



The MP940/35/47MK-A8 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.



## Model: MP940/35/47MK-A8

### 1. Electrical Characteristics

| Item                                   | Value   | Note   |
|--|---|--|
| Frequency Range                        | 925 ~ 960 MHz   |  |
| Gain                                   | 47 ± 1dB  |  |
| Gain Flatness                          | ± 1.0dB   | Over Freq. Range                               |
| Gain Variation                         | ± 1dB   | Over Temp. Range                               |
| Output Power P1                        | + 47 dBm (Min.)   |  |
| Output Power Psat                      | + 48 dBm (Min.)   |  |
| Output 3 <sup>rd</sup> Intercept Point | + 59 dBm  | 2 tones @ + 40 dBm output power, 1 MHz Spacing |
| ACLR @ + 47 dBm                        | - 30 dBc @ ± 200 KHz offset from F0 (Max.) (RBW = 30 kHz)<br>-55 dBc @ ± 400 KHz offset from the F0 (Max.) (RBW = 30 kHz) | <u>Signal Source:</u><br>1 GSM                 |
| Input / Output VSWR                    | ≤ 1.2   | Output Isolator Included                       |
| Harmonics                              | -45 dBc (Max.)  |  |
| Spurious                               | -70 dBc (Max.)  |  |
| HPA Enable/Disable                     | TTL "0V or Open": Enable<br>TTL "5V": Disable   |  |
| VVA Control                            | +5V: Maxim Gain<br>0V: Maxim Attenuation  |  |
| VVA Range                              | >25 dB  |  |
| Forward Power Monitor                  | 2.4 ± 0.1 V @ +47 dBm   | RMS Detection                                  |
| Reverse Power Monitor                  | 2.4 ± 0.1 V @ +47 dBm   | RMS Detection                                  |
| Input Power Monitor                    | 2.4 ± 0.1 V @ +20 dBm   | RMS Detection                                  |
| Current Sensor                         | 10mV/100mA  |  |
| DC Input Voltage / Current             | +28 VDC ± 1V / 4.5A   | DC Input Voltage / Current @ +47 dBm           |
| Thermal Shutdown                       | +85°C ± 5°C   | Auto Recover @ +70°C ± 5°C                     |
| Input / Output Impedance               | 50 Ω  |  |
| Max. Input Signal (without damage)     | +25 dBm   | With ALC on                                    |

### 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           | 6.4" x 3.4" x 1"     |              |

| Revision History |                     |          |              |
|------------------|---------------------|----------|--------------|
| REV              | Reason to Change    | Date     | Initialed by |
|                  | Production approved | 11/28/16 | Y.Z.         |
|                  |                     |          |              |
|                  |                     |          |              |

### 3. Environment Characteristics

|                       |               |            |
|-----------------------|---------------|------------|
| Operating Temperature | -20°C ~ +70°C | Base Plate |
|-----------------------|---------------|------------|

### 4. DB9 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 | +28V                  |  |
| 8    | Current Sensor        | 10mV/100mA                                   |
| 9    | Ground                |  |

### 5. Outline Drawing

