



SUMITOMO ELECTRIC INDUSTRIES, LTD.

Advance

00.05.09

P0400810H

800 MHz band

Power Amplifier Module

◆ **Features**

- 820 - 830 MHz frequency band
- Typical 36.0 dBm around saturation power operation for single carrier application
- Low power consumption of typical 9.9W
- Typical 24 dB power gain
- Power supplies of 9 V and -4 V
- Cost-effective metal package
- Low thermal resistance structure



◆ **Applications**

- Power Amplifier for use in AMPS booster or base station

◆ **Description**

The P0400810H is a power amplifier module capable of 36dBm output power with a typical 24 dB gain at an 800 MHz band, housed in a cost effective metal package. This power amplifier can operate around the saturation power with low power consumption of typical 9.9 W.

The P0400810H is designed to achieve the 2nd and 3rd harmonic distortion of less than -30 dBc at the output power of 36 dBm for use in the AMPS booster or base station system for the single carrier application. It operates with 9 V and -4 V power supplies.

◆ **Absolute Maximum Ratings**

Case Temperature Tc=25 °C

Parameter	Symbol	Value	Units
DC Supply Voltage	Vd	10 *	V
	Vg	- 6	V
Input Power	Pin	10	dBm
Storage Temperature	Tstg	-40 to + 85	°C
Operating Case Temperature	Topt	-20 to + 80	°C

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

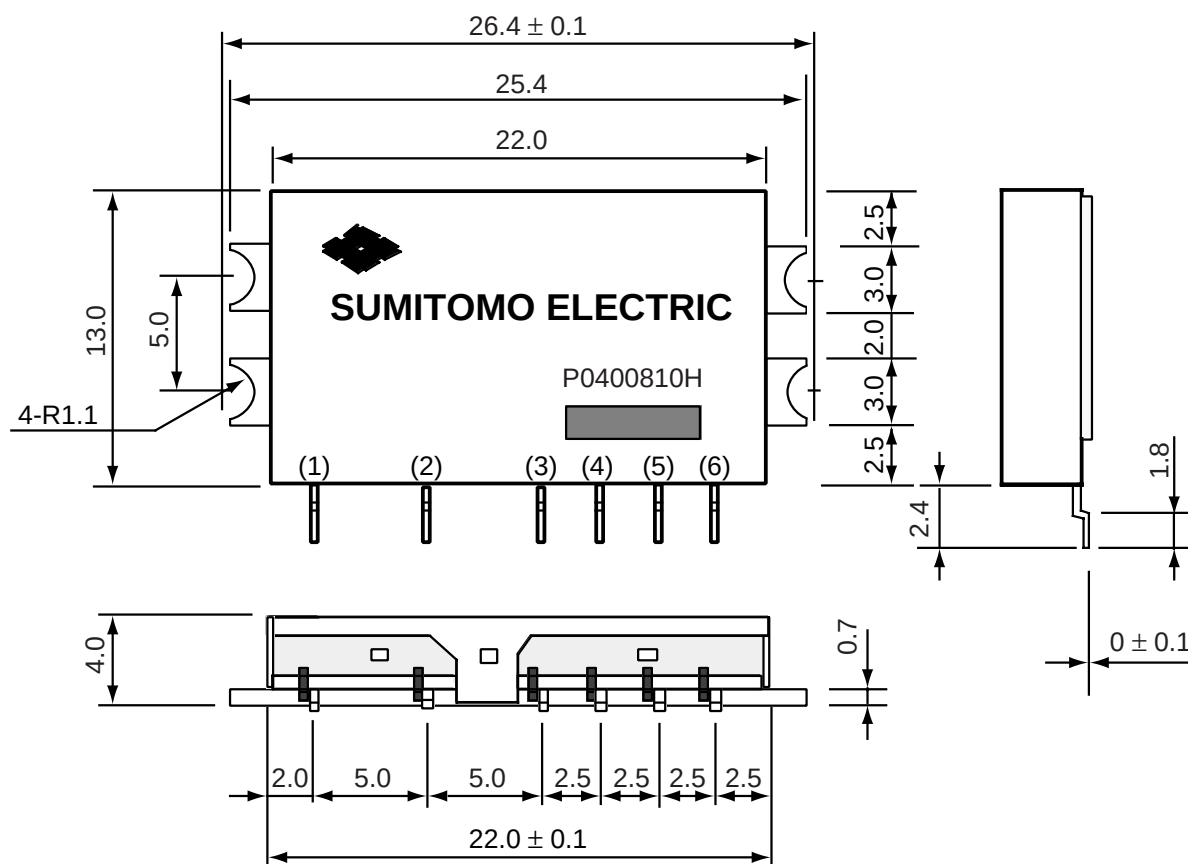
*Vg=-4 V

◆ **Electrical Specifications**

Case Temperature Tc=25 °C

Parameter	Symbol	Test Conditions	Value			Units
			Min.	Typ.	Max.	
Frequency	f		820	—	830	MHz
Supply Current (under operation)	Id	Pout= 36 dBm Vd=-9.0 V Vg=-4.0 V	—	1100	1200	mA
Gate Current	Ig		—	—	4	mA
Power Gain	Ga		22	24	26	dB
Input VSWR	—		—	—	3.1	—
Harmonic Distortion	2f0		—	—	-30	dBc
	3f0		—	—	-40	dBc

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



Nominal Variation of Lead Pitch : ± 0.3

Nominal Variation of parts undescribed : ± 0.3

Lead Size : 0.25×0.5

Lot Number

◆ **Pin Assignment**

(1) RFin

(2) Vg1

(3) Vd1

(4) Vg2

(5) Vd2

(6) RFout

Case: GND

◆ Evaluation Board Layout (Dimensions are mm)

