



SUMITOMO ELECTRIC INDUSTRIES, LTD.

01.02.13

P0602110H

2.1 GHz band

Power Amplifier Module

◆ **Features**

- Low voltage operation of 4.8 V with negative voltage of -4 V
- 2110 - 2170 MHz frequency band
- Typical P1dB of 26 dBm
- Excellent adjacent channel leakage power of -50 dBc (5 MHz offset) at 16 dBm output with low power consumption of typical 2.0 W
- Typical 35 dB power gain
- Cost-effective metal package
- Low thermal resistance structure



◆ **Applications**

- Power Amplifier for use in driver stage of W-CDMA base station systems

◆ **Description**

The P0602110H is a power amplifier module which achieves an excellent adjacent leakage power at the output power of 26 dBm at an 2100MHz band, housed in a cost effective metal package. It features a low voltage operation of 4.8 V. This power amplifier can be used for a driver stage of the W-CDMA base station systems. The P0602110H is designed to achieve the output power of 16 dBm with the adjacent channel leakage power (ACPR) of -50 dBc at 5 MHz offset, and with the ACPR of -56 dBc at 10 MHz offset, dissipating as low as typical 2.0 W. It operates with 4.8 V and -4 V power supplies.

◆ **Absolute Maximum Ratings**Case Temperature T_c=35 °C

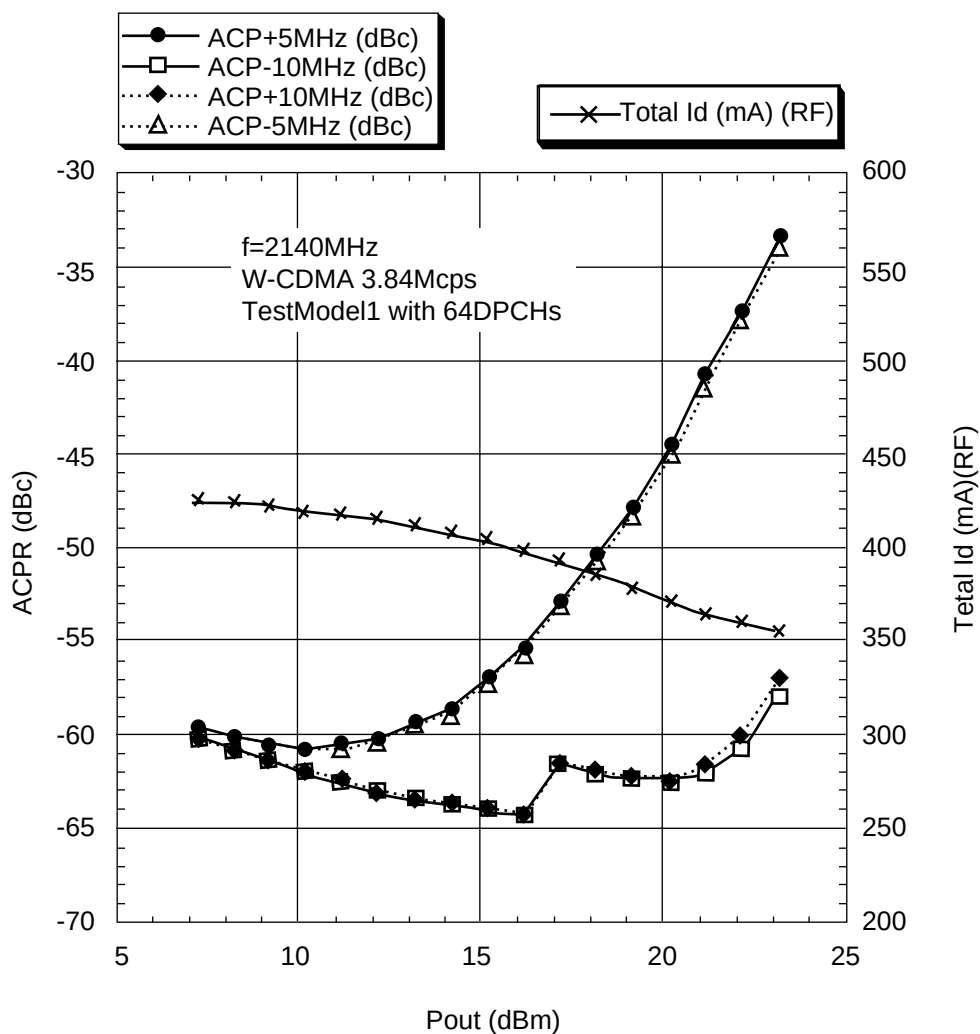
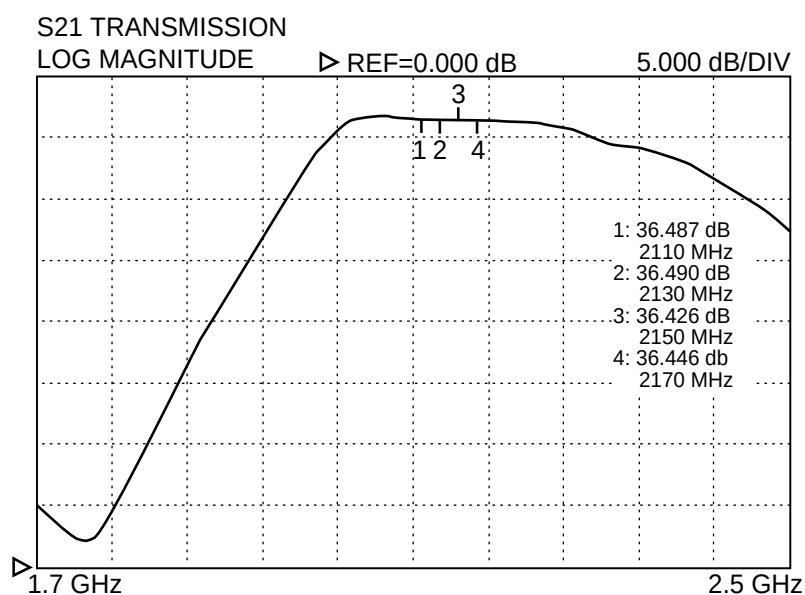
Parameter	Symbol	Value	Units
DC Supply Voltage	V _d	6 *	V
	V _g	-6	V
Input Power	P _{in}	0	dBm
Storage Temperature	T _{stg}	-20 to + 90	°C
Operating Case Temperature	T _{opt}	-20 to + 85	°C

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

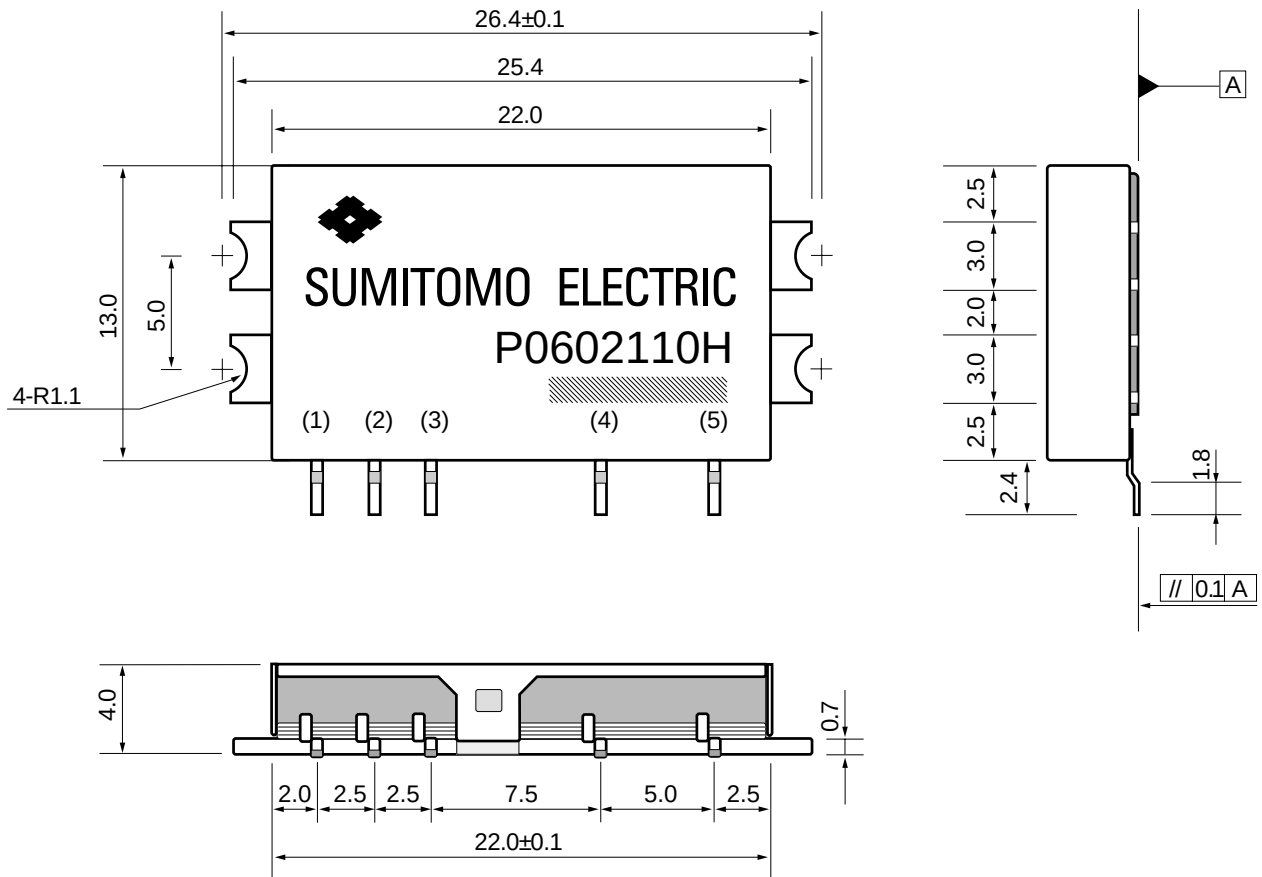
*V_g=-4 V◆ **Electrical Specifications**Case Temperature T_c=35 °C

Parameter	Symbol	Test Conditions	Value			Units
			Min.	Typ.	Max.	
Frequency	f		2110	—	2170	MHz
Supply Current (under operation)	I _d	P _{out} =16 dBm V _{d1} =V _{d2} =4.8 V V _{g1} =-4 V	—	400	450	mA
Gate Current	I _g		—	2.5	3	mA
Power Gain	G _a		30	35	—	dB
Input VSWR	—		—	1.5	2.5	—
Adjacent Channel Leakage Power Ratio*	ACPR1	5MHz offset	—	-52	-50	dBc
	ACPR2	10MHz offset	—	-60	-56	dBc

*W-CDMA Test Model 1 with 64 DPCHs

◆ **Adjacent Channel Leakage Power**◆ **Small Signal Gain**

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



Lead Size : 0.25×0.5

▨ : Lot No.

Dimensions are mm (± 0.3 mm)

◆ **Pin Assignment**

(1) RFin

(2) Vg1

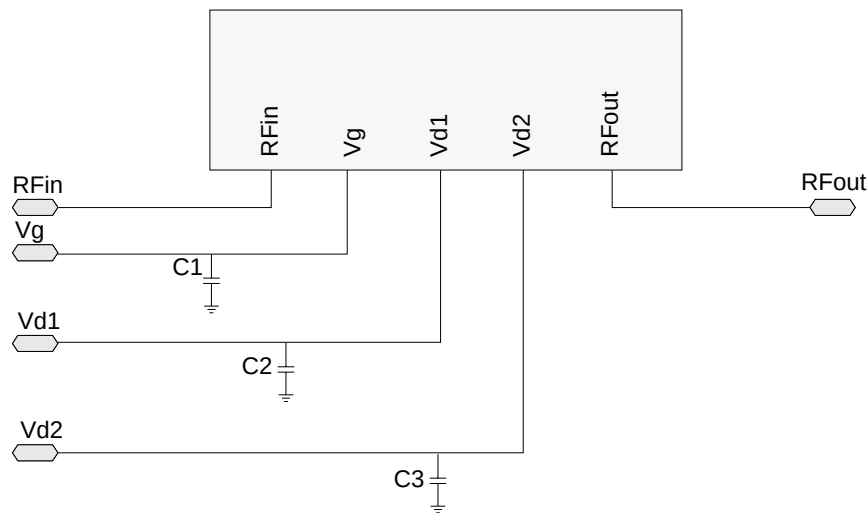
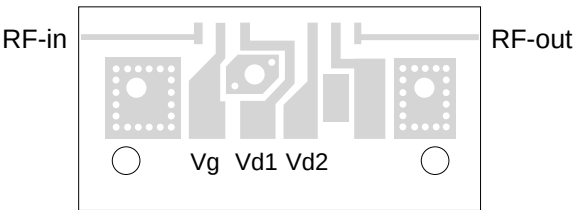
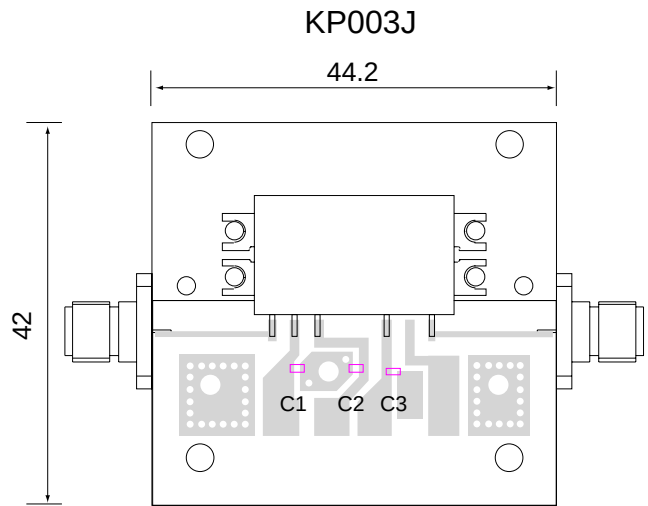
(3) Vd1

(4) Vd2

(5) RFout

Case: GND

◆ Evaluation Board Layout (Dimensions are mm)



DESIGNATION	VALUE
C1	0.1 μ F
C2,C3	1.0 μ F