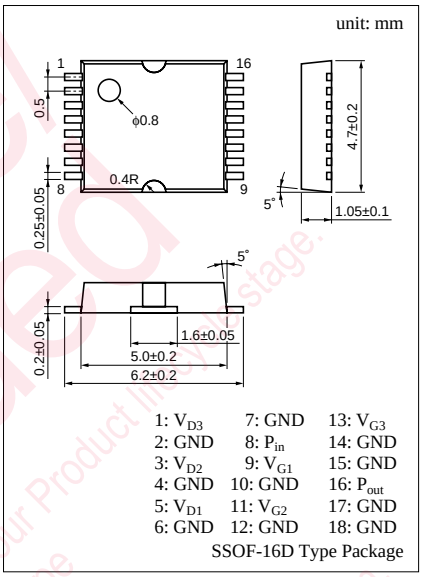
GN05013N

GaAs IC

Transmitting amplifier for PHS



■ Features

- Operated by a single positive power supply
- Low consumption current
- Input/output 50Ω matching

■ Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Ratings	Unit
Power supply voltage	V_{DD}	5	V
Input current	P_{in}	−15	dBm
Allowable power dissipation	P_D	400	mW
Operating temperature	T_{opr}	−10 to +60	°C
Storage temperature	T_{stg}	−30 to +120	°C

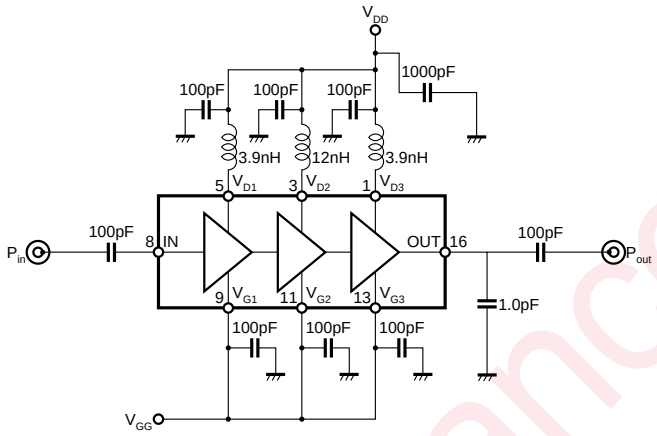
■ Electrical Characteristics (V_{DD} = 3V, Ta = 25 ± 3°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Circuit current	I_{DD}	V_{GS} = 0 to +0.5V		145	165	mA
Power gain	PG*1	V_{GS} = 0 to +0.5V f = 1906.5MHz, P_{out} = 20.5dBm	34	40		dB
Adjacent channel leakage power (ACP)	DM_1*1	V_{GS} = 0 to +0.5V, f = 1906.5MHz P_{out} = 20.5dBm 600kHz Detuning, 192kHz Bandwidth		−60	−55	dBc
	DM_2*1	V_{GS} = 0 to +0.5V, f = 1906.5MHz P_{out} = 20.5dBm 900kHz Detuning, 192kHz Bandwidth		−68	−60	dBc
Voltage standing wave ratio	VSWRin*1	V_{GS} = 0 to +0.5V, f = 1906.5MHz P_{out} = 20.5dBm		2.5	3	—
Harmonics output ratio	2fo*1	V_{GS} = 0 to +0.5V, f = 1906.5MHz P_{out} = 20.5dBm		−30	−25	dBc

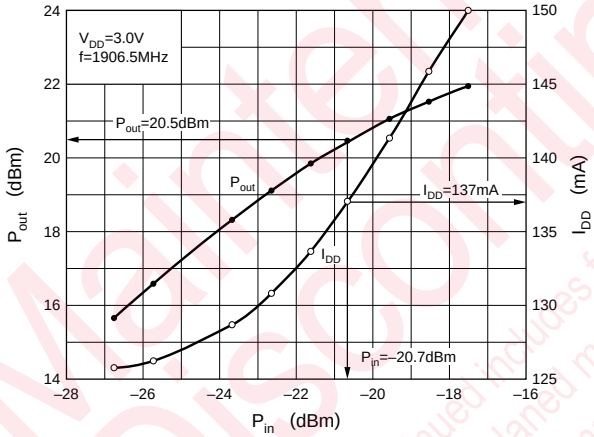
*1 Gate voltage (V_{GS}) is the voltage which adjusts the drain current (I_D) to 125mA under no input signal condition.

** In case of handling this IC, take measures against static electricity.

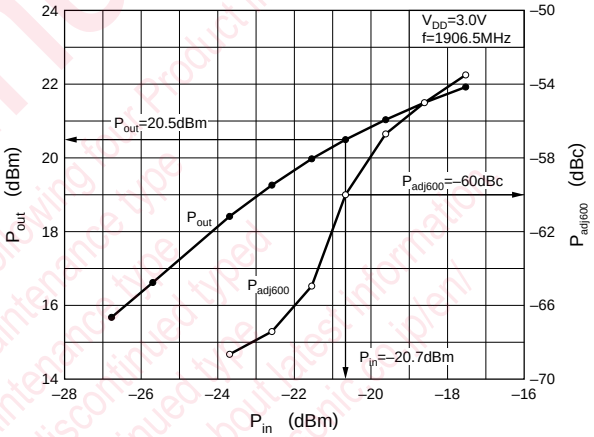
■ Measurement Circuit



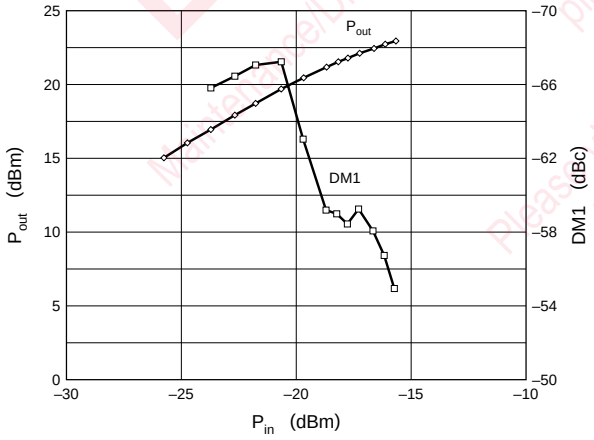
P_{out}, I_{DD} — P_{in}



P_{out}, P_{adj600} — P_{in}



P_{out}, DM1 — P_{in}



⚠Caution for Safety

⚠DANGER

■ This product contains Gallium Arsenide (GaAs).

GaAs powder and vapor are hazardous to human health if inhaled or ingested. Do not burn, destroy, cut, cleave off, or chemically dissolve the product. Follow related laws and ordinances for disposal. The product should be excluded from general industrial waste or household garbage.

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