

The MP900/200/53HK-A5 is suitable for broadband high power linear applications. The amplifier employs linear LDMOS power devices that provide sufficient output power, wide dynamic range, and high gain. It supports GSM, CDMA, and LTE applications.

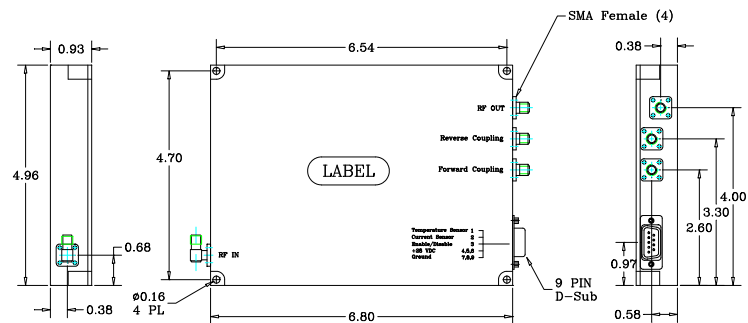
Model: MP900/200/53HK-A5

| 1. Electrical Characteristics | | |
|---------------------------------|---|---|
| Item | Value | Note |
| Frequency Range | 800 ~ 1000 MHz | |
| Gain | 46 ± 1 dB | @ 0 dBm Input |
| Gain Flatness | ± 1.0 dB (Typ.) | Over Freq. Range |
| Gain Variation | ± 1.0 dB (Typ.) | Over Temp. Range |
| Output Power P1dB | +52 dBm (Min.) | |
| Output Power Psat | +53 dBm (Min.) | |
| Input / Output VSWR | ≤ 1.2 (Max.) | |
| Noise Figure | 15 dB (Max.) | |
| Harmonics | -45 dBc (Max.) | @ 80 Watts Output |
| Spurious | -70 dBc (Max.) | |
| HPA Enable/Disable | TTL "0V or Open" ⇒ Disable TTL "5V" ⇒ Enable | |
| Output IP3 | +61 dBm (Min.) | Two Tones @ +40 dBm per tone, 12.5 KHz Spacing. |
| Forward Coupling | 30 dB ± 0.3 dB Over Entire Freq. Range | ≥ 30 dB Directivity |
| Reverse Coupling | 30 dB ± 0.3 dB Over Entire Freq. Range | ≥ 20 dB Directivity |
| Current Sensor | 100 mV/Amp | Pin 2 on DB-9 |
| Temp. Sensor | V _t + 475 mV, 10 mV/°C | Pin 1 on DB-9 |
| DC Input Voltage / Current | +28 VDC ± 1V / 9A (Max.) | DC Input Voltage / Current @ 80 Watts |
| Thermal Shutdown | +95°C ± 5°C | Auto Recover at +80°C ± 5°C |
| VSWR Protection | Isolator Included | ≥ 20 dB Isolation |
| Reverse Power Handling | 80 Watts (Max.) | |
| Input / Output Impedance | 50 Ω | |
| Max. Input Power without Damage | +15 dBm | |

| 3. Environment Characteristics | | |
|--------------------------------|---------------------|---|
| Operating Temperature | -20°C ~ +80°C | Base Plate |
| Storage Temperature | -40°C ~ +85°C | |
| Cooling | External Heatsink | |
| Humidity (Non-condensing) | 95% (Max.) | Designed to meet: IAW MIL-STD-810F |
| Operating Altitude | 10000 Feet (Min.) | |
| Vibration and Shock | Vibration 6.06 gRMS | Designed to meet: IAW MIL-STD-202F method 214 |
| Salt Fog | 5%, +35°C, 96 hours | Designed to meet: IAW MIL-STD-810F |
| Fungus | | Designed to meet: IAW MIL-STD-810F method 508.5 |

| 4. DB9 Pin Description | | |
|------------------------|--------------------|--|
| 1 | Temperature Sensor | 10 mV/°C, V _t + 475 mV |
| 2 | Current Sensor | 100 mV/Amp |
| 3 | Enable / Disable | Disable: TTL Low or Open Enable: TTL High |
| 4,5,6 | +28 VDC | |
| 7,8,9 | Ground | |

5. Outline Drawing



| 2. Mechanical Characteristics | | |
|--|----------------------|------------------------|
| Monitoring Connector | DB-9 Male | 4 – 40 screw |
| RF IN/OUT Connector | SMA 4 Holes / Female | Sucoplate or Tri-Metal |
| Forward Coupling Connector | SMA 4 Holes / Female | Sucoplate or Tri-Metal |
| Reverse Coupling Connector | SMA 4 Holes / Female | Sucoplate or Tri-Metal |
| DC Input | Pin 4,5,6 on DB-9 | |
| Dimensions | 6.8" x 4.96" x 0.93" | |
| Maximum Weight | 2.1 lb | |
| Screws Type | Philips | |
| Paint Except for Base Plate Surface (Chemical Conversion Coating on Base Plate) | Epoxy Gray F63A33 | Mil-DTL-24441D |

| Revision History | | | |
|------------------|------------------|------|--------------|
| REV | Reason to Change | Date | Initialed by |
| | | | |