



SUMITOMO ELECTRIC INDUSTRIES, LTD.

Preliminary

00.05.11

P0622300H

2.3 GHz band

Power Amplifier Module

◆ **Features**

- 2.3 GHz frequency band
- Typical 33 dBm P1 dB
- Power consumption 10 W typ.
- Excellent adjacent leakage power
- Typical 31 dB power gain
- Cost-effective metal package
- Low thermal resistance structure



◆ **Applications**

- Final stage power amplifier for KoreanWide band CDMA-WLL subscriber system

◆ **Description**

The P0622300H is a high performance 2.3 GHz band power amplifier module capable of 33 dBm output power with a typical 31 dB gain at 2.3 GHz band, housed in a cost effective metal package. This device features a low power consumption owing to the excellent linearity and high gain of the pulse-doped GaAs MESFET developed by SEI, dissipating 0.6A typical.

The P0622300H is designed to perform the output power of 1W(Average output power) for use in WLL subscriber system. It operates from +10 V and -3 V power supplies.

◆ **Absolute Maximum Ratings**

Case Temperature Tc=25 °C

Parameter	Symbol	Value	Units
DC Supply Voltage	Vd1,2, Vd3	11 *	V
	Vd1,2, Vd3	- 6	V
Input Power	Pin	5	dBm
Storage Temperature	Tstg	-40 to + 90	°C
Operating Case Temperature	Topt	-20 to + 75	°C

Notes: Operating of this device above any one of these parameters may cause permanent damage.

*Vg1,Vg2=-3.0 V

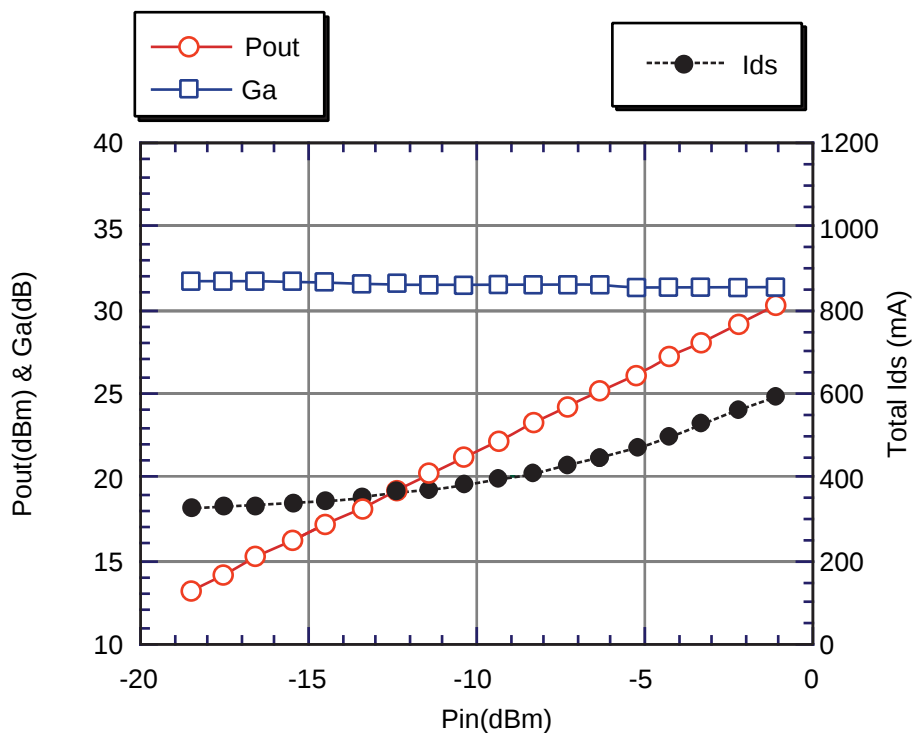
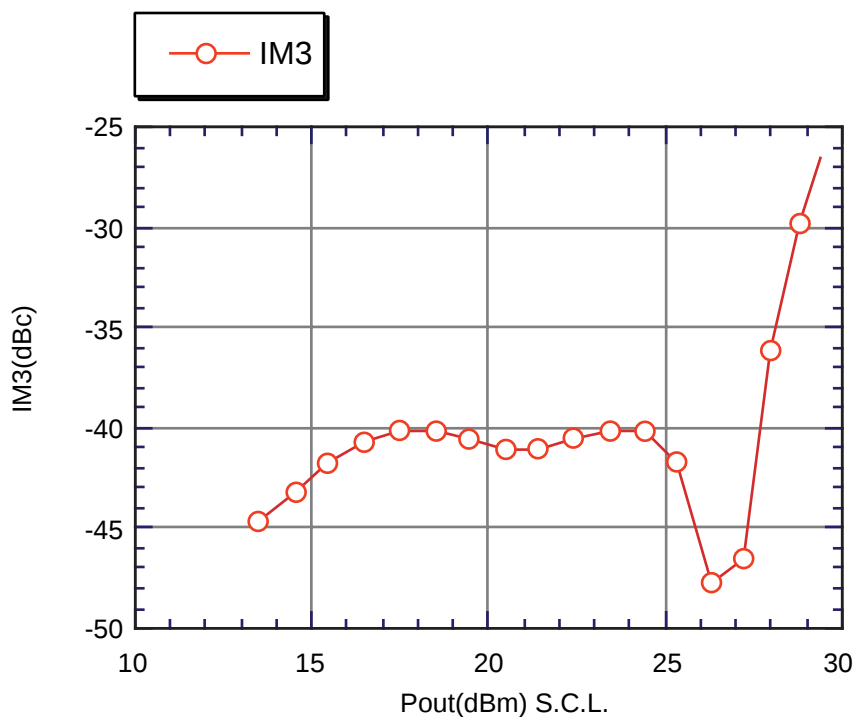
◆ **Electrical Specifications**

Test condition is ZS=ZL=50 Ω, Vd1,2=Vd3=10 V and Vg1,2=Vg3=-3.0 V

Case Temperature Tc=25 °C

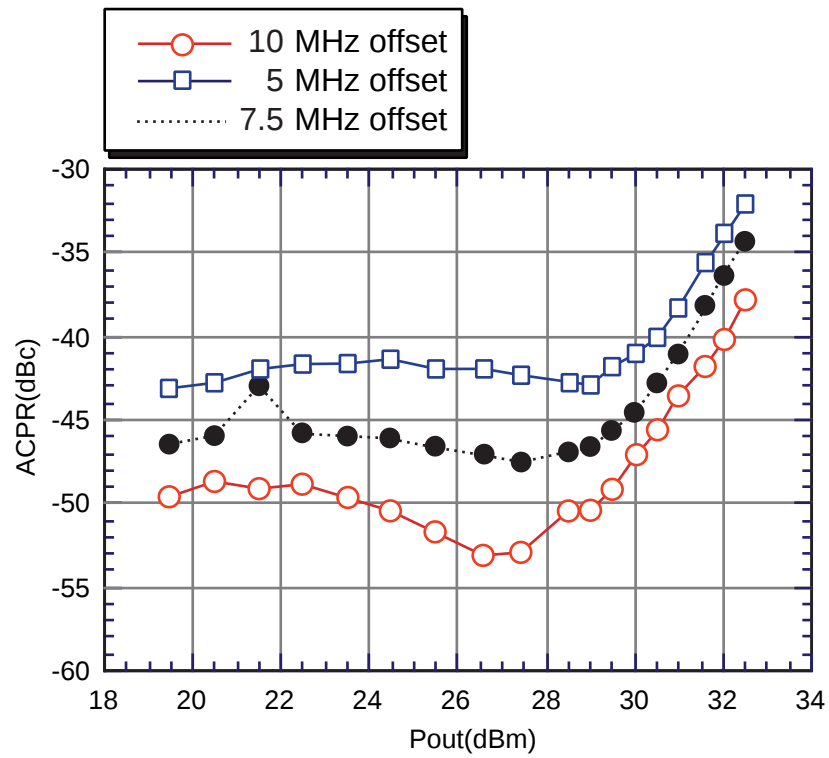
Parameter	Symbol	Test Conditions	Value			Units
			Min.	Typ.	Max.	
Frequency	f		2300	—	2330	MHz
Supply Current 1	Id1	Pout =30.0 dBm	—	550	650	mA
Supply Current 2	Id2	Pout =0.0 dBm	—	350	440	mA
Gate Current	Ig	Vd1,2,3 =10.0 V Vg1,2,3 =-3.0 V Pout =30.0 dBm	—	5	10	mA
Power Gain 1)	Ga		29	31.0	33.0	dB
Adjacent Channel Leakage Power Ratio 5 MHz offset 2)	ACPR 1		—	-35.0	-25.0	dBc
Adjacent Channel Leakage Power Ratio 7.5 MHz 2)	ACPR 2		—	-40.0	-31.0	dBc
Adjacent Channel Leakage Power Ratio 10 MHz 2)	ACPR 3		—	-45.0	-40.0	dBc
Input VSWR	ρ in		—	1.8	2.5	—

1) Tc=25°C 2) Korean W-CDMA Chiprate=8.192MHz, Single Carrier Level

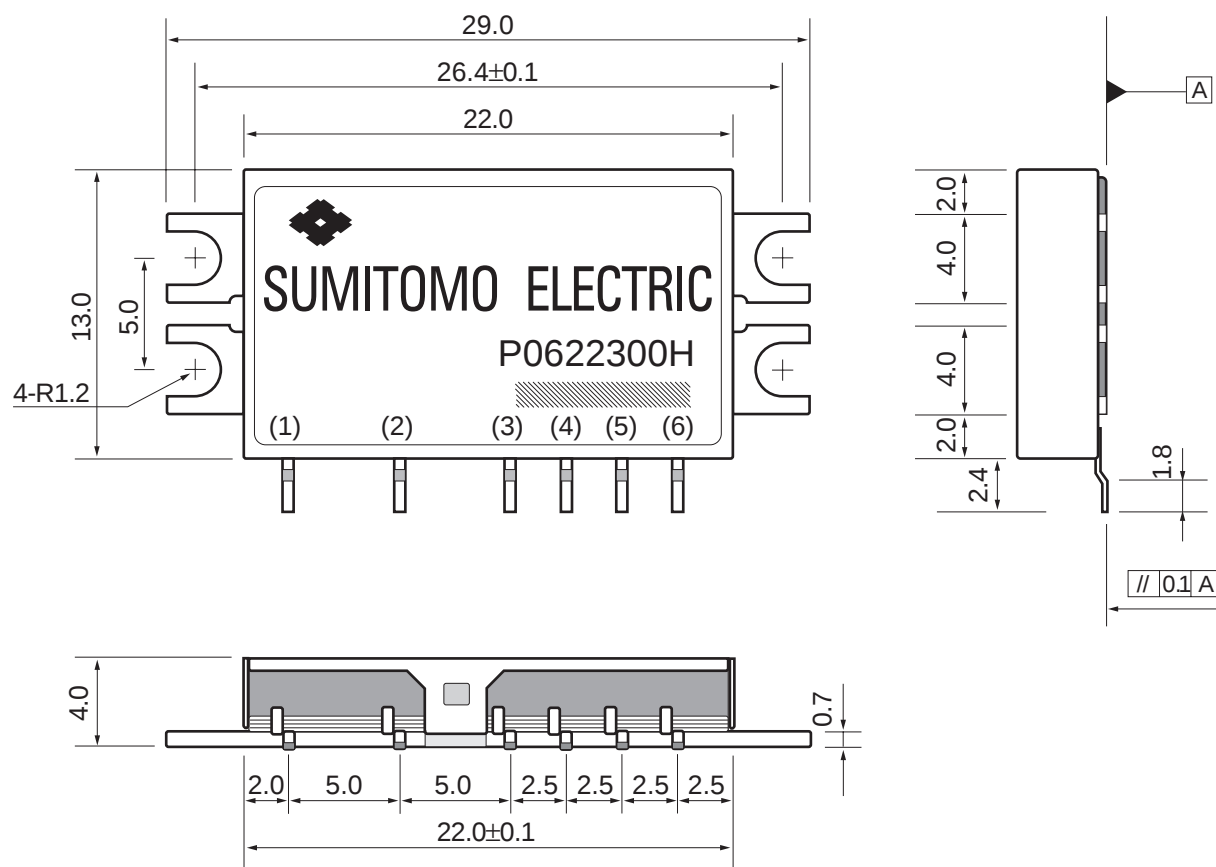
◆ **Power Characteristics** $f_1=2300\text{ MHz}$, $V_{d1,2}, V_{d3}=10.0\text{ V}$, $V_{g1,2}, V_{g3}=-3.0\text{ V}$ ◆ **Harmonic Distortion (2tone)** $f_1=2300\text{ MHz}$, $f_2=2301\text{ MHz}$, $V_{d1,2}, V_{d3}=10.0\text{ V}$, $V_{g1,2}, V_{g3}=-3.0\text{ V}$ 

◆ **Power Characteristics**

$f_1=2300$ MHz, $f_2=2301$ MHz, $V_{d1,2}, V_{d3}=10.0$ V, $V_{g1,2}, V_{g3}=-3.0$ V



◆ **Package Drawings (Dimensions are mm)**



Lead Size : 0.25×0.5

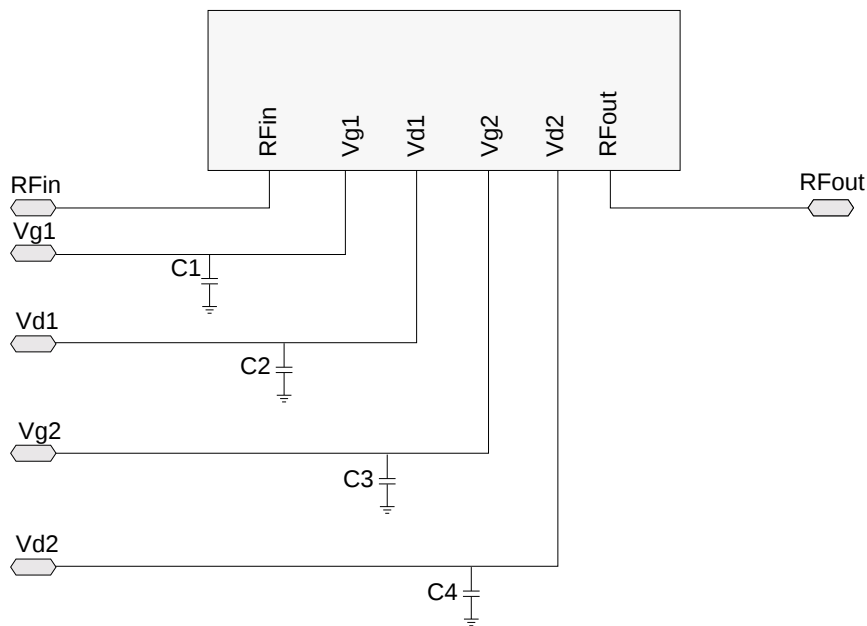
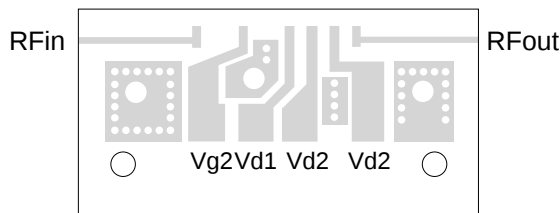
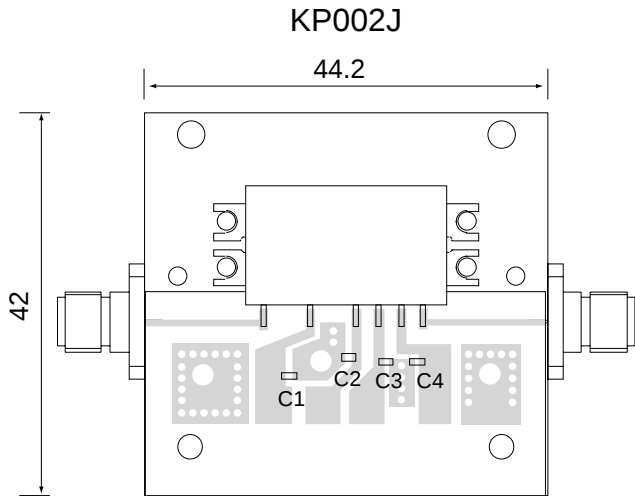
▨ : Lot No.

Dimensions are mm (±0.3mm)

◆ **Pin Assignment**

(1) RFin	(2) Vg1	(3) Vd1
(4) Vg2	(5) Vd2	(6) RFout
Case:GND		

◆ Evaluation Board Layout (Dimensions are mm)



DESIGNATION	VALUE
C1,C3	0.1 μ F
C2,C4	1.0 μ F