



SUMITOMO ELECTRIC INDUSTRIES, LTD.

Preliminary

00.05.10

P0400871H

800MHz band

Power Amplifier Module

◆ **Features**

- 887 - 958 MHz frequency band
- Typical P1dB of 32 dBm
- Excellent IM3 of -70 dBc at 8 dBm output with low power consumption of 5.9 W
- Typical 28 dB power gain
- Power supplies of 9 V and -3 V
- Cost-effective metal package



◆ **Applications**

- Power Amplifier for use in PDC up-link booster system

◆ **Description**

The P0400871H is a power amplifier module which achieves an excellent IM3 of -62 dBc at the output power of 8 dBm (S.C.L.) with a typical 28 dB gain at an 800MHz band, housed in a cost effective metal package. This power amplifier for smaller zone size of the PDC booster or base station systems is required a low 3rd order distortion because of amplifying several carriers at the same time. The P0400871H is designed to achieve the total output power of 11 dBm at IM3 of -70 dBc with a low power consumption of 5.9 W. It operates with 9 V and -3 V power supplies.

◆ **Absolute Maximum Ratings**

Case Temperature Tc=35 °C

Parameter	Symbol	Value	Units
DC Supply Voltage	Vd	10 *	V
	Vg	- 8	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

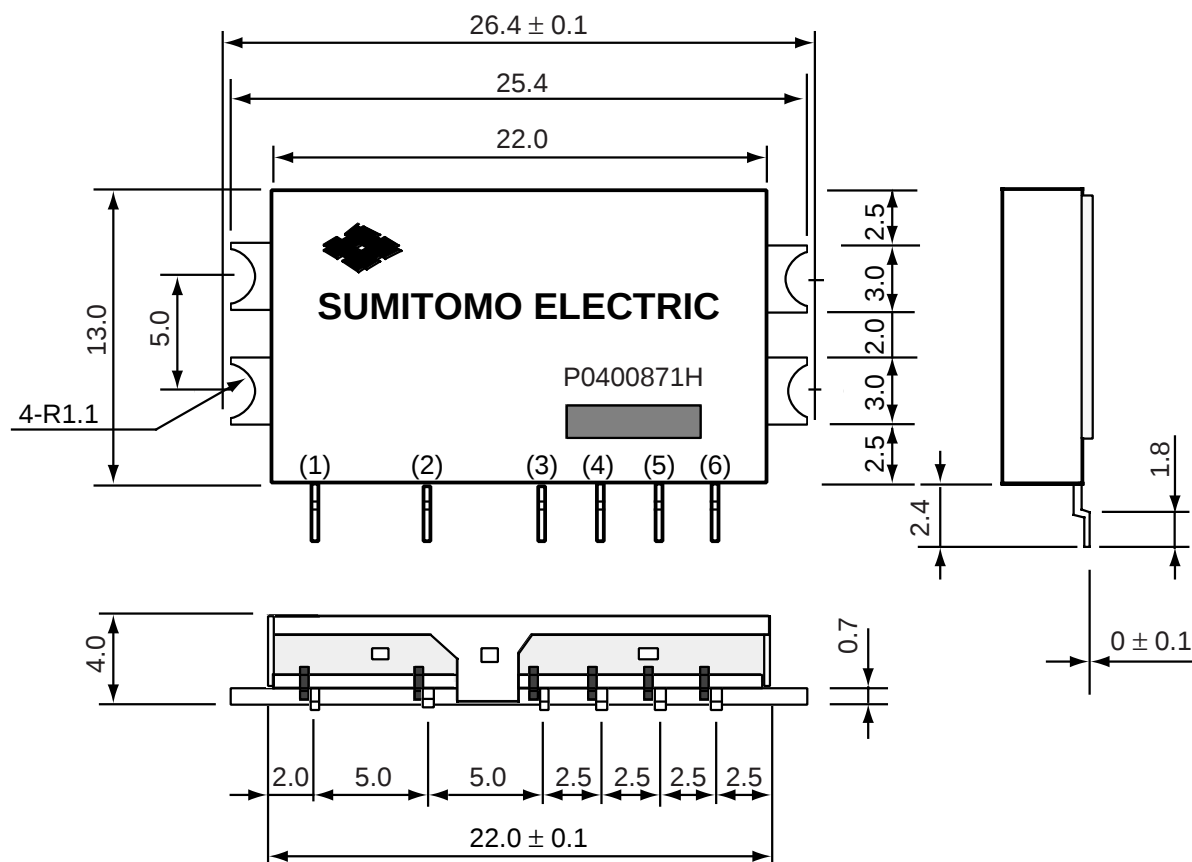
◆ **Electrical Specifications**

Case Temperature Tc=35 °C

Parameter	Symbol	Test Conditions	Value			Units
			Min.	Typ.	Max.	
Frequency	f		887	—	957	MHz
Supply Current (under operation)	Id	Pout=11 dBm Vd1=Vd2==9 V Vg1=Vg2=-4 V	—	650	700	mA
Gate Current	Ig		—	—	4	mA
Power Gain	Ga		27	28	—	dB
Input VSWR	—		—	—	3 : 1	—
Harmonic Distortion	2f0		—	—	-30	dBc
	3f0		—	—	-40	dBc
Third Order Intermodulation Ratio	IM3	Pout=7 dBm* Δf = 1 MHz	—	—	-70	dBc

* Single Carrier Level

◆ **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)

