



SUMITOMO ELECTRIC INDUSTRIES, LTD.

Preliminary

00.09.12

P0622142H

2.1 GHz band

Power Amplifier Module

◆ **Features**

- 2.1 GHz frequency band
- Typical 37 dBm output power
- Low power consumption 17 W typ.
- Excellent ACPR < -50 dBc@ $P_{out}=27$ dBm (Ave.Power)
- Typical 31 dB power gain
- Low gain deviation
- Cost-effective metal package
- Low thermal resistance structure



◆ **Applications**

- For base station of wide band CDMA

◆ **Description**

The P0622142H is a power amplifier module for a base station of wideband CDMA Communication system, and is capable of 37 dBm output power with typical 31 dB gain at 2.1 GHz band, housed in a cost effective metal package. This device features a low power consumption owing to the excellent linearity and high gain of the pulse-doped GaAs MESFET developed by SEI, dissipating 1.7 A.

◆ **Absolute Maximum Ratings**

Case Temperature Tc=35 °C

Parameter	Symbol	Value	Units
DC Supply Voltage	Vd12,Vd3	11 *	V
	Vg12,Vg3	- 4	V
Input Power	Pin	13	dBm
Storage Temperature	Tstg	-20 to + 85	°C
Operating Case Temperature	Topt	-20 to + 75	°C
Supply Current	Id12	600	mA
	Id3	2000	mA

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

*Vg1,Vg2=-3.0 V

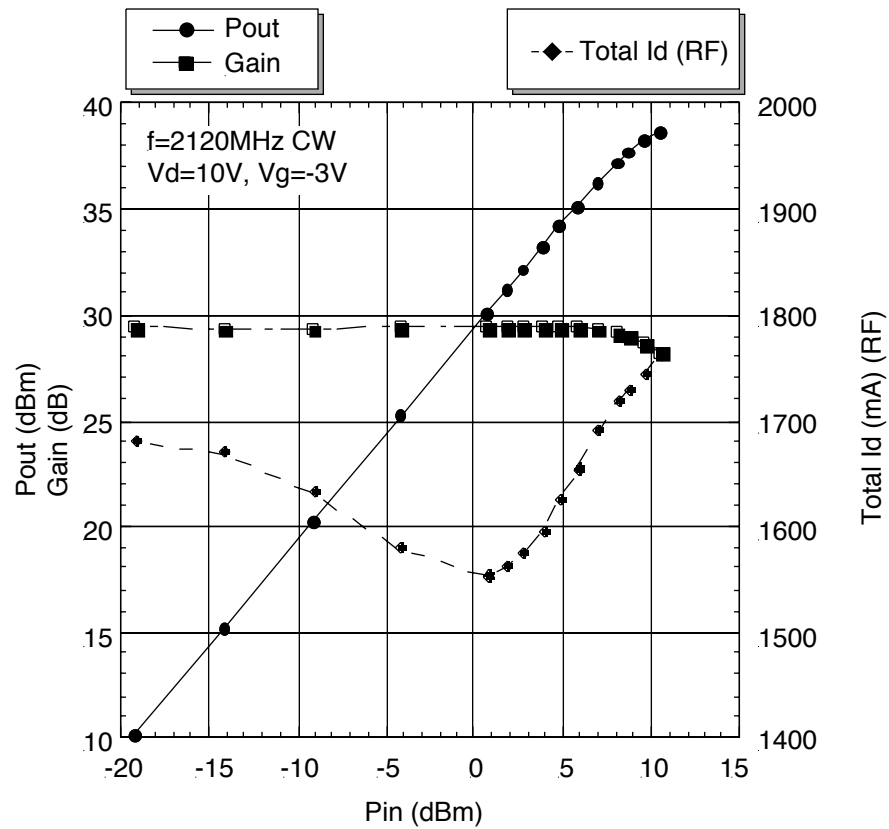
◆ **Electrical Specifications**

Case Temperature Tc=35 °C

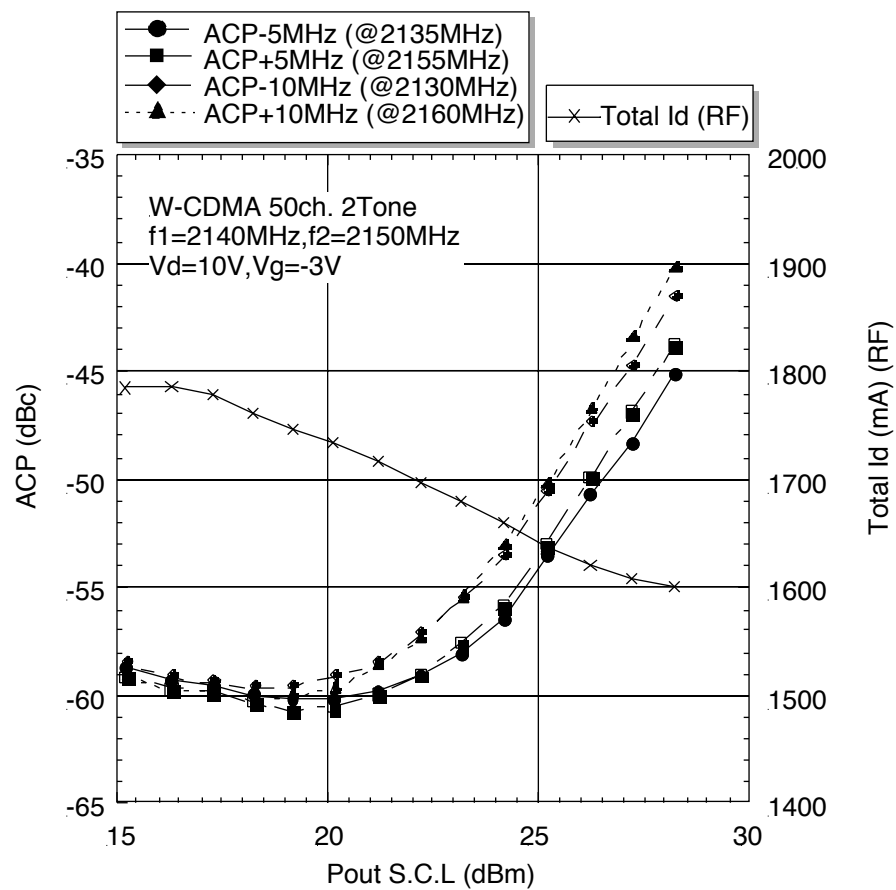
Parameter	Symbol	Test Conditions	Value			Units
			Min.	Typ.	Max.	
Frequency	f		2070	—	2190	MHz
Supply Current (under operation)	Id	Pout=24 dBm Vd=10 V Vg=-3.0 V	—	—	2000	mA
Gate Current	Ig		—	—	15	mA
Power Gain	Ga		29	31	—	dB
Input VSWR	—		—	2.0	3.0	—
Adjacent Channel Leakage Power Ratio 5MHz offset	ACPR1	Pout=24 dBm* Δf=10 MHz 2Tone Test	—	-55	-50	dBc
Adjacent Channel Leakage Power Ratio 10MHz offset	ACPR2		—	-52	-50	dBc

*W-CDMA DPCCH +50 DPDCHs
Single Carrier Level

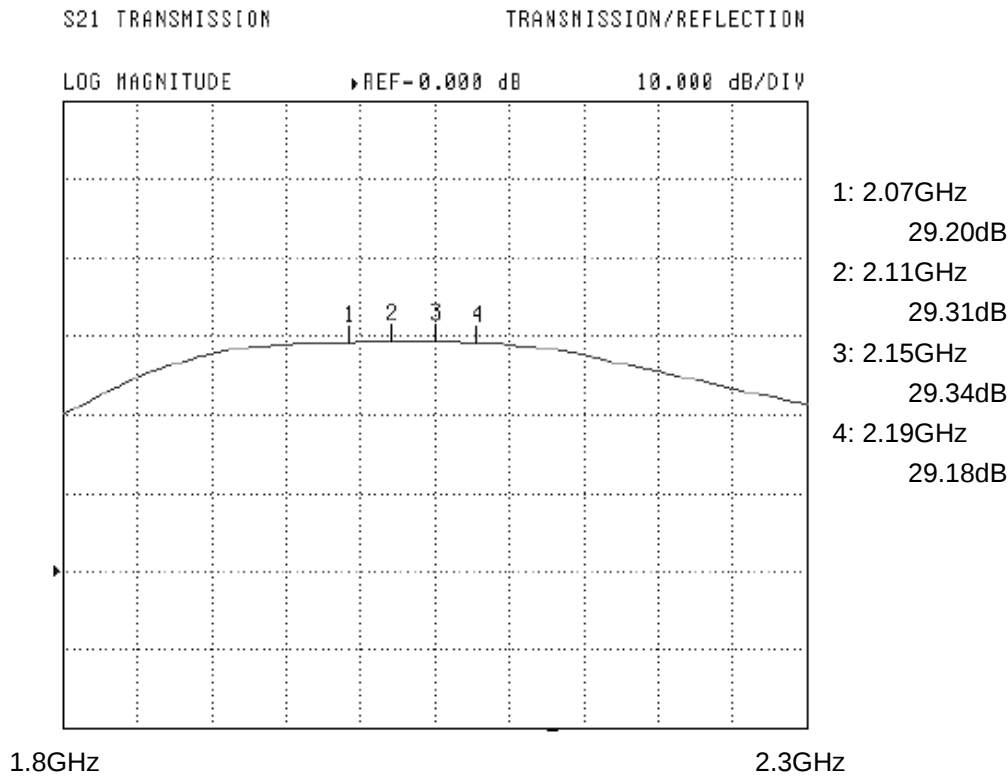
◆ Power Characteristics



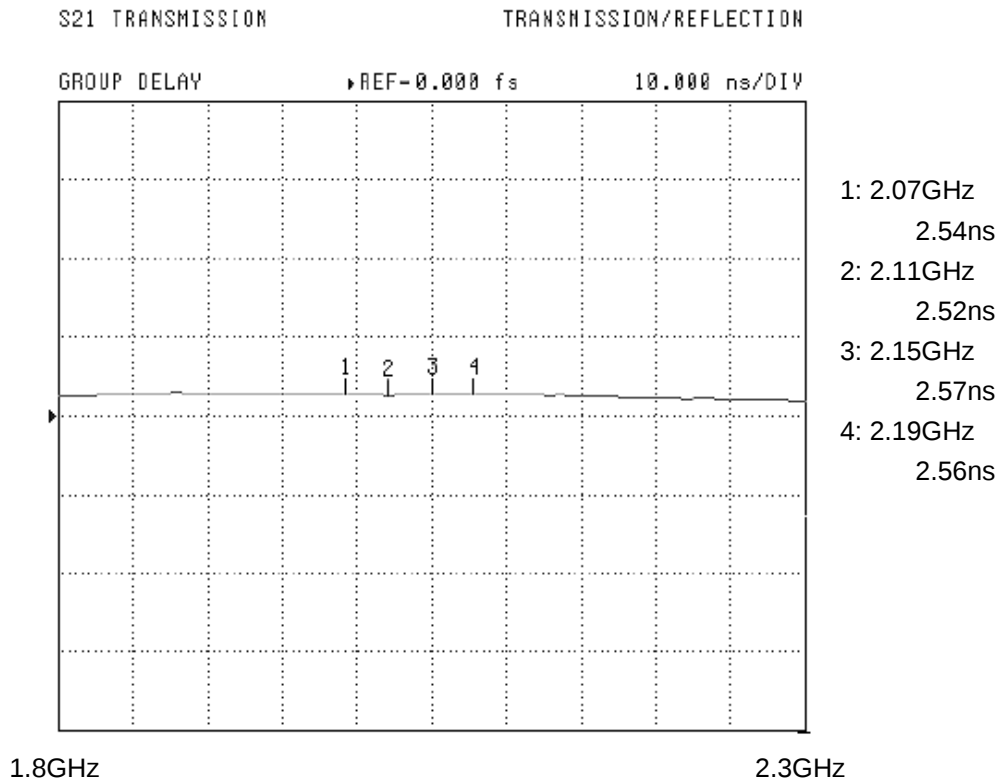
◆ IM3



◆ *Gain*



◆ *Group Delay*



[illegible]

◆ *Pin Assignment*

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

◆ Evaluation Board Layout (Dimensions are mm)

