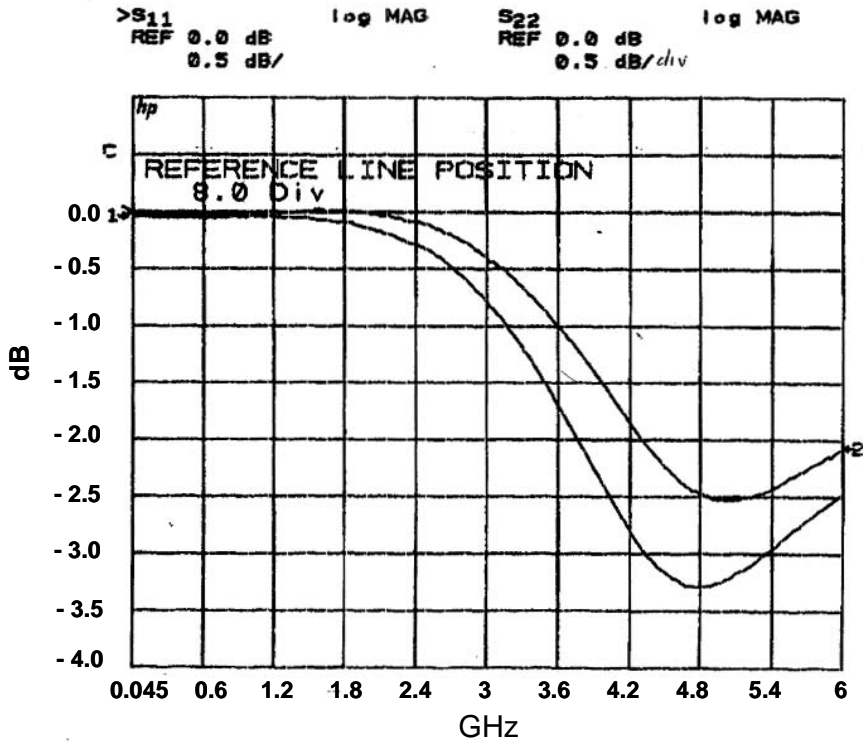
### Part #1, 0805 68nf, Y Cap Balance



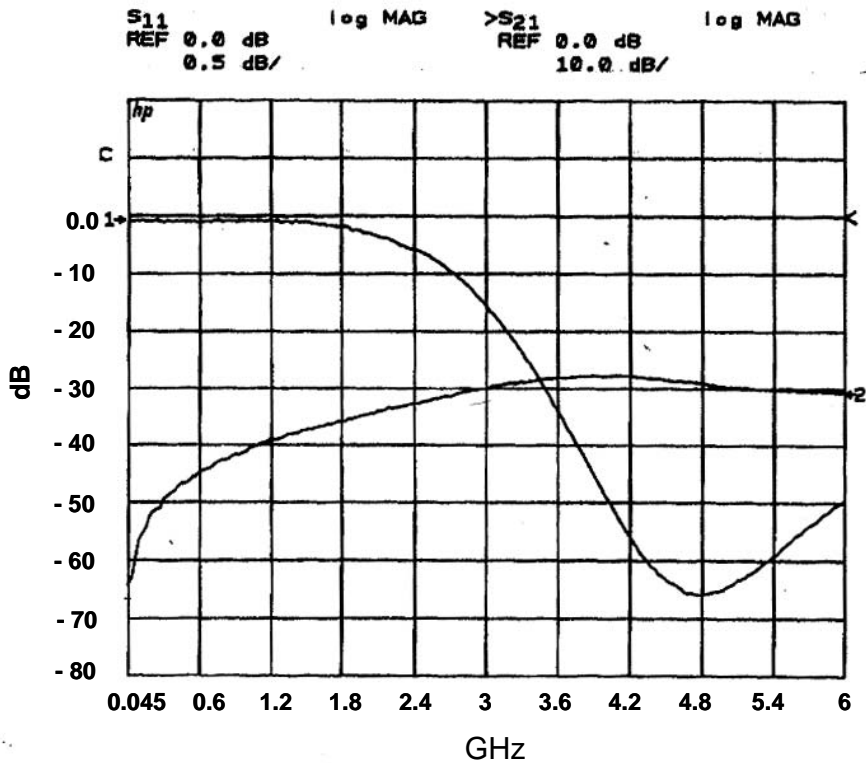
### Part #1, 0805 68nf, Insertion Loss



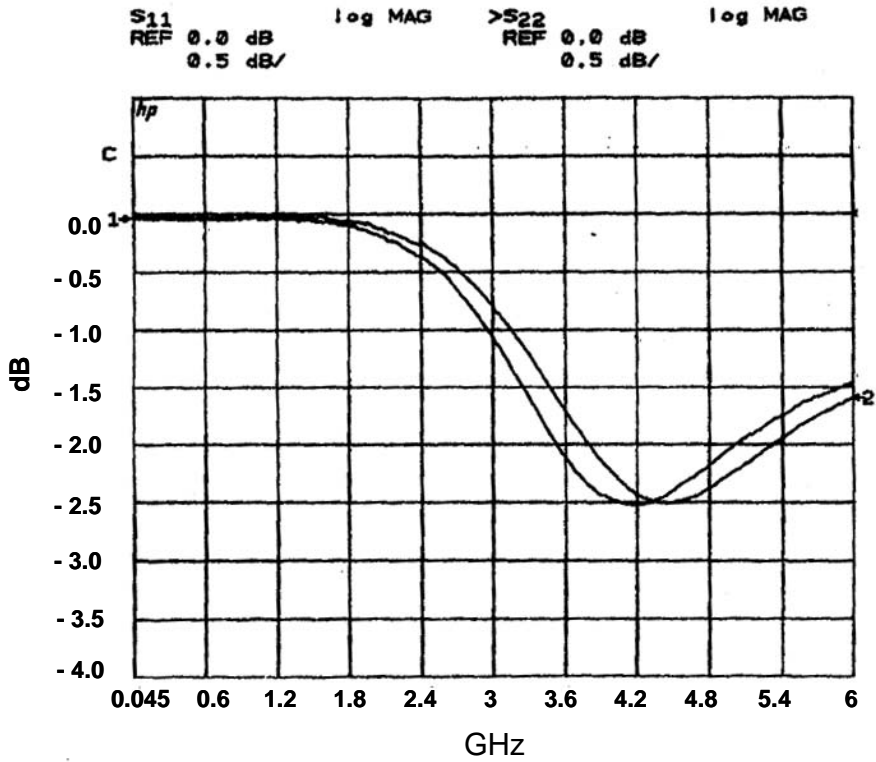
### Part #2, 0805 68nf, Y Cap Balance



### Part #2, 0805 68nf, Insertion Loss

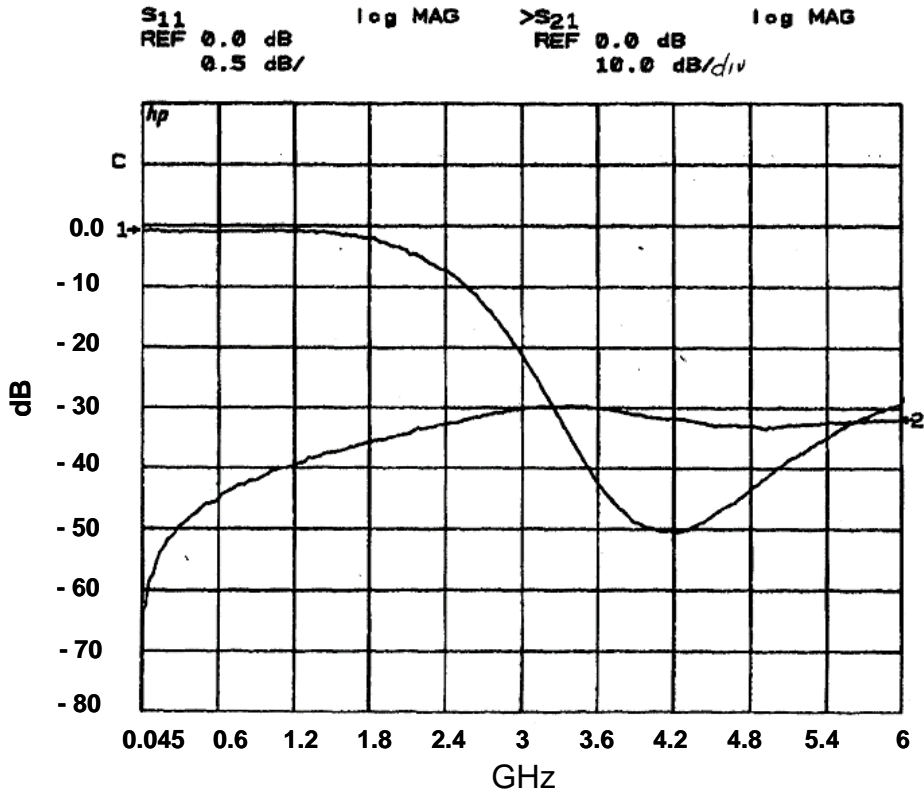


### Part #3, 0805 68nf, Y Cap Balance



START 0.045000000 GHz  
STOP 6.000000000 GHz

### Part #3, 0805 68nf, Insertion Loss

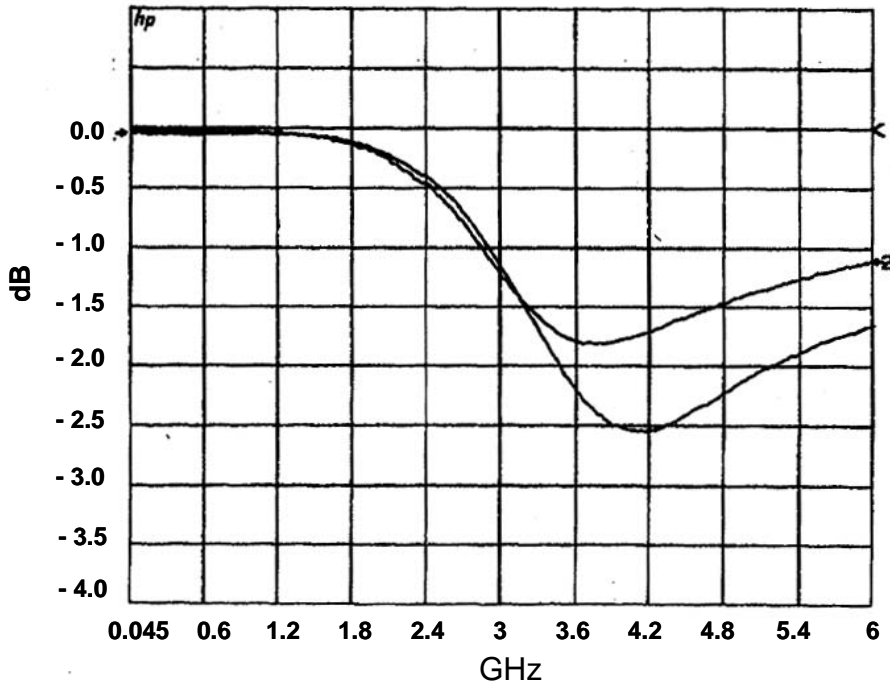


START 0.045000000 GHz  
STOP 6.000000000 GHz



### Part #4, 0805 68nf, Y Cap Balance

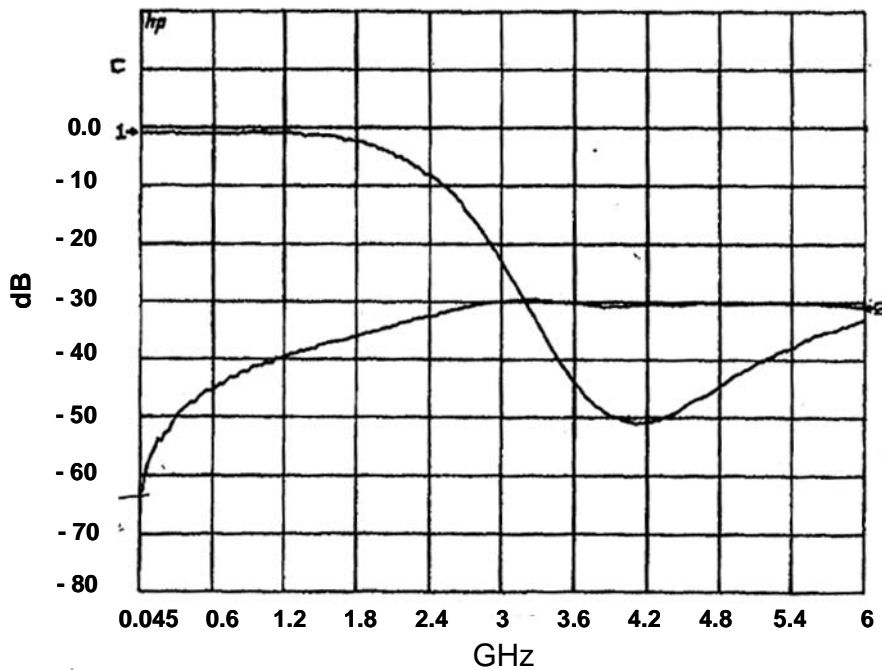
S<sub>11</sub> REF 0.0 dB log MAG >S<sub>22</sub> REF 0.0 dB log MAG  
 0.5 dB/ 0.5 dB/



START 0.045000000 GHz  
 STOP 6.000000000 GHz

### Part #4, 0805 68nf, Insertion Loss

S<sub>11</sub> REF 0.0 dB log MAG >S<sub>21</sub> REF 0.0 dB log MAG  
 0.5 dB/ 10.0 dB/

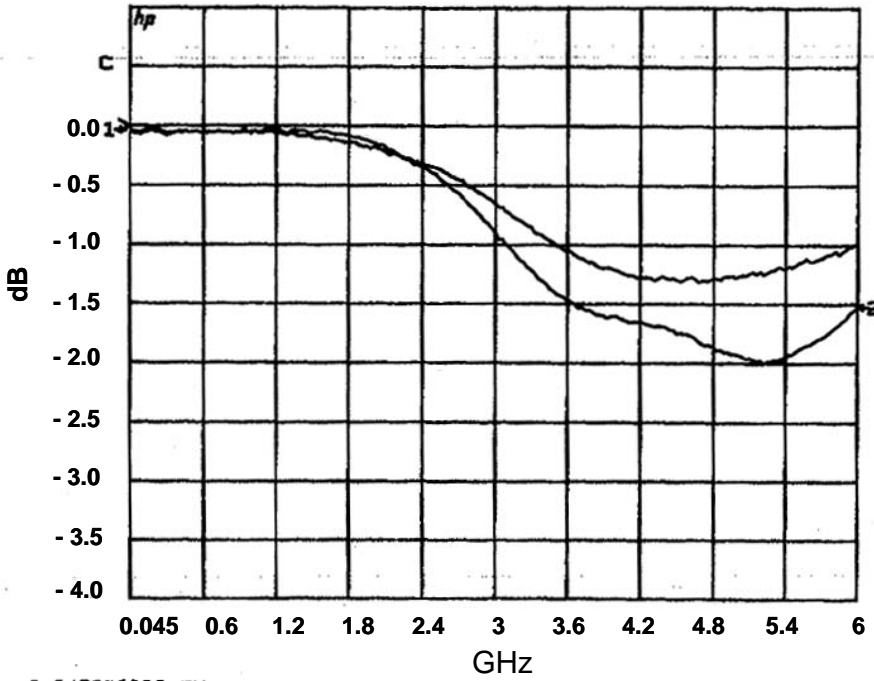


START 0.045000000 GHz  
 STOP 6.000000000 GHz



### Part #5, 0805 10nf, Y Cap Balance

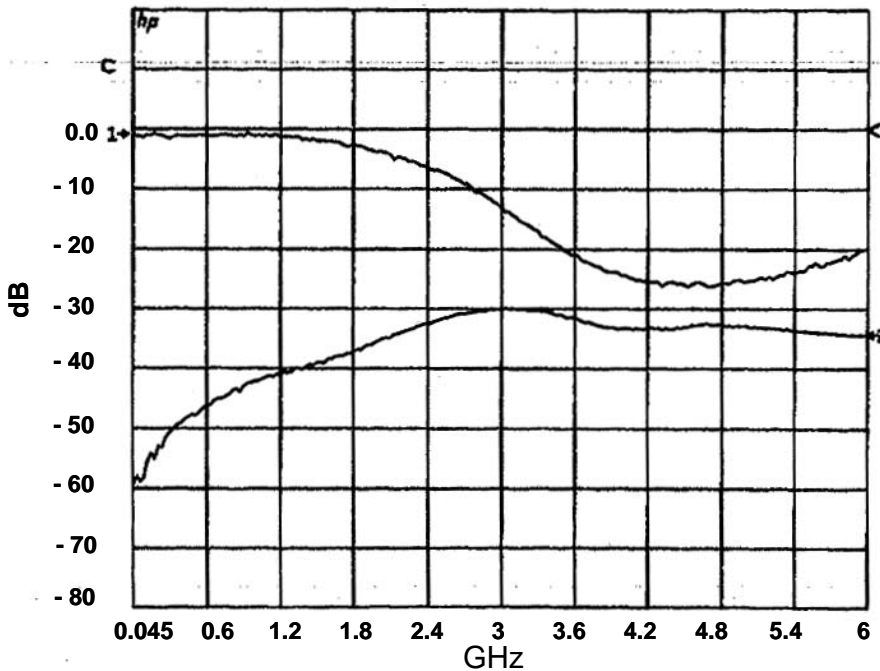
>S11/M1 log MAG REF 0.0 dB 0.5 dB/  
>S22/M8 log MAG REF 0.0 dB 0.5 dB/



START 0.045000000 GHz  
STOP 6.000000000 GHz

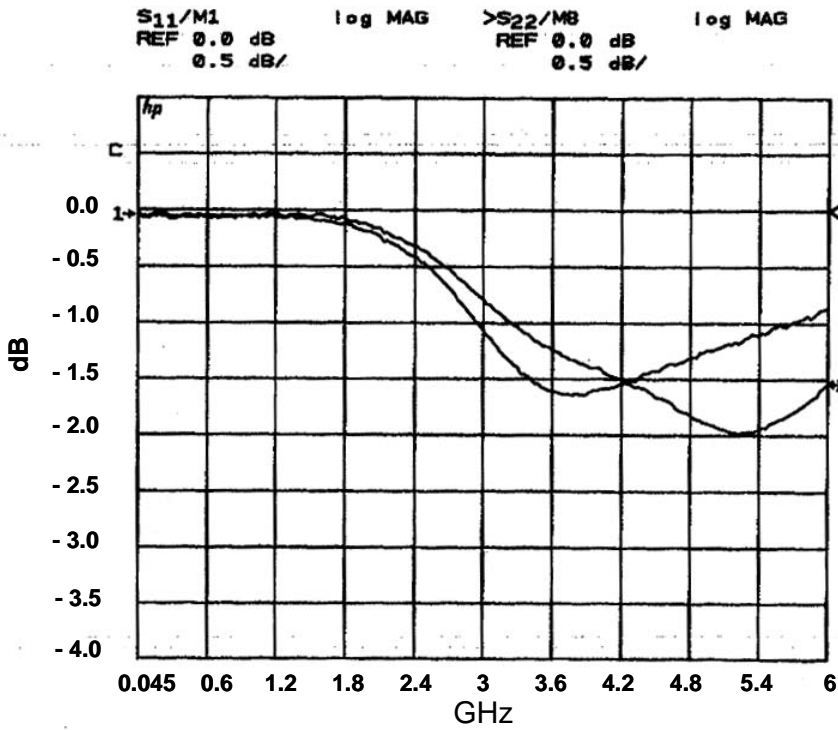
### Part#5, 0805 10nf, insertion Loss

S11/M1 log MAG REF 0.0 dB 0.5 dB/  
>S21 log MAG REF 0.0 dB 10.0 dB/



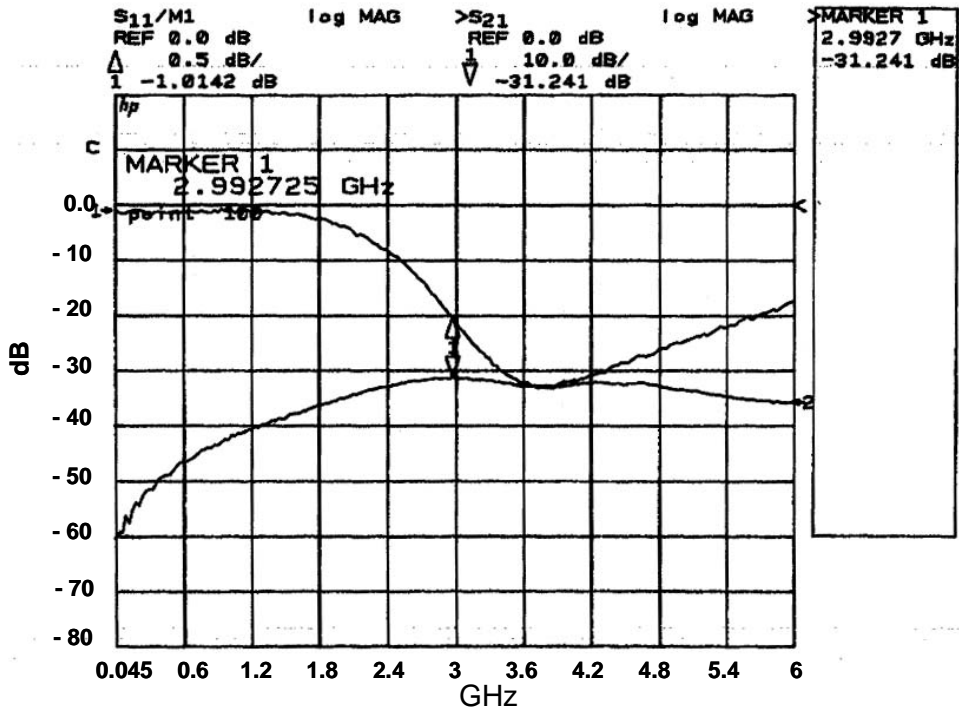
START 0.045000000 GHz  
STOP 6.000000000 GHz

### Part #6, 0805 10nf, Y Cap Balance



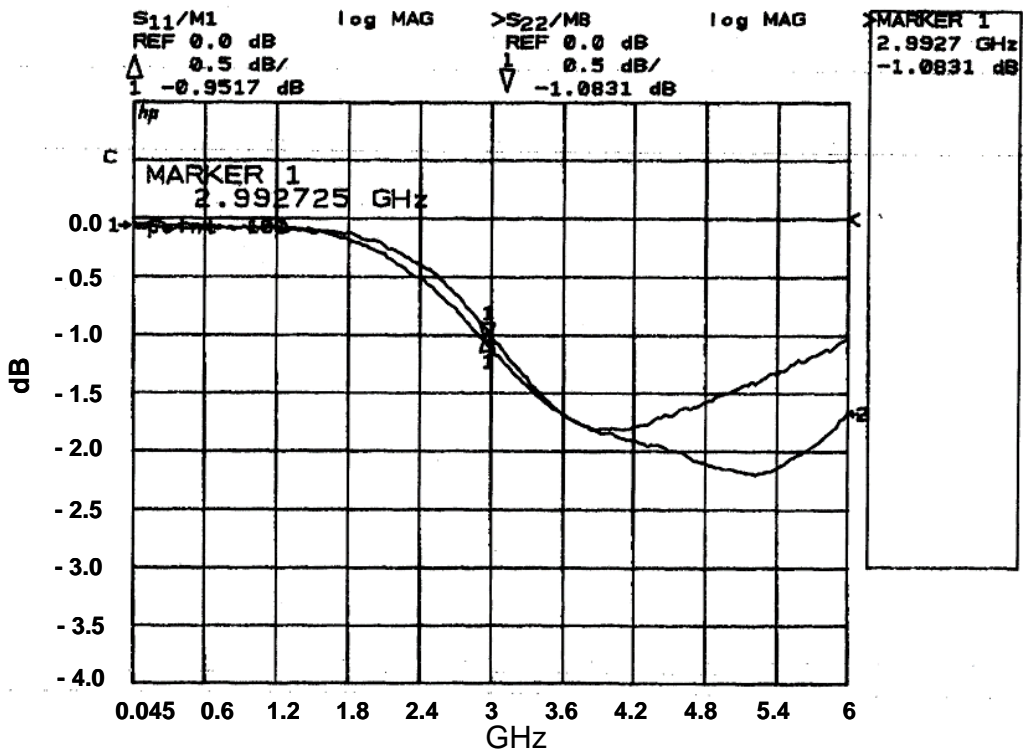
START 0.045000000 GHz  
 STOP 6.000000000 GHz

### Part#6, 0805 10nf, insertion Loss



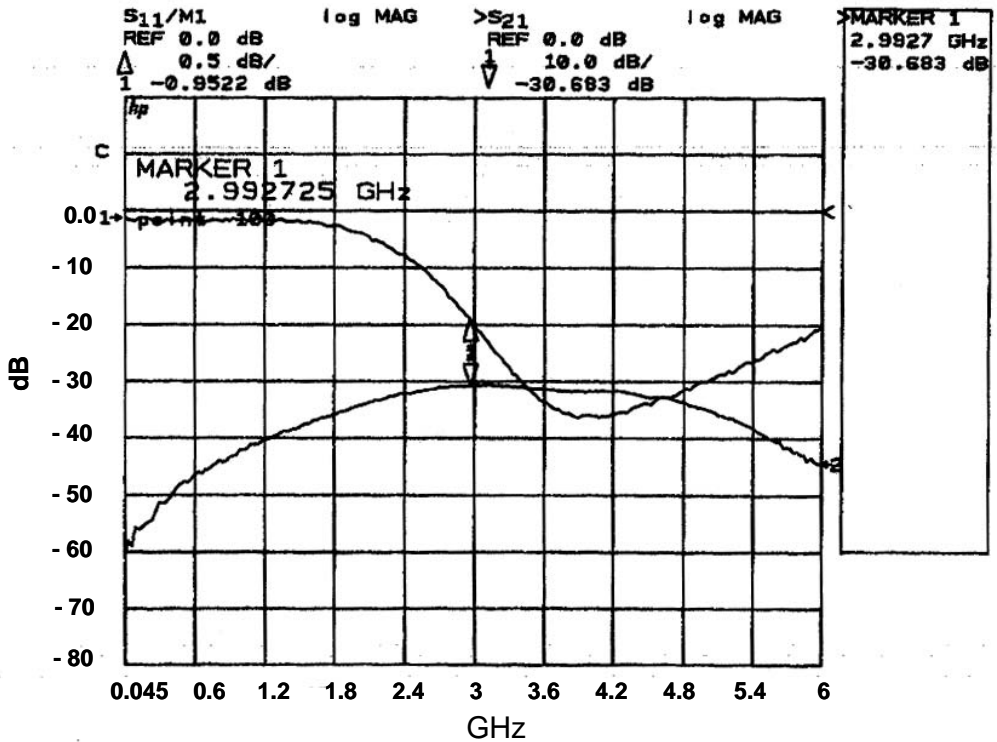
START 0.045000000 GHz  
 STOP 6.000000000 GHz

### Part #7, 0805 10nf, Y Cap Balance



START 0.045000000 GHz  
 STOP 6.000000000 GHz

### Part#7, 0805 10nf, insertion Loss



START 0.045000000 GHz  
 STOP 6.000000000 GHz