



SUMITOMO ELECTRIC INDUSTRIES, LTD.

Advance

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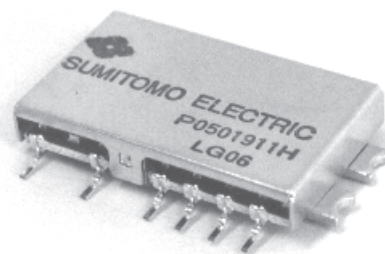
P0300300H

300 MHz band

Power Amplifier Module

◆ **Features**

- 300 MHz frequency band
- Typical 31.0 dBm output power
- Low power consumption 6.24 W typ.
- Typical 30 dB power gain
- Cost-effective metal package
- Low thermal resistance structure



◆ **Applications**

- Power Amplifier for smaller zone size of 300 MHz band land mobile telecommunication systems

◆ **Description**

The P0300300H is a power amplifier module capable of 31 dBm output power with a typical 30 dB gain at a 300 MHz band, housed in a cost effective metal package. This power amplifier for driver amplifier in mobile telecommunication systems is required a low 3rd order distortion because of amplifying several carriers at the same time. The P0300300H is designed to perform the output power of 17 dBm at IM3 = -50 dBc. It operates with +10 V and -4 V power supplies.

◆ **Absolute Maximum Ratings**

Case Temperature Tc=30 °C

Parameter	Symbol	Value	Units
DC Supply Voltage	Vd	12 *	V
	Vg	- 5	V
Input Power	Pin	6	dBm
Storage Temperature	Tstg	-40 to + 90	°C
Operating Case Temperature	Topt	-20 to + 75	°C

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

*Vg=-3V

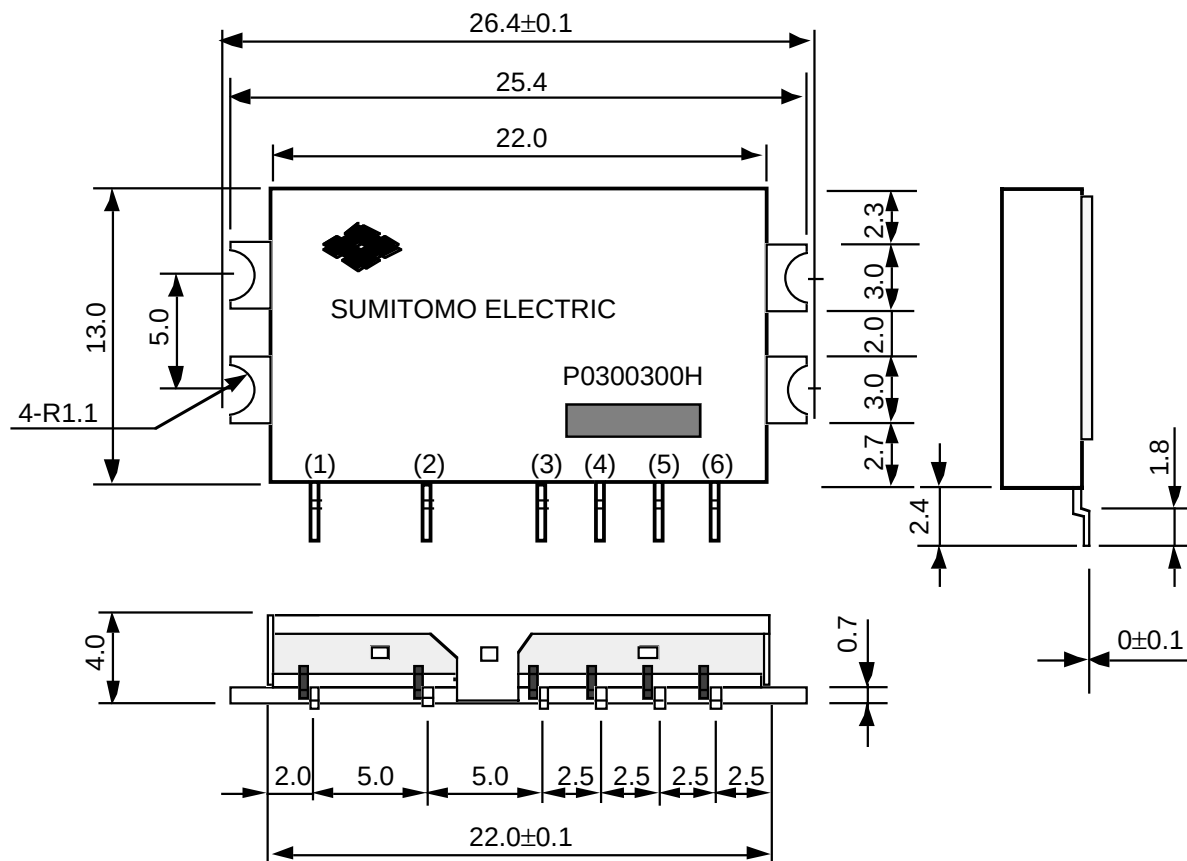
◆ **Electrical Specifications**

Case Temperature Tc=30 °C

Parameter	Symbol	Test Conditions	Value			Units
			Min.	Typ.	Max.	
Frequency	f		360	—	380	MHz
Supply Current (under operation)	Id	Pout= 20 dBm Vd=10 V Vg=-3 V	—	650	700	mA
Gate Current	Ig		—	—	10	mA
Power Gain	Ga		27	30	—	dB
Input VSWR	—		—	1.6	3.0	—
Harmonic Distortion	2f0		—	—	-50	dBc
	3f0		—	-50	-55	dBc
Third Order Intermodulation Ratio	IM3	Pout= 17 dBm* OF = 1 MHz	—	—	-50	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 : $\pm 0.25 \times 0.5$

 : Lot Number

◆ **Pin Assignment**

(1) RFin

(2) Vg1

(3) Vd1

(4) Vg2

(5) Vd2

(6) RFout

Case: GND

◆ Evaluation Board Layout (Dimensions are mm)

