

**Model: TLLA5M700M-24-15**
**Low Noise Amplifier**
**5-700MHz, NF:1.5dB, Gain:24dB, P1dB:23dBm**
**Feature:**

- Ultra Wide Band: 5-700MHz
- Gain: 24dB Min
- Noise Figure: 1.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

**Electrical Specifications:**

| Parameter          |         | Min   | Typ   | Max  | Units |
|--------------------|---------|-------|-------|------|-------|
| Frequency range    |         | 5-700 |       |      | MHz   |
| Gain               | @5MHz   | 24    | 26.7  |      | dB    |
|                    | @25MHz  |       | 26.8  |      |       |
|                    | @100MHz |       | 26.9  |      |       |
|                    | @300MHz |       | 27    |      |       |
|                    | @500MHz |       | 27    |      |       |
|                    | @700MHz |       | 26.9  |      |       |
| Gain Flatness      |         |       | ±0.25 | ±0.5 | dB    |
| Noise Figure       |         |       | 1.5   | 1.8  | dB    |
| Output P1dB@350MHz |         | 21    | 23    |      | dBm   |
| Output IP3@350MHz  |         | 30    | 38    |      | dBm   |
| Input VSWR         |         |       |       | 1.2  | :1    |
| Output VSWR        |         |       |       | 1.4  | :1    |
| DC Voltage         |         | 11    | 12-15 | 30   | V DC  |
| DC Supply Current  |         |       | 150   | 180  | mA    |
| Impedance          |         | 50    |       |      | Ohms  |

**Mechanical Specifications:**

| Parameter               | Value                 | Units |
|-------------------------|-----------------------|-------|
| Input /Output Connector | SMA Female/SMA Female |       |
| DC Bias                 | Solder Pin            |       |
| Size                    | 31.75*31.75*14.29     | mm    |
| Weight                  | /                     | g     |

### Absolute Maximum Ratings:

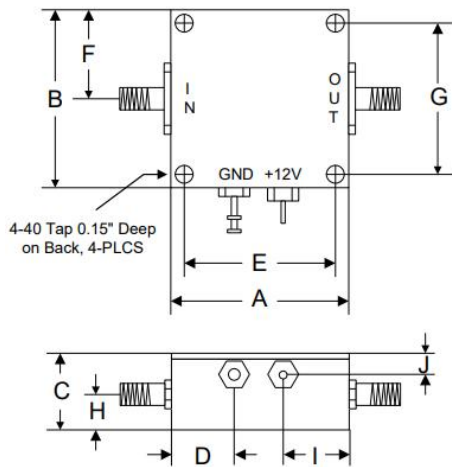
| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +35V                 |
| RF Input Power        | 15 dBm               |
| ESD sensitivity (HBm) | Class 0, passed 150V |



Available 220V System  
Benchtop Amplifier

### Outline Drawing:

Unit: mm



|   |         |
|---|---------|
| A | 31.75mm |
| B | 31.75mm |
| C | 14.29mm |
| D | 11.43mm |
| E | 25.4mm  |
| F | 15.88mm |
| G | 25.4mm  |
| H | 6.35mm  |
| I | 12.7mm  |
| J | 4.76mm  |

**\*\*\*Heat Sink Required During Operation**



OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

### Environmental Conditions:

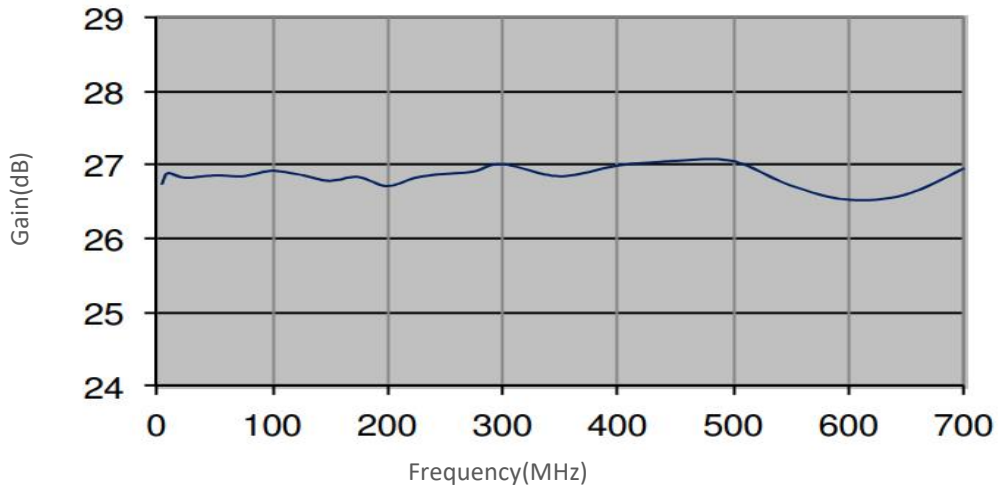
| Parameter                       | Min   | Typ    | Max  | Units |
|---------------------------------|---|--------|------|-------|
| Operating Temperature           | -40   |        | +85  | °C    |
| Non-operating Temperature       | -55   |        | +125 | °C    |
| Relative humidity               |   | 95     |      | %     |
| Altitude                        |   | 50,000 |      | feet  |
| Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis |        |      |       |
| Shock(non operating)            | 20G for 11msc half sin wave,3 axis both directions  |        |      |       |

### Ordering Information:

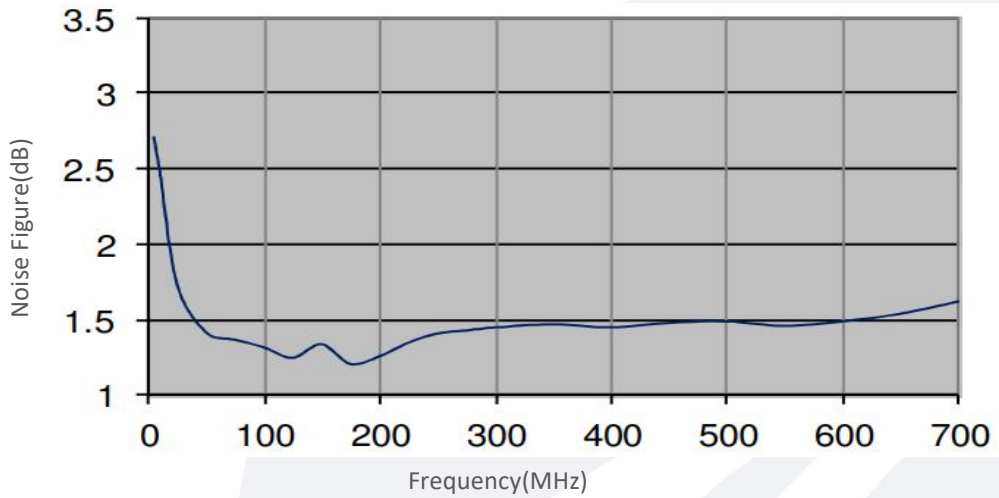
| Part Number         | Description   | Revision |
|---------------------|---|----------|
| TLLA5M700M-24-15    | Low Noise Amplifier, 5-700MHz, Noise Figure:1.5dB, Gain:24 dB,P1dB:15dBm,+12V DC,Without Heatsink | Rev.1.1  |
| TLLA5M700M-24-15-HS | Low Noise Amplifier, 5-700MHz, Noise Figure:1.5dB, Gain:24 dB,P1dB:15dBm,+12V DC,With Heatsink    | Rev.1.1  |

Typical Performance Data:

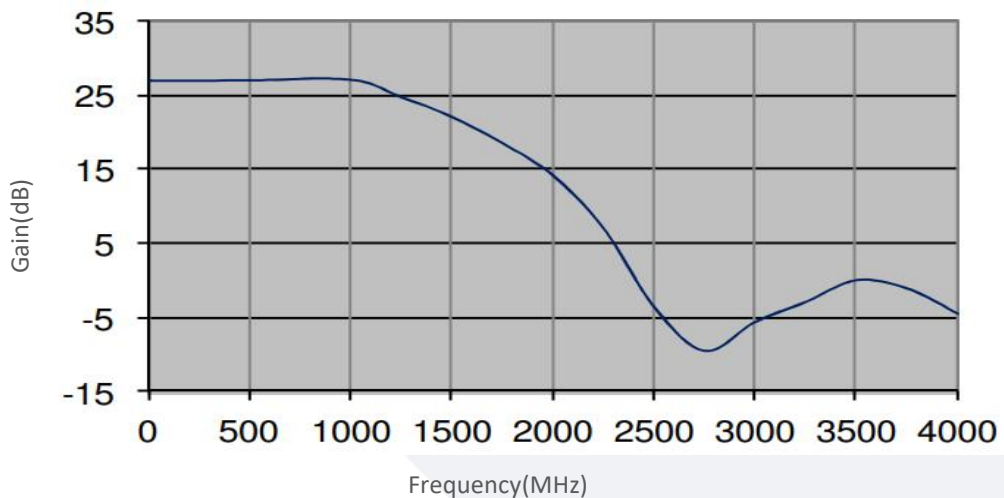
Gain vs Frequency



Noise Figure vs Frequency

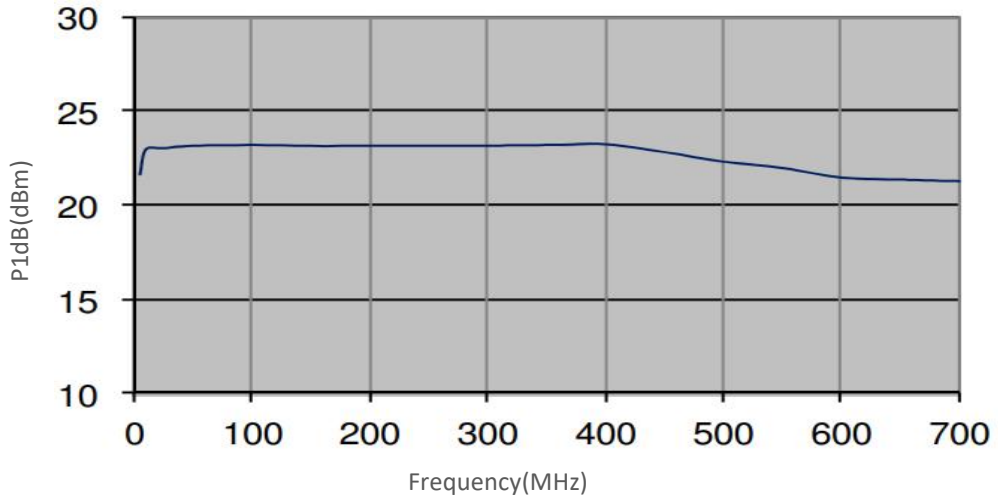


Broadband Gain vs Frequency

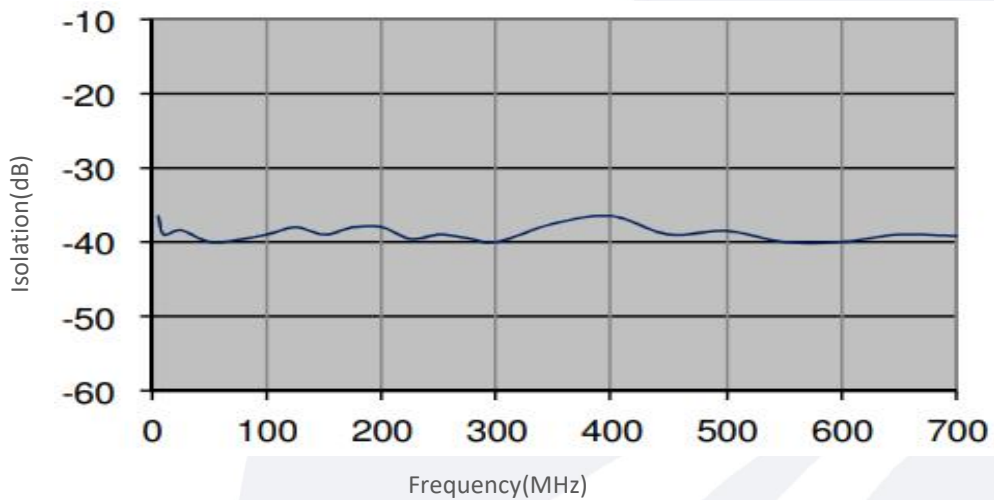


Typical Performance Data:

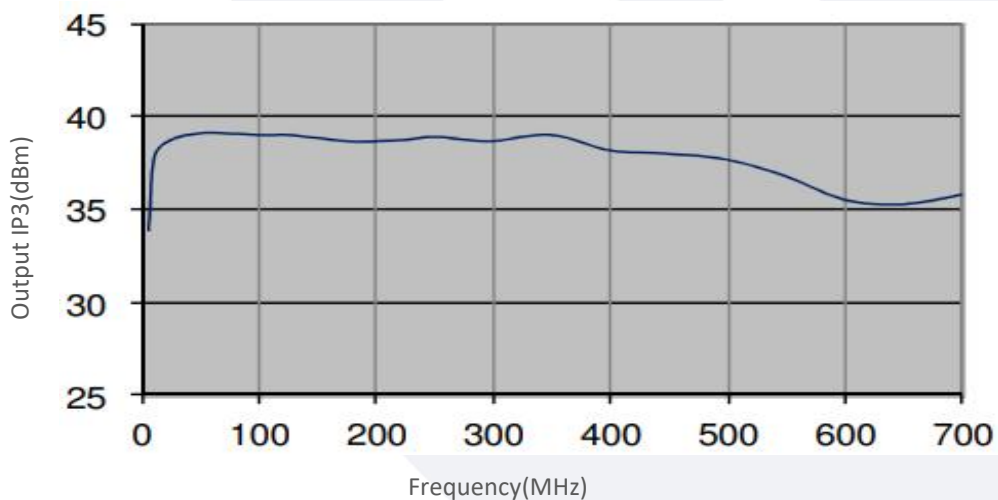
P1dB vs Frequency



Isolation vs Frequency

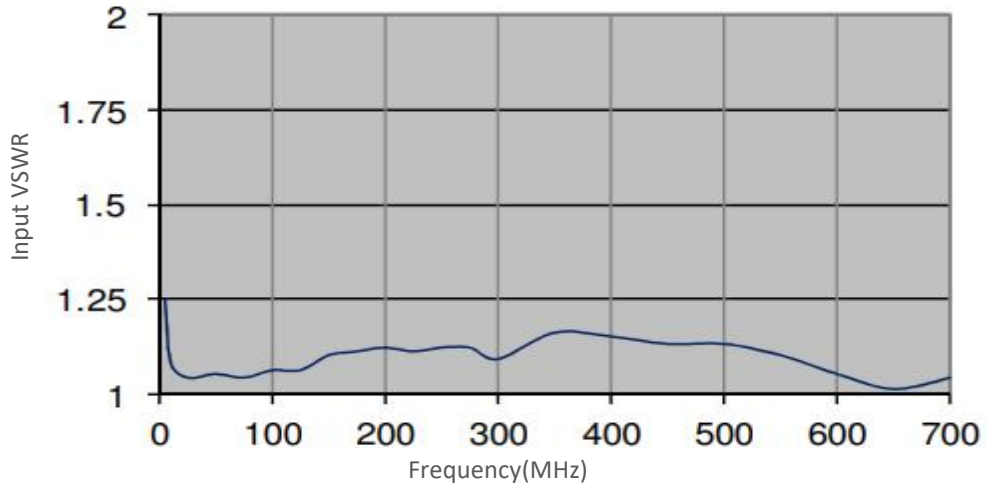


Output IP3 vs Frequency

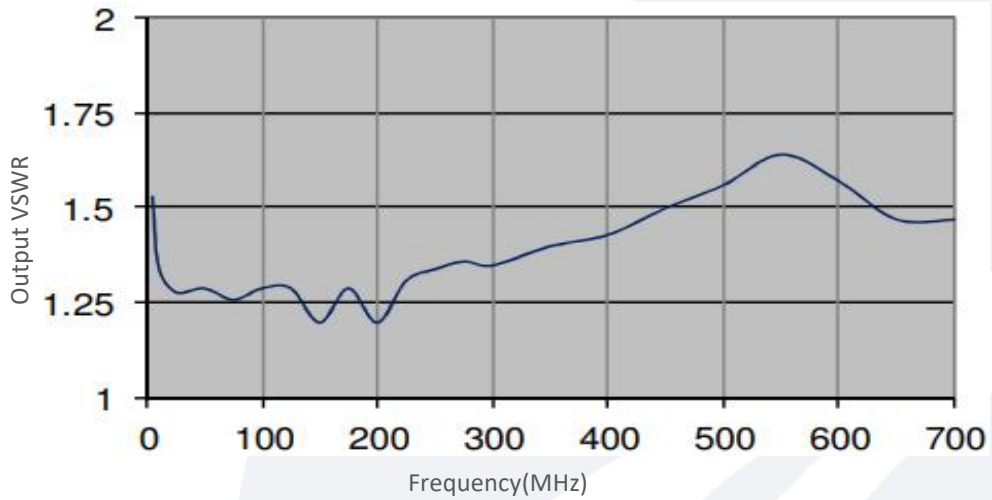


Typical Performance Data:

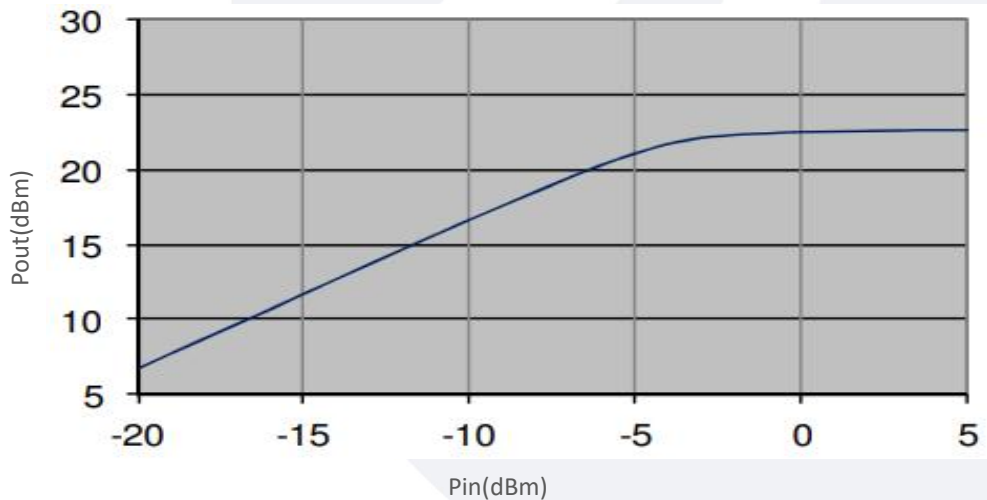
Input VSWR vs Frequency



Output VSWR vs Frequency

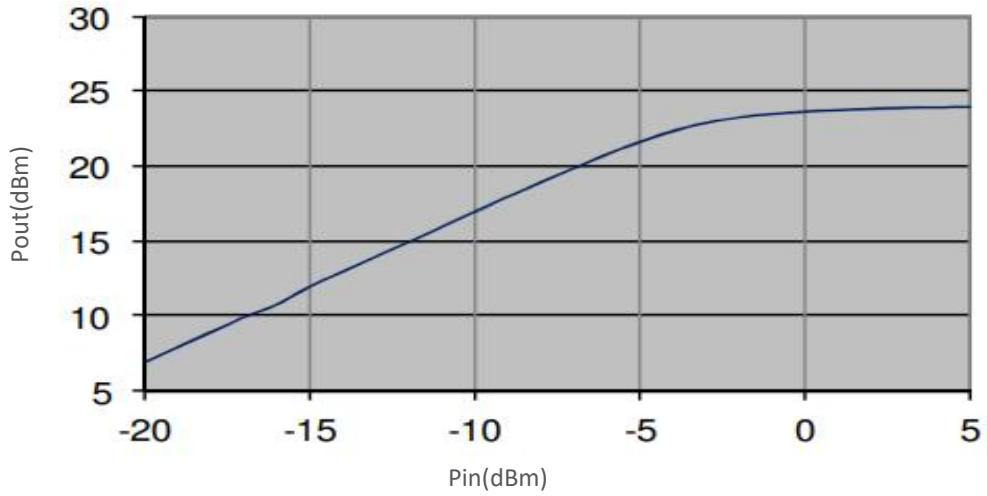


Pout vs Pin@5MHz

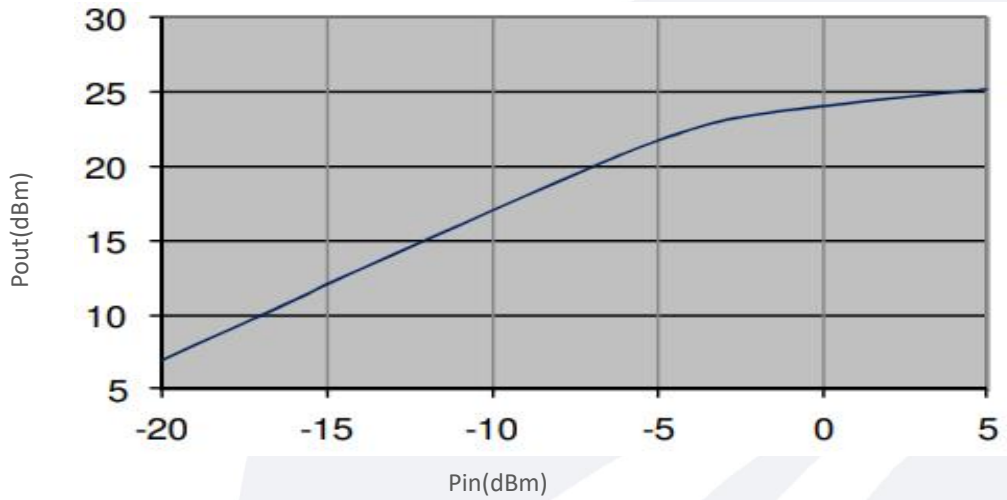


Typical Performance Data:

Pout vs Pin@10MHz



Pout vs Pin@50MHz



Pout vs Pin@100MHz

