

Electronic Components

ODRKGF2841-03
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KGF2841

Preliminary

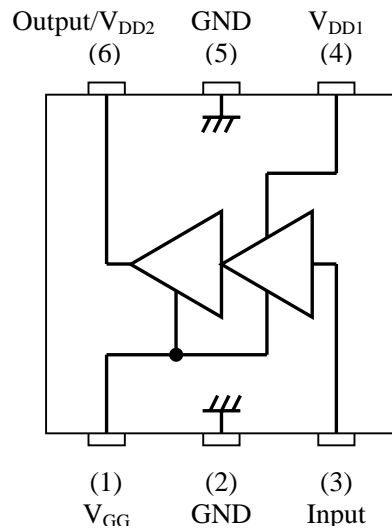
PHS Power Amplifier

GENERAL DESCRIPTION

The KGF2841, housed in a 6-pin HSON plastic package, is a two-stage amplifier that features high output power, high linear gain and high efficiency. The KGF2841 is internally matched 50Ω input and requires externally simple output impedance-matching circuit at 1900MHz. The KGF2841 is ideal as a power amplifier in the PHS (Personal Handy phone System).

- Input 50Ω matched impedance
- High linear gain > 23dB
- High output power > 22dBm
- Low current operation: < 180mA
- Package: HSON-6P

FUNCTION DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Condition	Min	Max	Unit	Note
Supply Voltage	V_{DD}	Ta=25°C	—	6	V	
Gate Voltage	V_{GG}	Ta=25°C	- 4	0.5	V	
Input Power	P_{IN}	Ta=25°C	—	6	dBm	
Total Power Dissipation	P_{TOT}	Ta=Tc=25°C	—	1	W	
Channel Temperature	T_{CH}	—	—	150	°C	
Storage Temperature	T_{STG}	—	-45	125	°C	

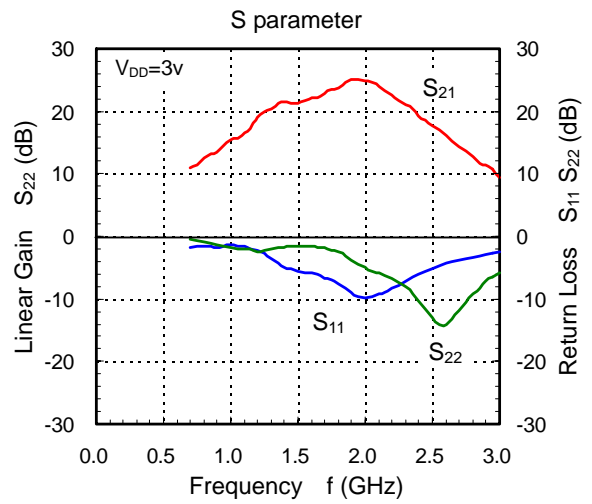
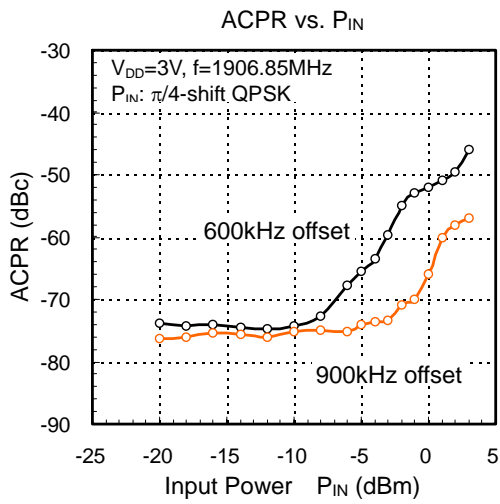
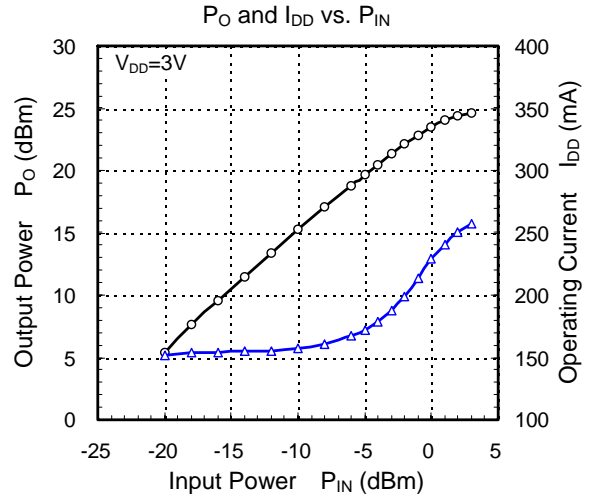
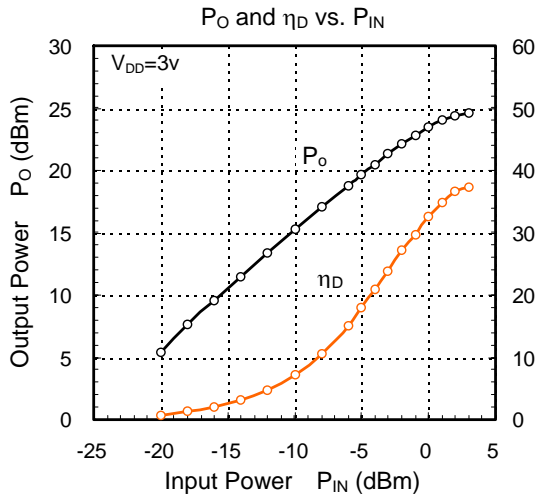
ELECTRICAL CHARACTERISTICS

(Ta=25°C)

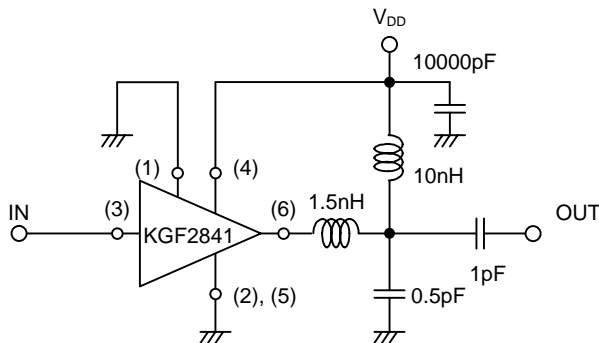
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Operating Current	I_{DD}	(*1), $P_{IN}=-20$ dBm	—	150	180	mA
Linear Gain	G_{LIN}	(*1)	23	26	—	dB
Input Return Loss	S_{11}	(*1)	—	—	-8	dB
Output Power	P_O	(*1), $P_{IN}=0$ dBm	22	23.5	—	dBm
Adjacent channel leak power ratio	ACPR1	(*1), $P_O=21$ dBm 600kHz offset	—	-60	-55	dBc
	ACPR2	(*1), $P_O=21$ dBm 900kHz offset	—	-65	-60	dBc
Thermal Resistant	R_{TH}	Channel to Case		TBD		°C/W

(*1): V_{DD} (V_{DD1} , V_{DD2})=3V, f=1900MHz

TYPICAL CHARACTERISTICS

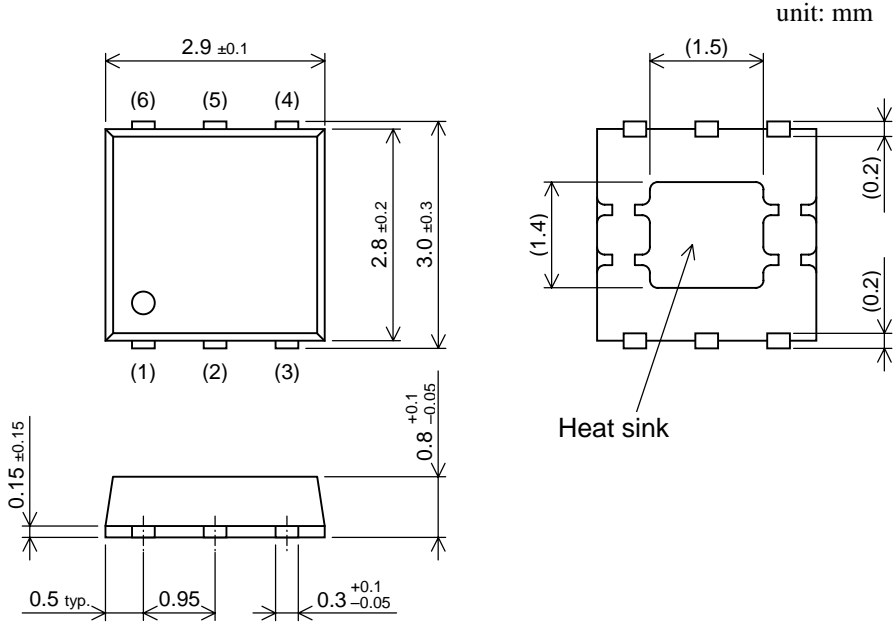


Test circuit



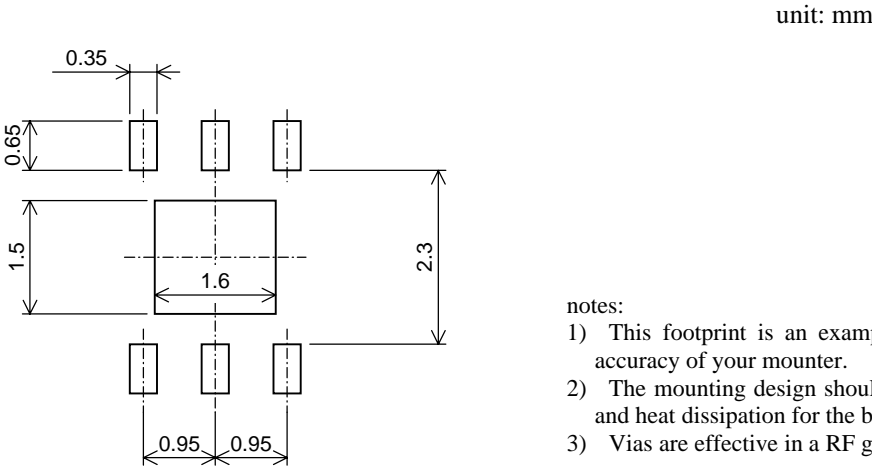
PACKAGE

HSON-6P (lead-free terminal plating of Sn-Ag material)



Pin Configuration	
(1)	V _{GG}
(2)	GND
(3)	Input
(4)	V _{DD1}
(5)	GND
(6)	Output / V _{DD2}

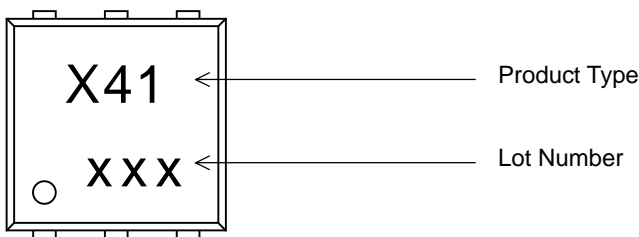
Footprint



notes:

- 1) This footprint is an example. The size of footprint depends on accuracy of your mounter.
- 2) The mounting design should fully be considered in RF grounding and heat dissipation for the better RF performance of the product.
- 3) Vias are effective in a RF grounding and heat dissipation.

MARKING



SAFETY AND HANDLING INFORMATION ON GAAS DEVICES

Arsenic Compound (GaAs Devices)

The product contains arsenic (As) as a compound.

This material is stable for normal use, however, its dust or vapor may be potentially hazardous to the human body.

Avoid ingestion, fracture, burning or chemical treatment to the product.

- Do not put the product in your mouth.
- Do not burn or destroy the product.
- Do not perform chemical treatment for the product.

Keep laws and ordinances related to the disposal of the products.

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1. The information contained herein can change without notice owing to product and/or technical improvements. Before using the product, please make sure that the information being referred to is up-to-date.
2. The outline of action and examples for application circuits described herein have been chosen as an explanation for the standard action and performance of the product. When planning to use the product, please ensure that the external conditions are reflected in the actual circuit, assembly, and program designs.
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4. Oki assumes no responsibility or liability whatsoever for any failure or unusual or unexpected operation resulting from misuse, neglect, improper installation, repair, alteration or accident, improper handling, or unusual physical or electrical stress including, but not limited to, exposure to parameters beyond the specified maximum ratings or operation outside the specified operating range.
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