



SUMITOMO ELECTRIC INDUSTRIES, LTD.

Preliminary

00.05.11

P0621916H

1.9 GHz band

Power Amplifier Module

◆ **Features**

- 1.9 GHz frequency band
- Low power consumption 7 W typ.
- Excellent $IM3 \leq 40$ dBc@Pout=20dBm (S.C.L.)
- Typical 24 dB power gain
- Cost-effective metal package
- Low thermal resistance structure



◆ **Applications**

- For base station of PCS

◆ **Description**

The P0621916H is a power amplifier module for a base station of PCS, and is capable of typical 24 dB gain at 1.9 GHz band, housed in a cost effective metal package.

The P0621916H is designed to perform the total output of 23 dBm at $IM3 = -40$ dBc. It operates from +10 V and -3 V power supplies.

◆ **Absolute Maximum Ratings**

Case Temperature Tc=35 °C

Parameter	Symbol	Value	Units
DC Supply Voltage	Vd	11 *	V
	Vg	- 5	V
Input Power	Pin	7	dBm
Storage Temperature	Tstg	-40 to + 90	°C
Operating Case Temperature	Topt	-20 to + 75	°C
Supply Current	Id1	110	mA
	Id2	680	mA

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

*Vg1,2 = -3.0 V

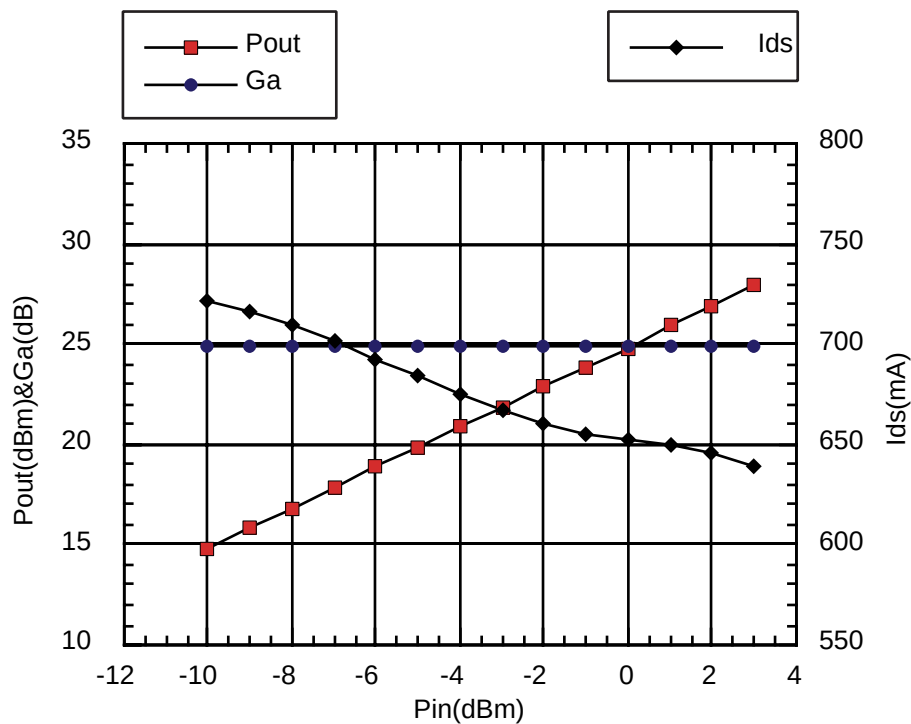
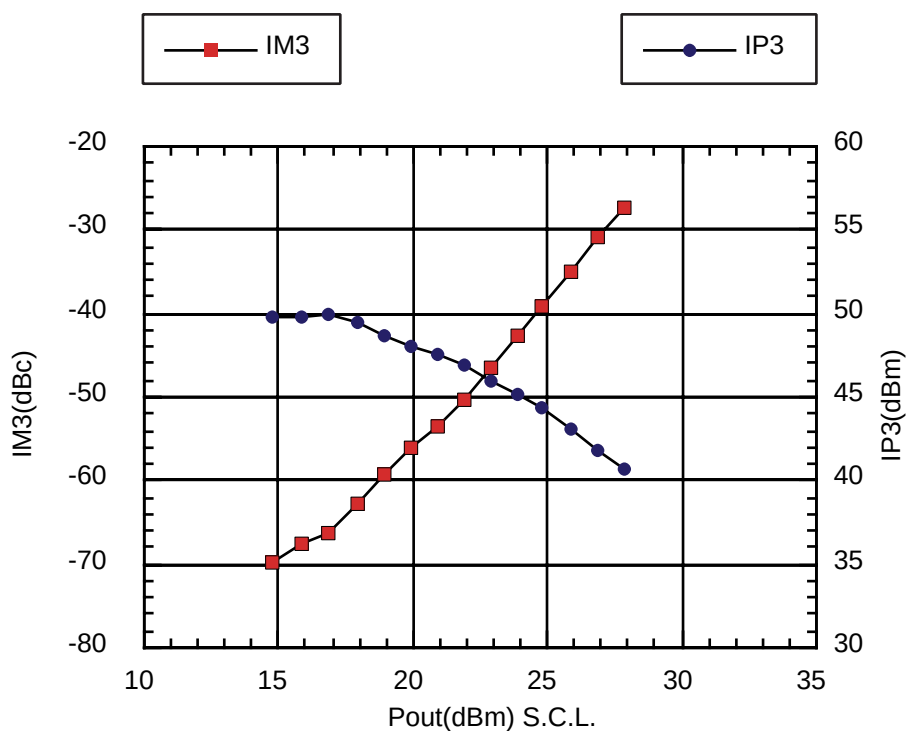
◆ **Electrical Specifications**

Case Temperature Tc=25 °C

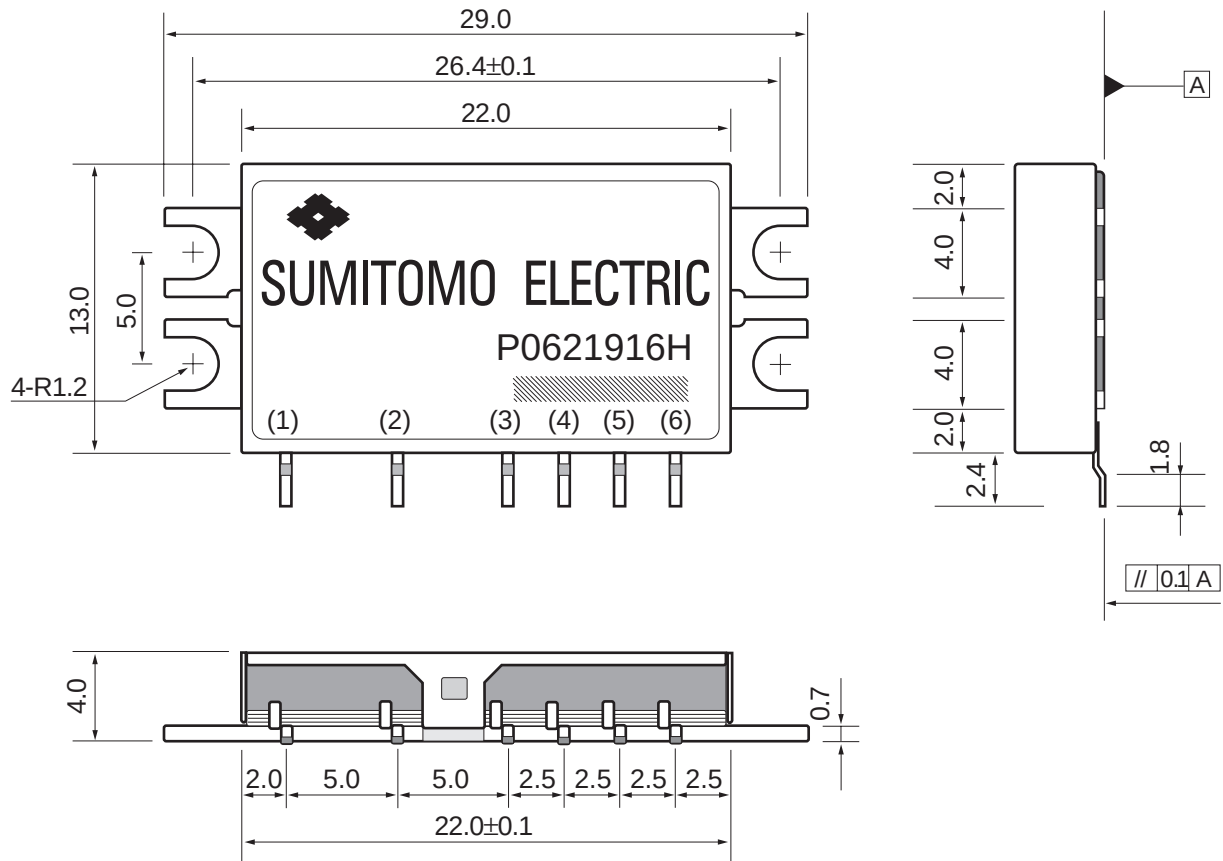
Parameter	Symbol	Test Conditions	Value			Units
			Min.	Typ.	Max.	
Frequency	f		1930	—	1990	MHz
Supply Current (under operation)	Id	Pout=20 dBm Vd=10 V Vg=-3 V	—	—	700	mA
Gate Current	Ig		—	—	7.0	mA
Power Gain	Ga		23	24	—	dB
Input VSWR	—		—	2.0	3.0	—
Harmonic Distortion	2f0		—	—	-30	dBc
	3f0		—	—	-40	dBc
Third Order Intermodulation Ratio	IM3	Pout=20 dBm* $\Delta f = 1 \text{ MHz}$	—	—	-40	dBc

*Single Carrier Level

◆ Power Characteristics

 $f=1960\text{MHz}, 1961\text{MHz}$, $V_d=10\text{V}$, $V_g=-3\text{V}$  $f=1960\text{MHz}, 1961\text{MHz}$, $V_d=10\text{V}$, $V_g=-3\text{V}$ 

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



Lead Size : 0.25×0.5

▨ : Lot No.
Dimensions are mm (±0.3mm)

◆ **Pin Assignment**

(1) RF _{in}	(2) V _{G1}	(3) V _{D1}
(4) V _{G2}	(5) V _{D2}	(6) RF _{out}
Case:GND		

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