



MA1065-1

For 1.9 GHz - High Power Amplifier

MA1065-1

DESCRIPTION

The MA1065-1 are 1.9 GHz band power amplifier modules ($P_o = +4.0W$), constructed by driver-amp, highpower-amp, power-monitor and control-circuit. Input and Output impedances are designed to 50Ω .

FEATURES

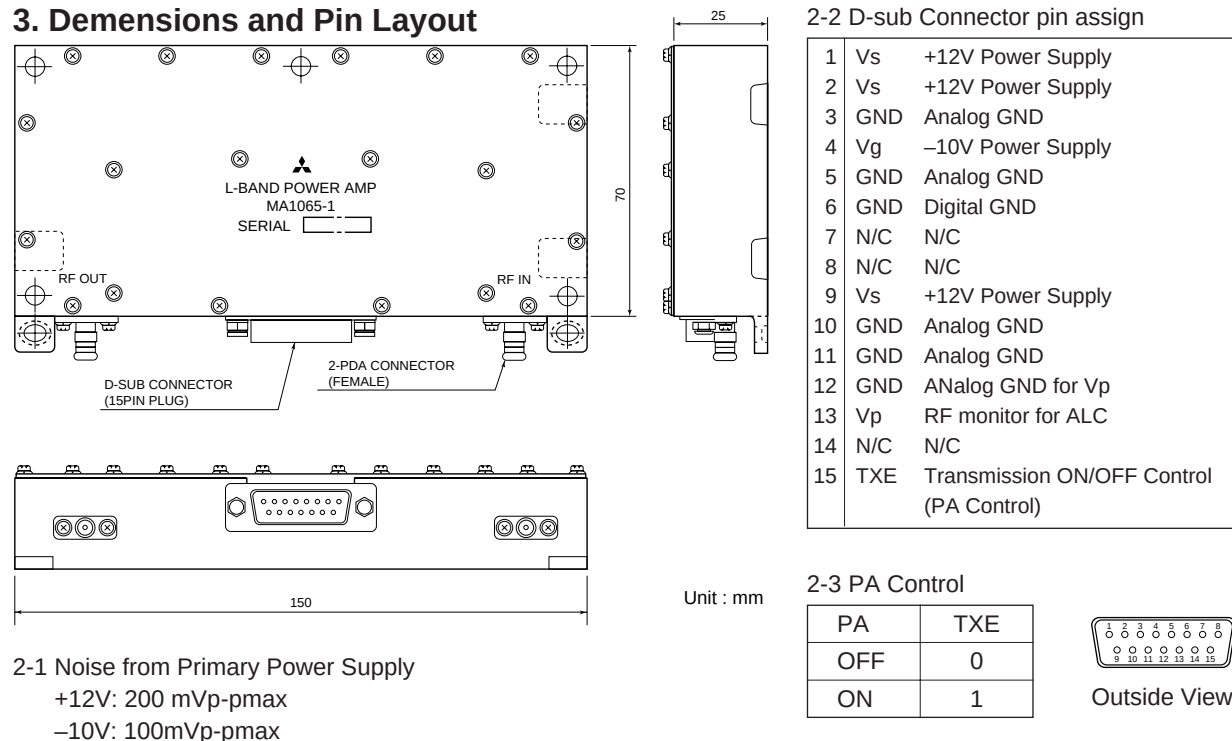
MA1065-1 : $P_o = +22.4 \sim 36.4$ dBm (8 step, $P_{in} = -9.0$ dBm) @1.9 GHz
 $V_s = +12.0V$, $V_g = -7.0V$,
 $V_{cont} = +5.0V$

APPLICATION

Power amplifier module for PHS base station/Japan.

OUTLINE DRAWING

3. Demensions and Pin Layout



Amplifier Specifications (MA1065-1)

1. Maximum Ratings

No.	Items	Symbol	Standard	Condition
1	Voltage	+12 V	Vs	+16 V
		-10 V	Vg	- 12.5V
2	Input RF Power	P _{in}	+5 dBm	Ta = +25°C, f = 1895 ~ 1918 MHz
3	Operating Temperature	Top	-20 ~ +80°C	Base Plate Temperature
4	Storage Temperature	Tstg	-40 ~ +90°C	
5	Humidity	Rh	+50°C, 95% R.H	

2. Electrical Performances

No.	Items	Condition	Standard			Unit
			Min	Typ	Max	
1	Frequency		1895	---	1918	MHz
2	Output Power	f = 1895, 1906, 1918 MHz P _{in} = -9.0 dBm	35.9	36.4	36.9	dBm
	Ripple		---	---	0.6	dBp-p
	Temperature drift		---	---	±2.0	dB
3	ACP	f = 1895, 1906, 1918 MHz P _{out} = 36.4 dBm π / 4 Shift QPSK Modulation	---	---	---	
	600 kHz deviation		---	---	-69.0	dBc
	900 kHz deviation		---	---	-74.0	dBc
4	Input/Output VSWR	f = 1895, 1906, 1918 MHz P _{in} ≤ -9.0 dBm	---	---	1 : 1.5	
	Load VSWR		With Load VSWR of less than 1:2.0 There is no abnormal Oscillation with Load VSWR of more than 1:2.0			
5	Spurious		---	---	---	
	In-band	f = 1895 ~ 1918 MHz P _{out} = 36.4 dBm	---	---	-75.0	dBc
	Out of band	f = 100 kHz ~ 6 GHz (Except In-band) P _{out} = 36.4 dBm	---	---	-65.0	dBc
6	Drain Current +12V (1) Transmission (2) Non Transmission	f = 1906 MHz π / 4 Shift QPSK Modulation P _{out} = 36.4 dBm	---	---	3.3 A max 200 mA	
7	Carrier-off leak power	P _{in} = -75 dBm	---	---	-70.0	dBm/200kHz
8	Burst Transmission Response		---	---	2.6	μS
9	Output Power Monitor	P _{out} = 39.4 dBm f = 1895, 1906, 1918 MHz Without modulation	---	---	---	
	Output Voltage		2.0	---	3.0	V
	Slope		---	400	---	mV/dB
	Frequency and Temperature drift		---	---	1.0	dBp-p
	Output Voltage under Burst off time		---	---	0.5	V