MA1078-2

For DCS1800 - 20W Power Amplifier

DESCRIPTION

The MA1078-2 is a 20W power amplifier designed for DCS 1800, which comprises 4 stages GaAs FET and 2 stages Si bipolar transistors, also RF power monitoring circuit.

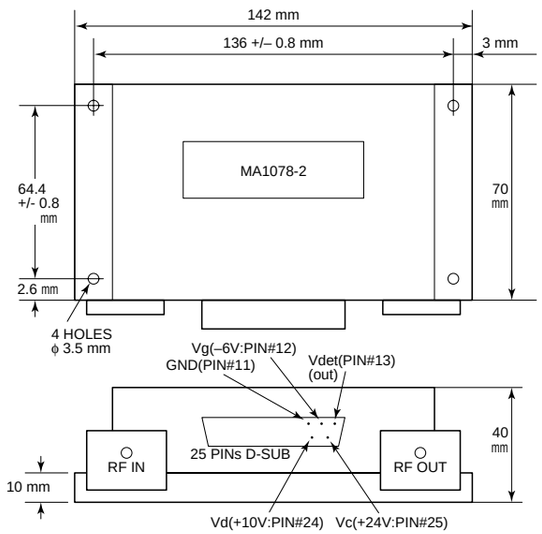
FEATURES

- ■Specified +25/+10 Volt Chracteristics
  - • RF Output Power : +43 dBm (typ.)
  - • Harmonics : –65 dBc typ.
- ■Small Size : 70 × 142 × 40 mm³
- ■50 Ohm Input/Output Impedances

APPLICATION

- ■DCS 1800 (1805 ~ 1880 MHz)
  Base station

OUTLINE DRAWING



2. Electrical Performances (Tc = +25°C, Vc = +24V, Vd = +10V, Vg = –6V, Zg = Zl = 50Ω)

No.	Items	Symbol	Condition	Standard			Unit
				Min	Type	Max	
1	Frequency	f		1805	– – –	1880	MHz
2	Output Power	P_{out}		+43	– – –	– – –	dBm
3	Output RF modulation spectrum ; from	– – –	P_{out} = +43 dBm				
	the carrier 100 KHz			– – –	– – –	+0.5	dB
	200 KHz		(P_{in} control)	– – –	– – –	–30	dB
	250 KHz			– – –	– – –	–33	dB
	400 KHz			– – –	– – –	–60	dB
	600 KHz to < 1200 KHz			– – –	– – –	–70	dB
	1200 KHz to < 1800 KHz			– – –	– – –	–73	dB
	1800 KHz to < 6000 KHz			– – –	– – –	–75	dB
	≦ 6000 KHz			– – –	– – –	–80	dB
4	Spurious ; in-band			– – –	– – –	–36	dBm
	out-band			– – –	– – –	–30	dBm
5	Harmonics	2fo	P_{out} = +43 dBm	– – –	–60	– – –	dBc
		3fo		– – –	–65	– – –	dBc
		4fo		– – –	–70	– – –	dBc
6	Quiescent current	I_{cq}	P_{in} = OmW	– – –	– – –	1.5	A

Amplifier Specifications (MA1078-2)

1. Maximum Ratings

No.	Items	Symbol	Condition	Standard	Unit
1	Case temperature	Tc		–40 ~ +70	°C
2	Storage temperature	Tstg		–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}		–11.0	dBm