

# **Model SM09397-45LD**

930-970 MHz 30 Watt Linear Power Amplifier FOR GSM APPLICATIONS

The **SM09397-45LD** is a solid state LDMOS amplifier designed for the Cellular/GSM telephony market. It is one of the smallest amplifiers in the industry to deliver a P1dB of 30 watts. The operating frequency is 930-970 MHz, and the linear gain is 50 dB with a gain flatness of  $\pm$  0.5 dB across the band. The unit operates off a single positive supply voltage of +24V, and draws less than 7 A of current. The amplifier is available in modular form (standard), or as a 19" rack mount unit.

#### **Features**

- Mis-Match Protected
- Single Power Supply
- Level Control
- Over/Reverse Voltage Protection
- Thermal Protection with Auto Reset

#### **Options**

- Forward/Reverse Power Detection
- Harmonic Filter
- Logic On/Off Control
- Integral Heatsink

### **Configurations**

- Module
- 19" Rack



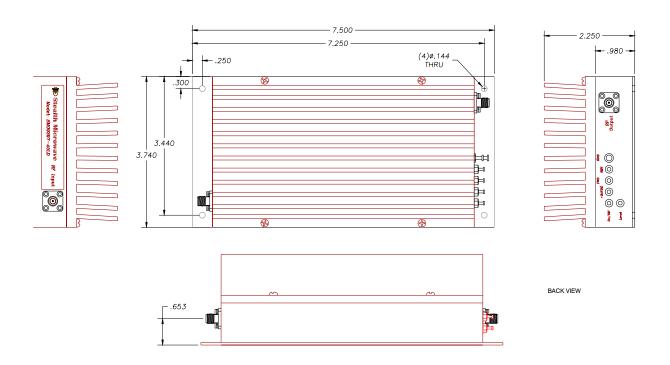
| Parameter                           | Specification                                   |  |
|-------------------------------------|---|--|
| Frequency Range                     | 930 - 970 MHz                                   |  |
| Pout (P1dB)                         | + 45 dBm  |  |
| Third Order Intercept<br>Point      | + 55 dBm  |  |
| Linear Gain                         | 50 dB ± 1 dB                                    |  |
| Gain Flatness over<br>Full Band     | ± .5 dB   |  |
| Gain Change over<br>Temperature     | ± .5 dB   |  |
| Input/Output Return<br>Loss         | -13 dB / -13 dB                                 |  |
| DC Supply                           | +24 Volts @ 6.6 Amperes (4.8 Amperes Quiescent) |  |
| Level Control                       | 32 dB   |  |
| Harmonic Filter (Optional)          | - 55 dBc  |  |
| Mechanical Dimensions With Heatsink | 7.5 x 3.7 x 2.2 inches                          |  |
| RF Connectors                       | SMA Female                                      |  |
| Operating Temperature               | 0°C to +55°C                                    |  |
| Operating Humidity                  | 95% Non-condensing                              |  |
| Operating Altitude                  | Up to 10,000 feet above<br>Sea Level            |  |

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## **DIMENSIONS IN INCHES**



| Pin       | Description                       | Values  |
|-----------|-----------------------------------|---|
| RF Input  | Input Connector (SMA Female)      | - 4 dBm, typical  |
| RF Output | Output Connector (SMA Female)     | + 45 dBm  |
| GND       | Ground Turret                     |   |
| REV       | Reverse Power Detector            | $\infty$ VSWR @ + 45 dBm $\approx$ + 5 Volts                            |
| FWD       | Forward Power Detector            | + 45 dBm Output Power ≈ + 5 Volts                                       |
| +24VDC    | DC Input Voltage                  | + 24 Volts @ 6.6 Amperes (4.8 Amperes Quiescent)                        |
| On/Off    | TTL Logic On/Off                  | 0  Volts = Off, + 5  Volts = On   |
| Level     | Voltage Variable Attenuator (VVA) | $0 \text{ Volts} = 0 \text{ dBr}, +5 \text{ Volts} \ge -32 \text{ dBr}$ |

Specifications subject to change without notice.

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