



MA1113-1

For PCS - 20W Power Amplifier

MA1113-1

DESCRIPTION

The MA1113-1 is a 20W power amplifier designed for PCS, which comprises 4 stages GaAs FET and 2 stages Si bipolar transistors, also RF power monitoring circuit.

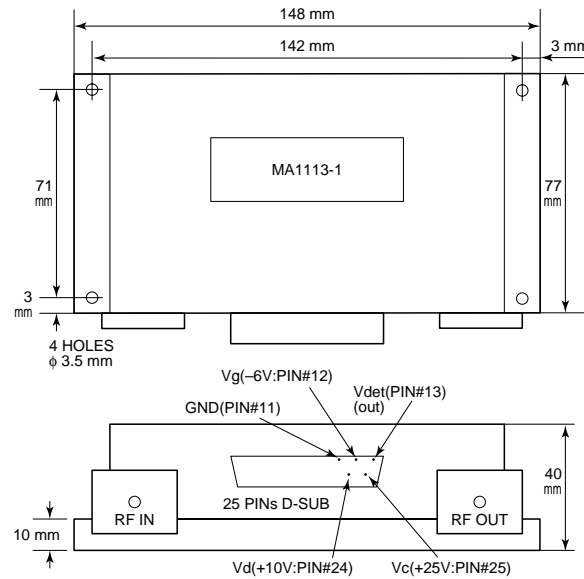
FEATURES

- Specified +25/+10 Volt Characteristics
 - RF Output Power : +43 dBm (typ.)
 - Harmonics : -65 dBc typ.
- Small Size : 77 × 148 × 40 mm³
- 50 Ohm Input/Output Impedances

APPLICATION

- PCS (1930 ~ 1990 MHz)
Base station

OUTLINE DRAWING



2. Electrical Performances (T_c = +25°C, V_c = +25V, V_d = +10V, V_g = -6V, Z_g = Z_l = 50Ω)

| No. | Items | Symbol | Condition | Standard | | | Unit |
|-----|--|-------------------|---|----------|-------------------|------------|-------------------|
| | | | | Min | Type | Max | |
| 1 | Frequency | f | | 1930 | --- | 1990 | MHz |
| 2 | Output Power | P _{out} | | +43 | --- | --- | dBm |
| 3 | Output RF modulation spectrum ; from the carrier | ---- | P _{out} = +43 dBm (P _{in} control) | ---- | ---- | | |
| | 100 KHz | | | ---- | ---- | +0.5 | dB |
| | 200 KHz | | | ---- | ---- | -30 | dB |
| | 250 KHz | | | ---- | ---- | -33 | dB |
| | 400 KHz | | | ---- | ---- | -60 | dB |
| | 600 KHz | | | ---- | ---- | -70 | dB |
| | to < 1200 KHz | | | | | | |
| | 1200 KHz | | | ---- | ---- | -73 | dB |
| | to < 1800 KHz | | | | | | |
| | 1800 KHz | | | ---- | ---- | -75 | dB |
| | to < 6000 KHz | | | | | | |
| | ≥ 6000 KHz | | | ---- | ---- | -80 | dB |
| 4 | Spurious ; in-band out-band | | | ---- | ---- | -36 -30 | dBm dBm |
| 5 | Harmonics | 2fo 3fo 4fo | P _{out} = +43 dBm | ---- | -60 -65 -70 | ---- | dBc dBc dBc |
| 6 | Quiescent current | I _{cq} | P _{in} = 0mW | ---- | ---- | 1.5 | A |

Amplifier Specifications (MA1113-1)

1. Maximum Ratings

| No. | Items | Symbol | Condition | Standard | Unit |
|-----|---------------------|------------------|-----------------------|-----------|------|
| 1 | Case temperature | T _c | | -40 ~ +70 | °C |
| 2 | Storage temperature | T _{stg} | | -40 ~ +80 | °C |
| 3 | Collector Voltage | V _c | | +26.0 | V |
| 4 | Drain Voltage | V _d | V _g = -6V | +11.5 | V |
| 5 | Gate Voltage | V _g | V _d = +10V | -10.0 | V |
| 6 | RF Input Power | P _{in} | | -9.0 | dBm |