



SUMITOMO ELECTRIC INDUSTRIES, LTD.

Preliminary

00.05.11

P0621965H

1.9 GHz band

Power Amplifier Module

◆ ***Features***

- 1.9 GHz frequency band
- Typical 27 dBm output power
- Power consumption 2.9 W typ.
- Excellent adjacent leakage power
- Typical 33 dB power gain
- Cost-effective metal package
- Low thermal resistance structure



◆ ***Applications***

- Power amplifier for Wide band CDMA vehicular terminals

◆ ***Description***

The P0621965H is a high performance 1.9 GHz band power amplifier module capable of 27 dBm output power with a typical 33 dB gain at 1.9 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.

It operates from +4.8 V and -2.5 V power supplies.

◆ **Absolute Maximum Ratings**Case Temperature $T_c=25\text{ }^{\circ}\text{C}$

Parameter	Symbol	Value	Units
DC Supply Voltage	Vd1,2, Vd3	6 *	V
	Vd1,2, Vd3	- 4	V
Input Power	Pin	0	dBm
Storage Temperature	Tstg	-40 to + 90	$^{\circ}\text{C}$
Operating Case Temperature	Topt	-20 to + 75	$^{\circ}\text{C}$

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

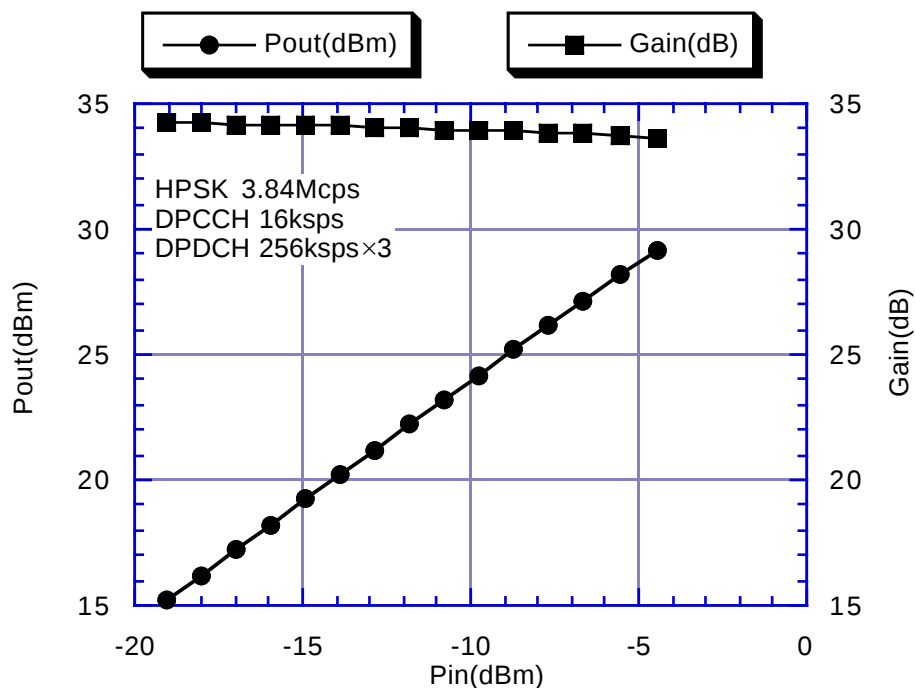
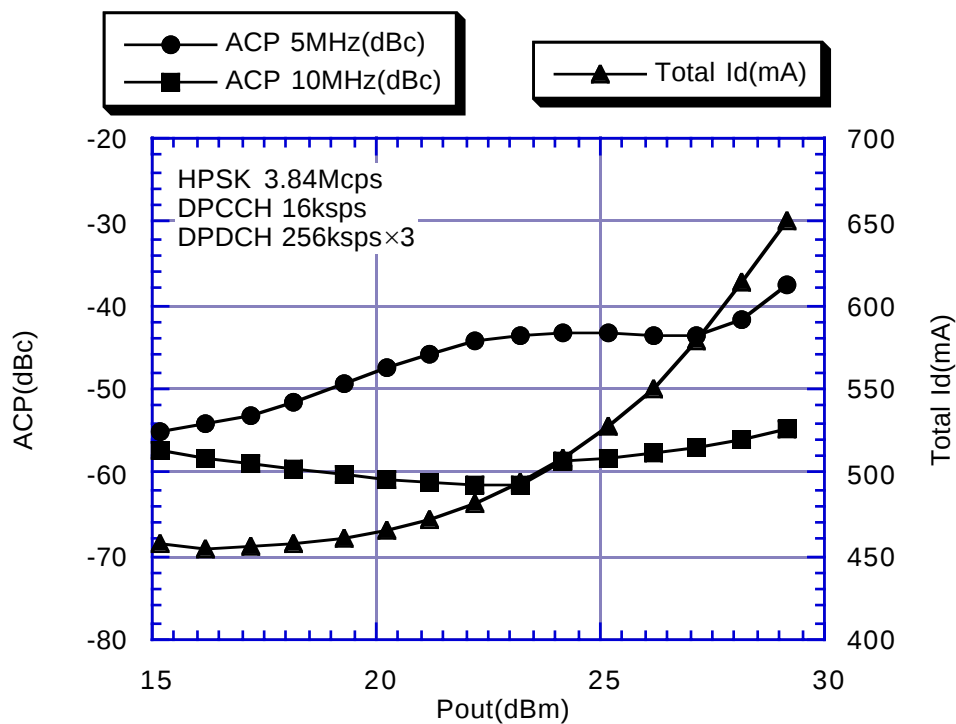
*Vg1,2, Vg3=-2.5 V

◆ **Electrical Specifications**Test condition is $Z_S=Z_L=50\text{ }\Omega$, Vd1,2=Vd3=4.8 V and Vg1,2=Vg3=-2.5 VCase Temperature $T_c=25\text{ }^{\circ}\text{C}$

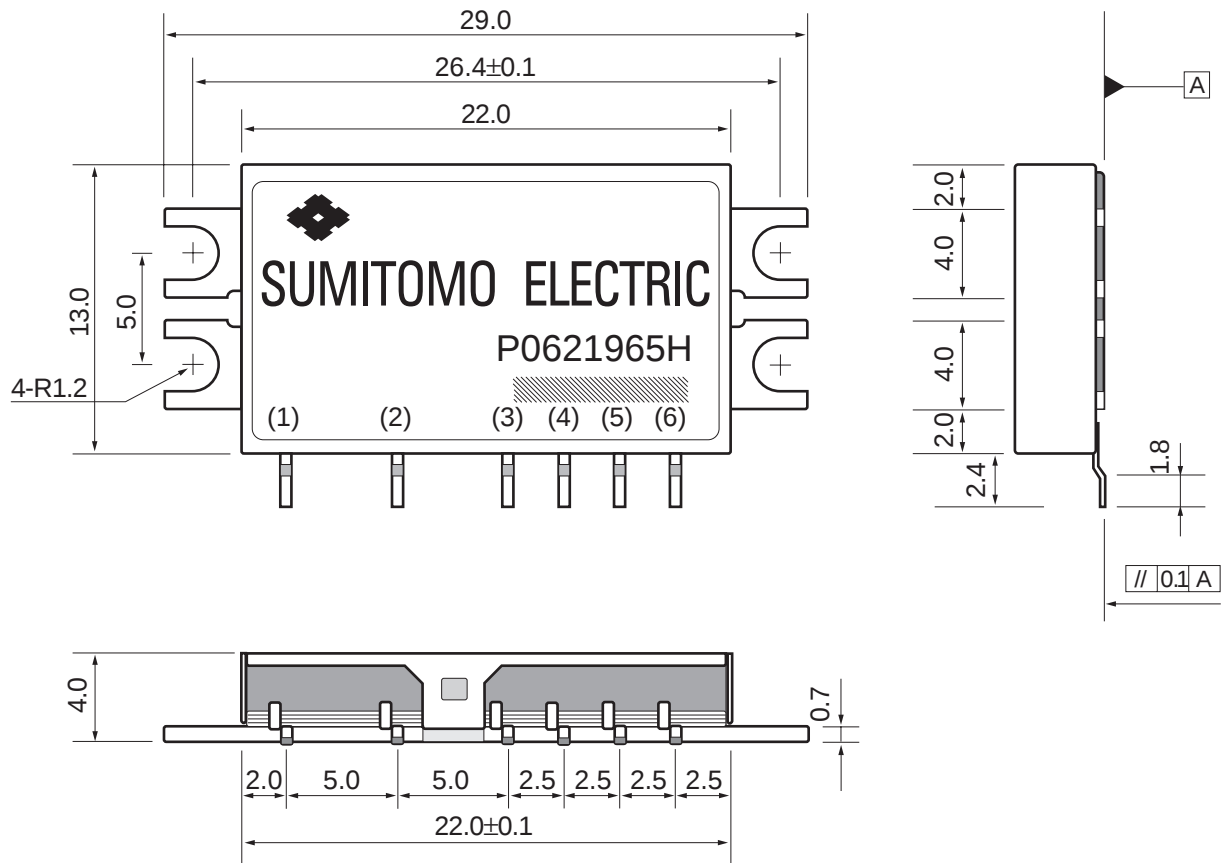
Parameter	Symbol	Test Conditions	Value			Units
			Min.	Typ.	Max.	
Frequency	f		1920	—	1980	MHz
Supply Current	Id	Pout =27 dBm	—	600	700	mA
Gate Current	Ig	Vd1,2,3 =4.8 V Vg1,2,3 =-2.5 V Pout =27 dBm	—	—	7	mA
Power Gain	Ga		30	33	—	dB
Adjacent Channel Leakage Power Ratio 5 MHz offset ¹⁾	ACPR 1		—	-40	-35	dBc
Adjacent Channel Leakage Power Ratio 10 MHz offset ¹⁾	ACPR 2		—	-53	-50	dBc
Input VSWR	ρ_{in}		—	1.8	3.0	—

 $T_c=25^{\circ}\text{C}$

1) W-CDMA HPSK Chiprate=3.84 Mcps, 3 channels Multiplex

◆ **Power Characteristics** $f_1=1950\text{ MHz}$, $V_{d1,2}, V_{d3}=4.8\text{ V}$, $V_{g1,2}, V_{g3}=-2.5\text{ V}$ ◆ **Adjacent Channel Leakage Power** $f_1=1950\text{ MHz}$, $V_{d1,2}, V_{d3}=4.8\text{ V}$, $V_{g1,2}, V_{g3}=-2.5\text{ V}$ 

◆ **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)

