



### SUMMARY TEST DATA ON AMPLIFIER

**Customer :**  
**Job No :**  
**Model No : PEC-25/15-618-15-SFF**  
**Serial No : PL1090**

**Tested By : Kevin Mason**  
**Temperature : +25°C**  
**Date : 09/18/03**

| TEST ITEM NO. | PARAMETERS                       | SPECIFIED VALUE  | MEASURED VALUE                         | REMARKS QA/QC |
|---------------|----------------------------------|--|--|---------------|
| 1             | Frequency Range:                 | 6 – 18 GHz   | Pass                                   |               |
| 2             | Gain:                            | J1-J2: 23 to 27dB<br>J1-J3: 13 to 17dB   | Pass<br>(See Plots)                    |               |
| 3             | Gain Variation:<br>J1-J2, J1-J3  | ±2.5 dB Max.   | J1-J2<br>±1.57 dB<br>J1-J3<br>±1.47 dB |               |
| 4             | Noise Figure:                    | 10.0 dB Max.   | Pass<br>(See Plots)                    |               |
| 5             | Output Power<br>J1-J2:<br>J1-J3: | +13 dBm Min. with -9 to +5dBm RF CW in J1<br>+13 dBm Min. with +1 to +5dBm RF CW in J1 | 14.0 to 18.3 dBm<br>13.5 to 15.6 dBm   |               |
| 6             | VSWR In/Out:                     | 2.0:1 Max.   | Pass<br>(See Plots)                    |               |
| 7             | Harmonics:                       | 15dBc Min.   | ≥ 15dBc                                |               |
| 8             | OIP3                             | +24dBm Min. @ J2<br>+21dBm Min. @ J3   | > +24dBm<br>>+21dBm                    |               |
| 9             | Temperature Range                | -54 to +85 °C  | Pass                                   |               |
| 10            | Isolation                        | 0.1dB Max. J2 to J3  | < 0.1dB                                |               |
| 11            | DC Power                         | 620mA@+15 VDC +/-2V  | 301mA                                  |               |

**Production Manager Approval:**  **Date: 09/18/03**

**QA/QC Approval:**  **Date: 09/18/03**

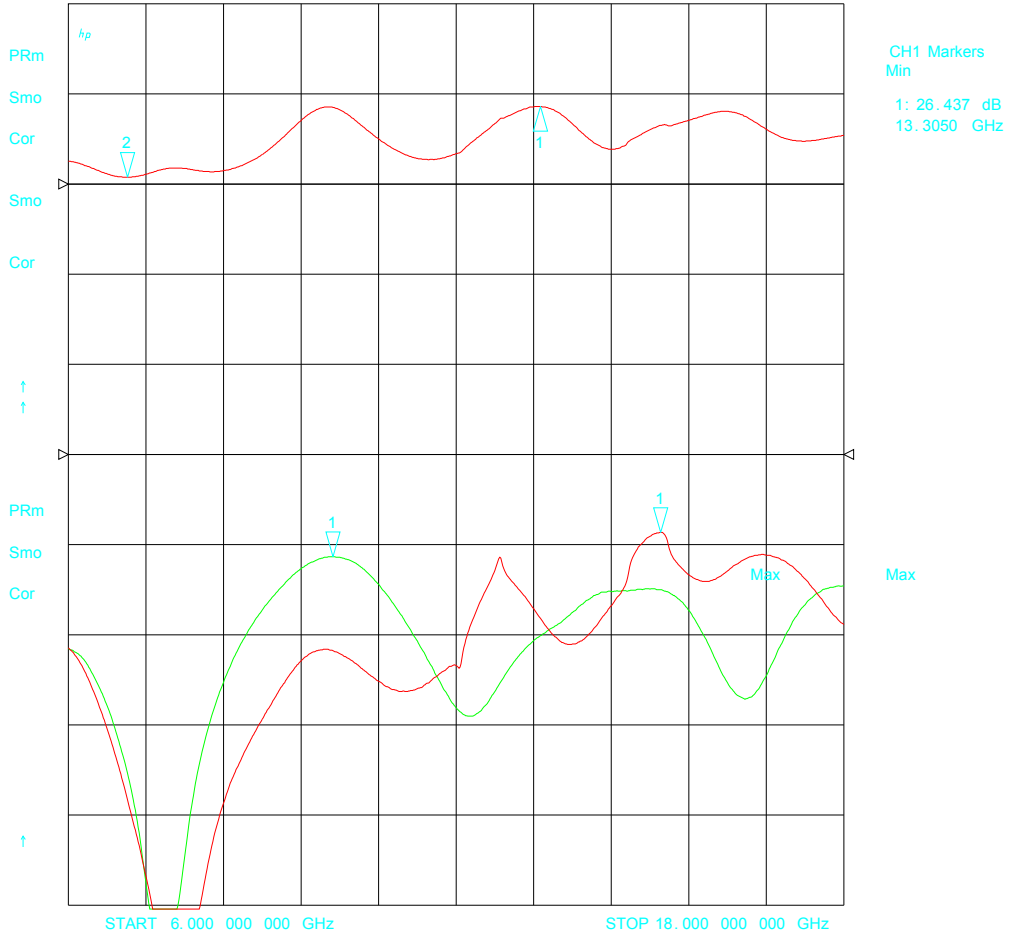
7311-G Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
 email: [sales@planarelec.com](mailto:sales@planarelec.com)



### VNA Plot – J1 to J2

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|     |     |     |       |              |               |                    |
|-----|-----|-----|-------|--------------|---------------|--------------------|
| CH1 | S21 | LOG | 4 dB/ | REF 23 dB    | 2: 23.299 dB  | 6.915 000 000 GHz  |
| CH2 | S11 | LOG | 5 dB/ | REF -9.54 dB | 1: -15.220 dB | 10.095 000 000 GHz |
| CH3 | S22 | LOG | 5 dB/ | REF -9.54 dB | 1: -13.868 dB | 15.165 000 000 GHz |



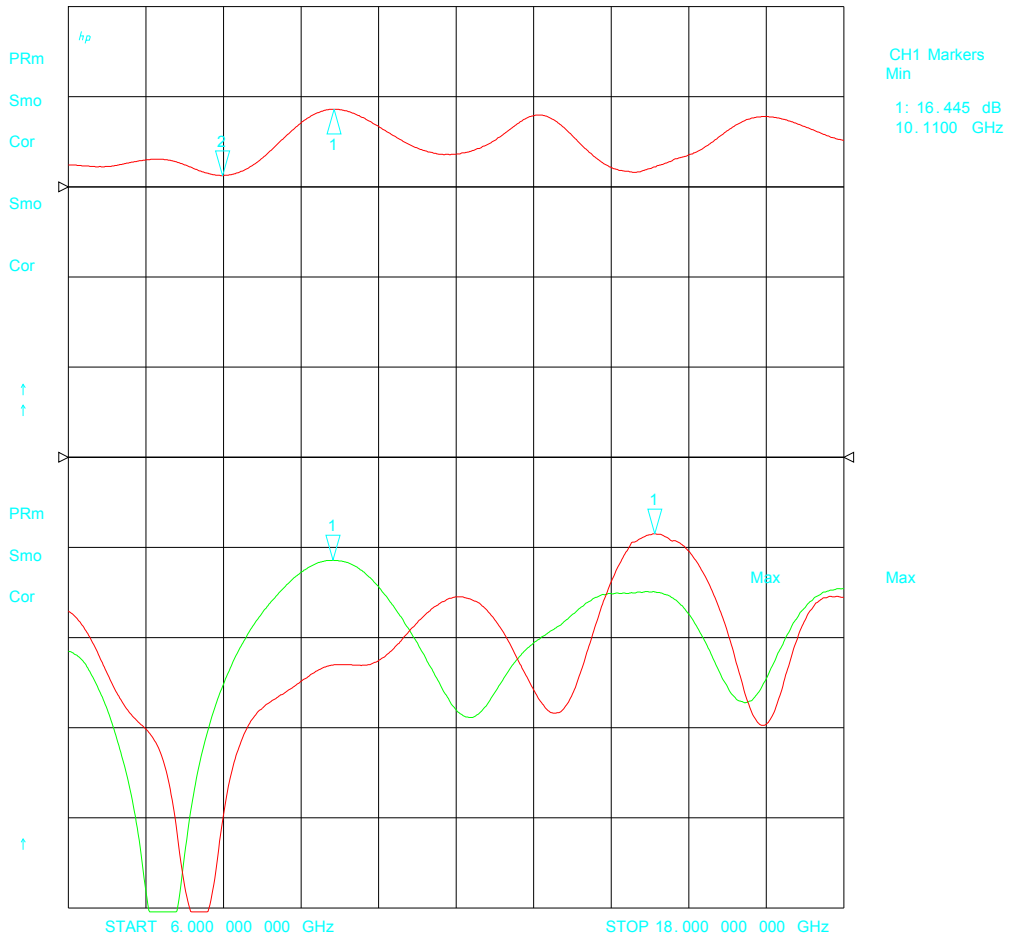
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### VNA Plot – J1 to J3

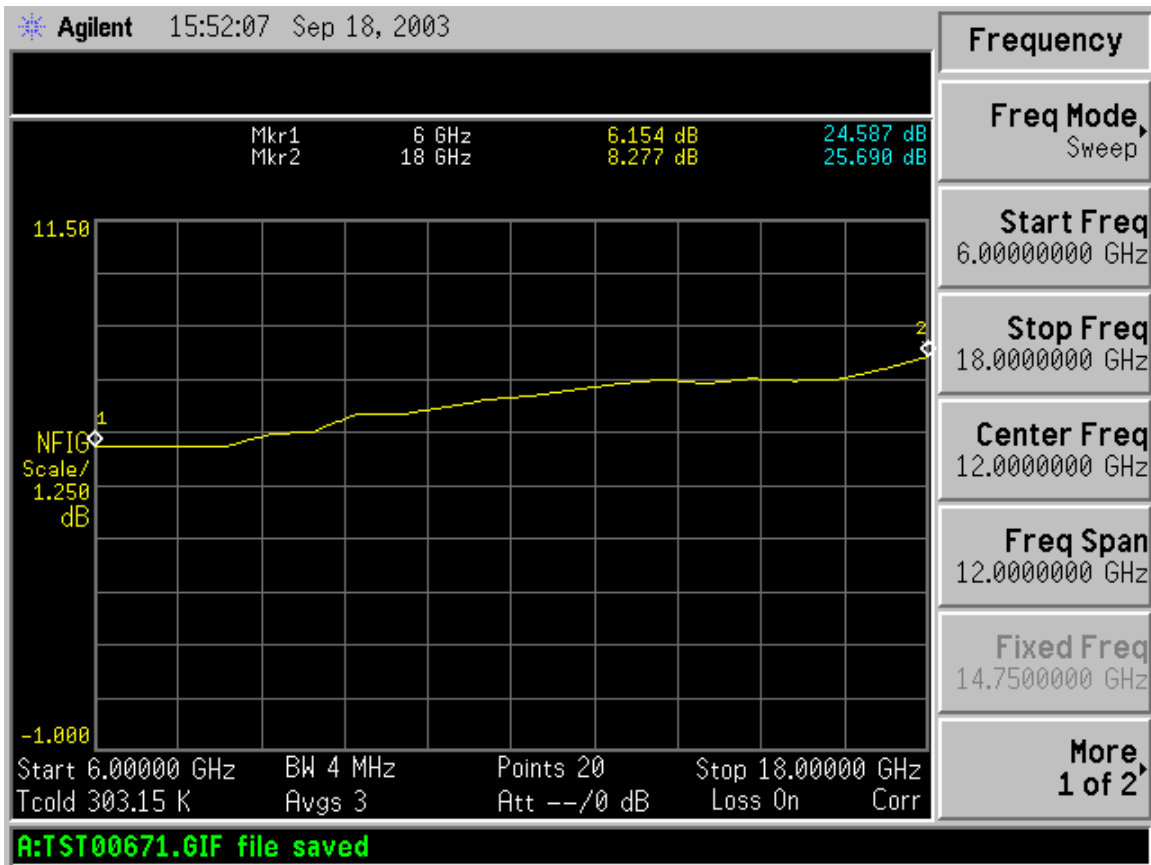
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|     |     |     |       |              |               |                    |
|-----|-----|-----|-------|--------------|---------------|--------------------|
| CH1 | S21 | LOG | 4 dB/ | REF 13 dB    | 2: 13.499 dB  | 8.385 000 000 GHz  |
| CH2 | S11 | LOG | 5 dB/ | REF -9.54 dB | 1: -15.259 dB | 10.095 000 000 GHz |
| CH3 | S22 | LOG | 5 dB/ | REF -9.54 dB | 1: -13.795 dB | 15.075 000 000 GHz |

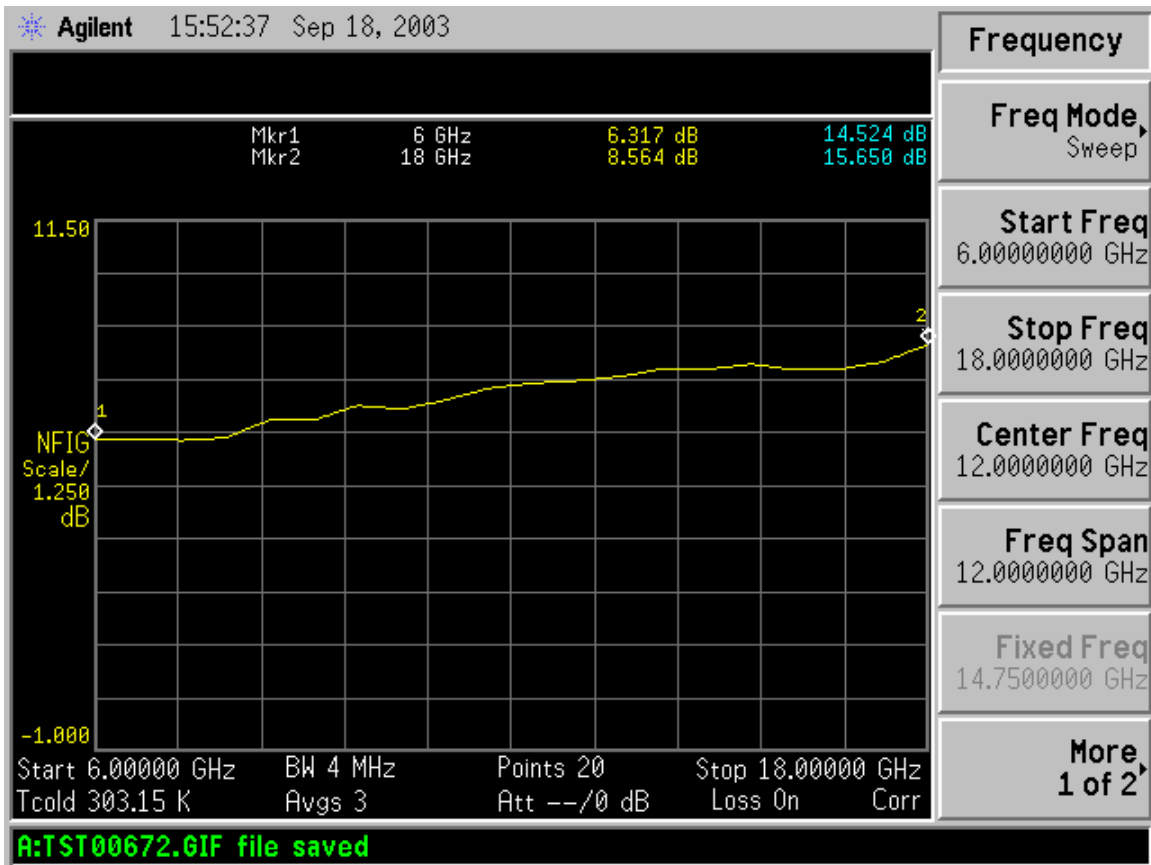


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### Noise Figure Plot - J1 to J2



### Noise Figure Plot - J1 to J3



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