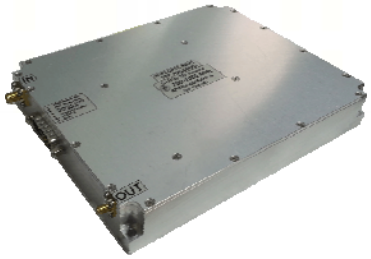


The **MP881/25/53HK-A** is suitable for single and multi carrier applications in 869-894 MHz band high power linear applications. The amplifier employs linear LDMOS power devices that provide significant linear output power, wide dynamic range, and high gain.

# Model: MP881/25/53HK-A

## 1. Electrical Characteristics

| Item | Value | Note |
|---|---|---|
| **Frequency range** | 869 ~ 894 MHz | |
| **Gain** | 54 ± 1 dB | |
| **Gain Flatness** | ± 0.5 dB | Over Freq. Range |
| **Gain Variation** | ± 1.0 dB | Over Temp. Range |
| **Power Output P1** | +52 dBm (Typ.) | |
| **Power Output Psat** | +53 dBm (Min.) | |
| **Output IP3** | +63 dBm (Min.) | 2 Tones @ +42.0 dBm/tone, 1 MHz spacing |
| **ACLR @ +45.5 dBm** | - 30 dBc @ ± 200 kHz offset from F0 (Max.) (RBW = 30 kHz)<br>-60 dBc @ ± 400 kHz offset from F0 (Max.) (RBW = 30 kHz) | Signal Source:<br>2 GSM's |
| **ACLR @ +45.5 dBm** | - 40 dBc @ ± 5 MHz offset from F0 (Max.) (RBW = 30 kHz)<br>-50 dBc @ ± 10 MHz offset from F0 (Max.) (RBW = 30 kHz) | **Signal Source:**<br>**1 WCDMA**<br>**Test Mode 1**<br>**with 64 DPCH**<br>**PAR=7.5 dB**<br>@ 0.01% Probability on CCDF |
| **ACLR @ +45.5 dBm** | - 30 dBc @ ± 5 MHz offset from F0 (Max.) (RBW = 30 kHz)<br>-40 dBc @ ± 10 MHz offset from F0 (Max.) (RBW = 30 kHz) | **Signal Source:**<br>**2 WCDMA's**<br>**Test Mode 1**<br>**with 64 DPCH,**<br>**PAR=9.8 dB**<br>@ 0.01% Probability on CCDF |
| **Input / Output VSWR** | ≤ 1.3 | |
| **VVA Control Range** | > 25 dB | Voltage Input 0-5V |
| **VVA Control Voltage** | +5V: Maxim Gain<br>0V: Minimum Gain | |
| **Over Temperature Protection** | Shutdown @ +85°C ± 5°C | Auto Recover @ +75°C ± 5°C |
| **HPA Enable/Disable** | TTL "Low or Open" ⇒Enable<br>TTL "High" ⇒Disable | |
| **Input Power Monitor** | 2.4 ± 0.1V @ +20 dBm | RMS Detection |
| **Forward Power Monitor** | 2.4 ± 0.1V @ +45.5 dBm | RMS Detection |
| **Reverse Power Monitor** | 2.4 ± 0.1V @ +45.5 dBm | RMS Detection |
| **Flatness over Freq. of Power Monitor** | ± 0.5 dBm (Max.) | |
| **Spurious** | -70 dBc (Max.) | |
| **Harmonics @ +45.5 dBm** | -50 dBc (Max.) | |
| **DC Input Voltage / Current** | +28 VDC ± 1V / 7.2A (Max.) | DC Input Voltage / Current @ +45.5 dBm |
| **Input / Output Impedance** | 50 Ω | |
| **Max. Input Signal *(without Damage)*** | +20 dBm | |
| **Reverse Power Max.** | +49 dBm | |

| Revision History | | | |
|---|---|---|---|
| **REV** | **Reason to Change** | **Date** | **Initialed by** |
| | Released for production | 8/13/15 | Y.Z. |
| | | | |

## 2. Mechanical Characteristics

| | | |
|---|---|---|
| **Monitoring Connector** | DB-9 Male | 4 – 40 screw |
| **RF IN/OUT Connector** | SMA 4 Holes Female | |
| **DC Input** | Pin 6,7 on DB-9 | |
| **Dimensions** | 6.82" x 5.42" x 1.07" | |
| **Weight** | 2.3 lb | |

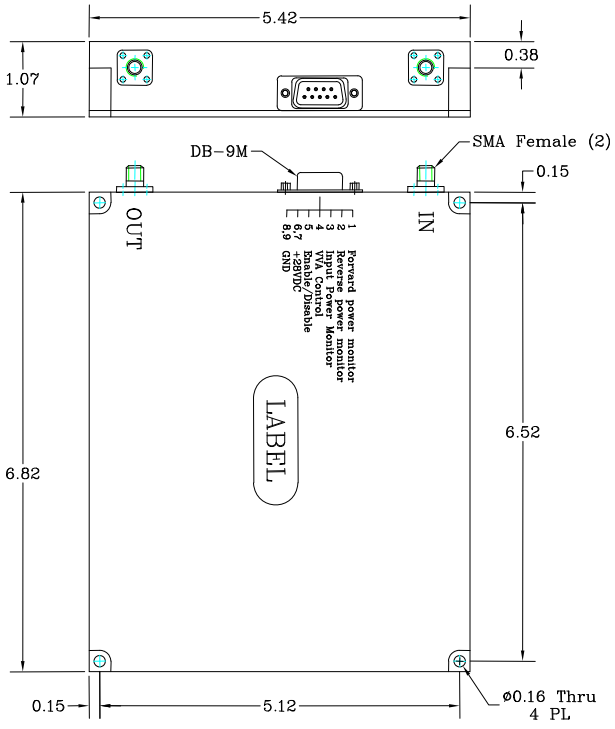
## 3. Environment Characteristics

| | | |
|---|---|---|
| **Operating Temperature** | -20°C ~ +75°C | Base Plate |
| **Storage Temperature** | -40°C ~ +95°C | |
| **Cooling** | External Heatsink | |
| **Humidity** *(Non-condensing)* | 95% (Max.) | **Designed to meet: IAW MIL-STD-810F** |

## 4. DB-9 Male Pin Description

| | | |
|---|---|---|
| **1** | Forward Power Monitor | |
| **2** | Reverse Power Monitor | |
| **3** | Input Power Monitor | |
| **4** | VVA Control | 0-5V |
| **5** | Enable / Disable | Enable: TTL Low or Open<br>Disable: TTL High |
| **6, 7** | +28VDC | |
| **8, 9** | GND | |

## 5. Outline Drawing

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