Preliminary

SUMITOMO ELECTRIC INDUSTRIES, LTD.

00.05.09

P0400811H

800MHz band

Power Amplifier Module

♦ *Features*

- 810 - 885 MHz frequency band
- Typical P1dB of 35 dBm
- Excellent IM3 of -62 dBc at 14 dBm output with low power consumption of 10.2 W
- Typical 28 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 PDC booster or base station

♦ *Description*

The P0400811H is a power amplifier module which achieves an excellent IM3 of -62 dBc at the output power of 14 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 P0400811H is designed to perform the total output power of 17 dBm at IM3 of -62 dBc with a low power consumption of 10.2 W. 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

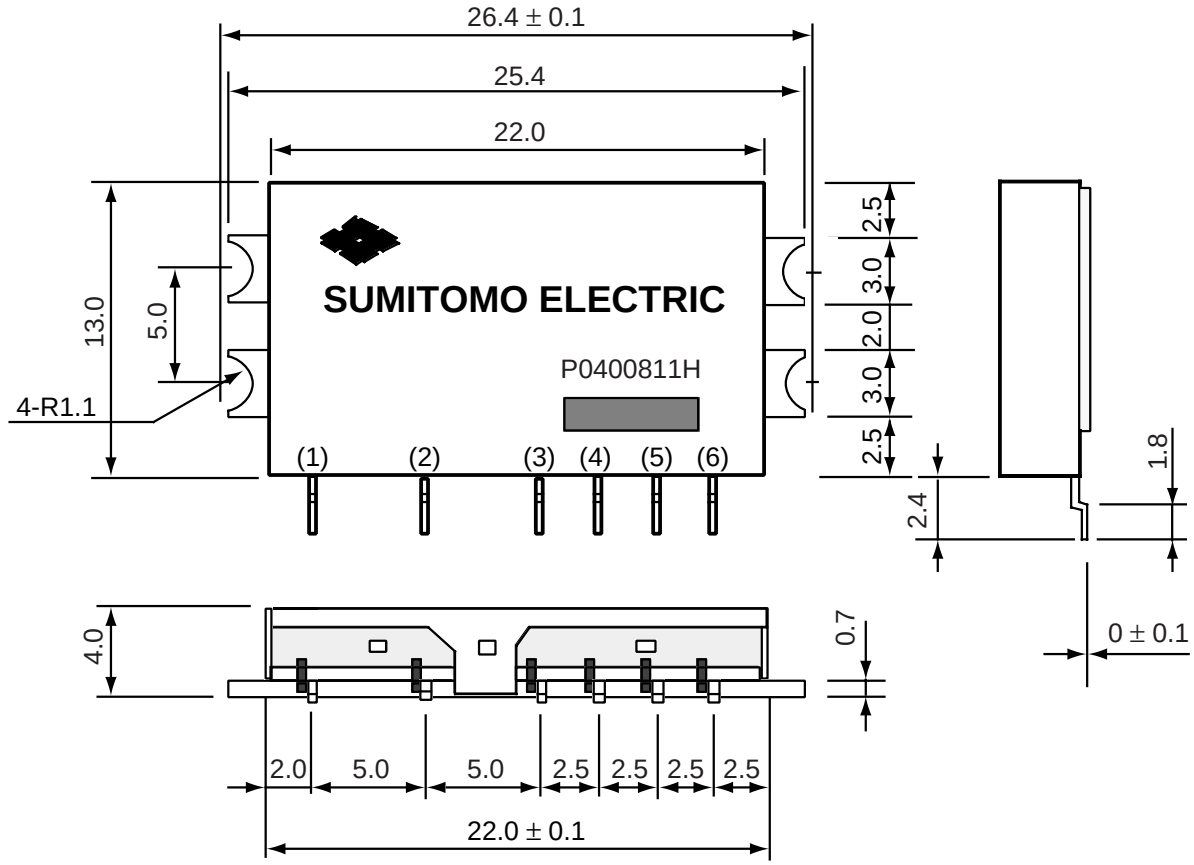
♦ *Electrical Specifications*

Case Temperature Tc=25 °C

Parameter	Symbol	Test Conditions	Value			Units
			Min.	Typ.	Max.	
Frequency	f		810	—	885	MHz
Supply Current (under operation)	Id	Pout= 17 dBm Vd=9 V Vg=-4 V	—	1200	1300	mA
Gate Current	Ig		—	—	4	mA
Power Gain	Ga		26.5	28	—	dB
Input VSWR	—		—	—	3.0	—
Harmonic Distortion	2f0		—	—	-30	dBc
	3f0		—	—	-40	dBc
Third Order Intermodulation Ratio	I_{M3}	Pout= 14 dBm* Δf = 1 MHz	—	—	-62	dBc

* Single Carrier Level

♦ *Package Drawing (Dimensions are mm)*



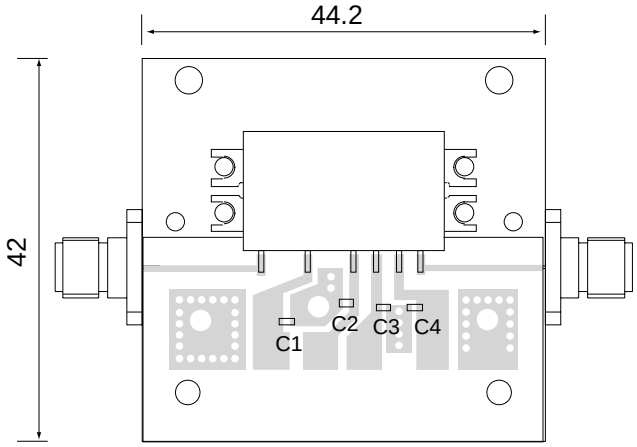
Nominal Variation of Lead Pitch : ± 0.3
Nominal Variation of parts undescribed : ± 0.3
Lead Size : 0.25 × 0.5
: Lot Number

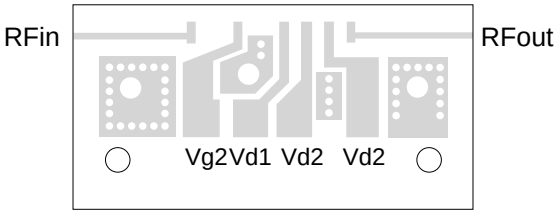
♦ *Pin Assignment*

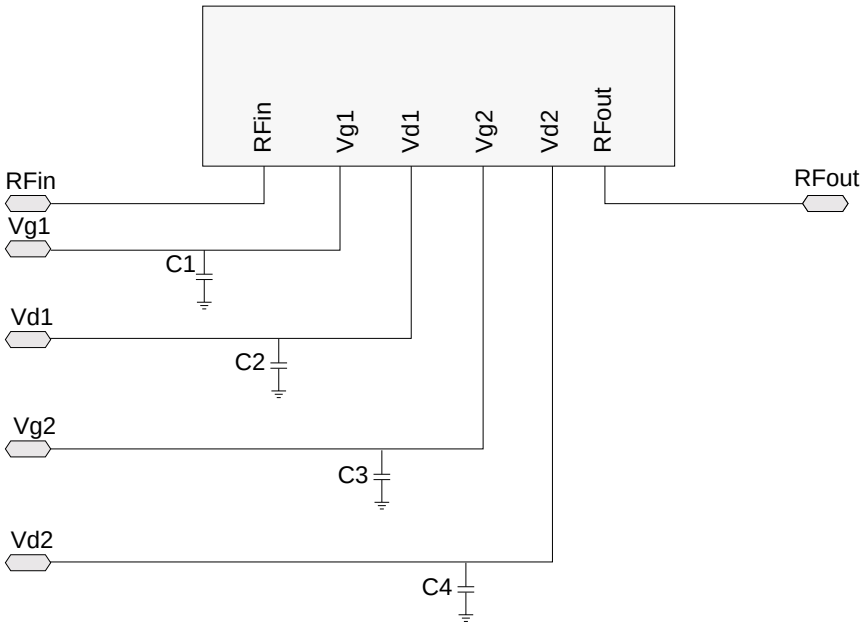
(1) R in	(2) Vg1	(3) Vd1	
(4) Vg2	(5) Vd2	(6) RFout	Case: GND

♦ *Evaluation Board Layout (Dimensions are mm)*

KP002J







DESIGNATION	VALUE
C1,C3	0.1µF
C2,C4	1.0µF