



MA1114-1

For PCS - 30W Power Amplifier

MA1114-1

DESCRIPTION

The MA1114-1 is a 30W power amplifier designed for PCS, which comprises 4 stages GaAs FET and 2 stages Si bipolar transistors, also RF power monitoring circuit.

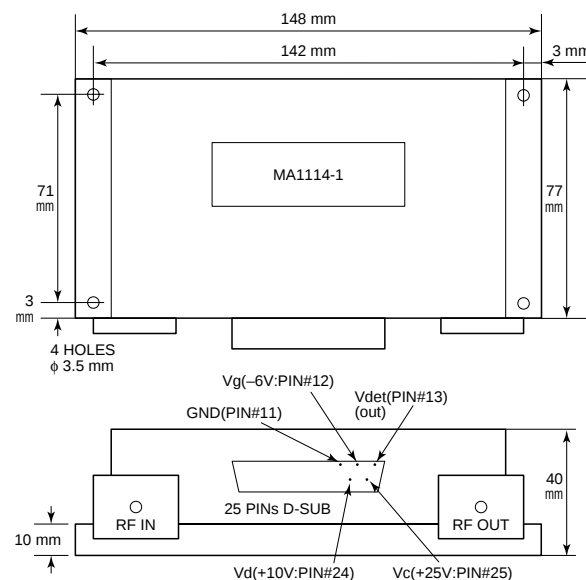
FEATURES

- Specified +25/+10 Volt Characteristics
 - RF Output Power : +45 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}		+45	---	---	dBm
3	Output RF modulation spectrum ; from the carrier	---	P _{out} = +45 dBm (P _{in} control)	---	---	+0.5	dB
	100 KHz			---	---	-30	dB
	200 KHz			---	---	-33	dB
	250 KHz			---	---	-60	dB
	400 KHz			---	---	-70	dB
	600 KHz			---	---	-70	dB
	to < 1200 KHz			---	---	-73	dB
	1200 KHz			---	---	-75	dB
	to < 1800 KHz			---	---	-75	dB
	1800 KHz			---	---	-80	dB
	to < 6000 KHz			---	---	-80	dB
	≥ 6000 KHz			---	---	-80	dB
4	Spurious ; in-band out-band			---	---	-36	dBm
				---	---	-30	dBm
5	Harmonics	2fo 3fo 4fo	P _{out} = +45 dBm	---	-60	---	dBc
				---	-65	---	dBc
				---	-70	---	dBc
6	Quiescent current	I _{cq}	P _{in} = 0mW	---	---	1.5	A

Amplifier Specifications (MA1114-1)

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