

OKI electronic components

KGF2511

Medium Power Amplifier for UHF band

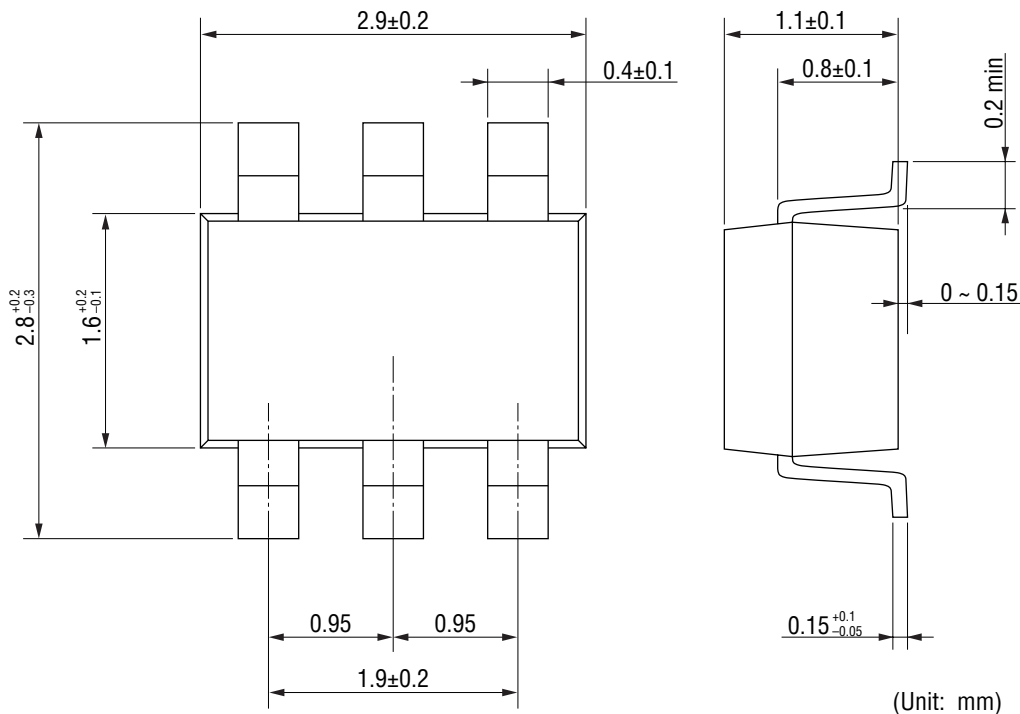
GENERAL DESCRIPTION

The KGF2511 is a medium power amplifier for UHF band that features high output power, high linear gain, low distortion and low-current dissipation. The KGF2511 has specifications guaranteed by fixed matching circuit of 2.8V and 900MHz band, although external impedance matching circuits are required. Because of the high output power and low distortion at the low operating current, the KGF2511 is ideal as a transmitter driver stage amplifier for portable phones such as PDC and CDMA.

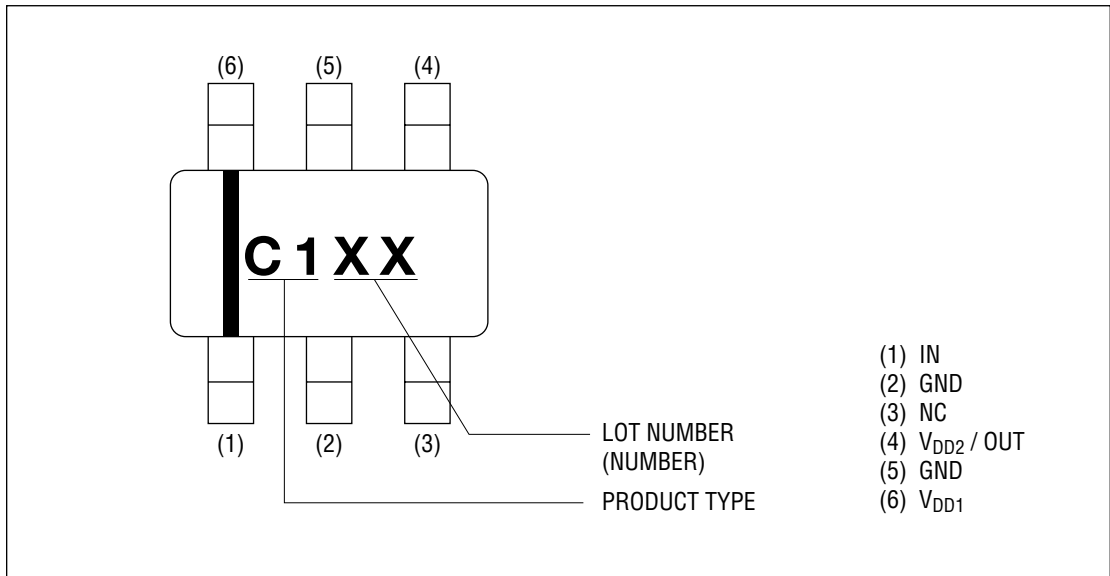
FEATURES

- High output power: 8dBm (min)
- High linear gain: 27dB (min)
- Low distortion (ACP): -55dBc (max) @ $P_O=8\text{dBm}$, $\pi/4\text{DQPSK}$, $\pm 50\text{kHz}$
- Low voltage and low current operation: 2.8V, 28mA (max)
- Self-bias circuit configuration with built-in source capacitor
- Surface mount 6-pin SOP plastic package

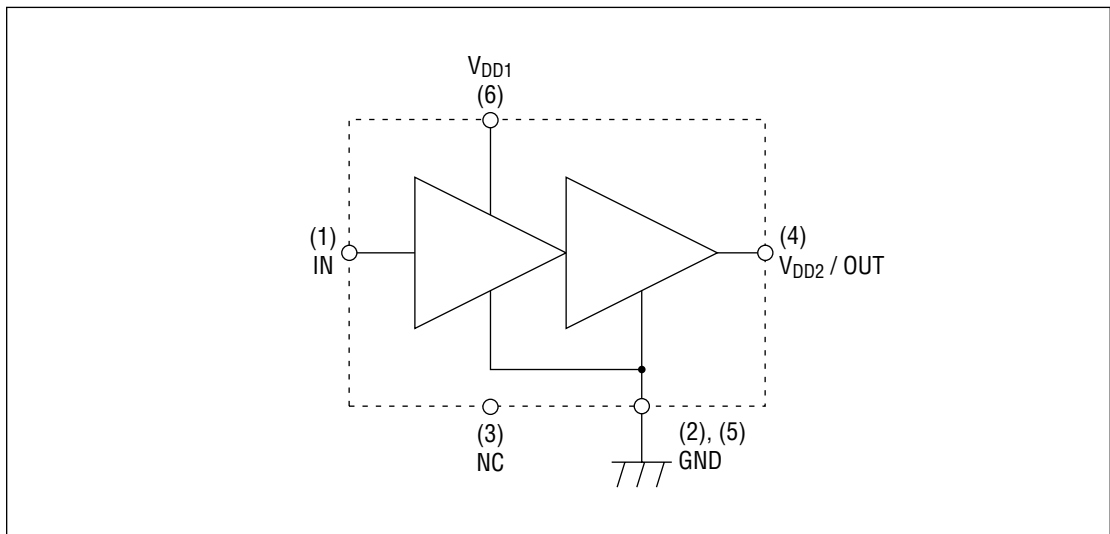
OUTLINE DIMENSIONS



MARKING



CIRCUIT



ABSOLUTE MAXIMUM RATINGS

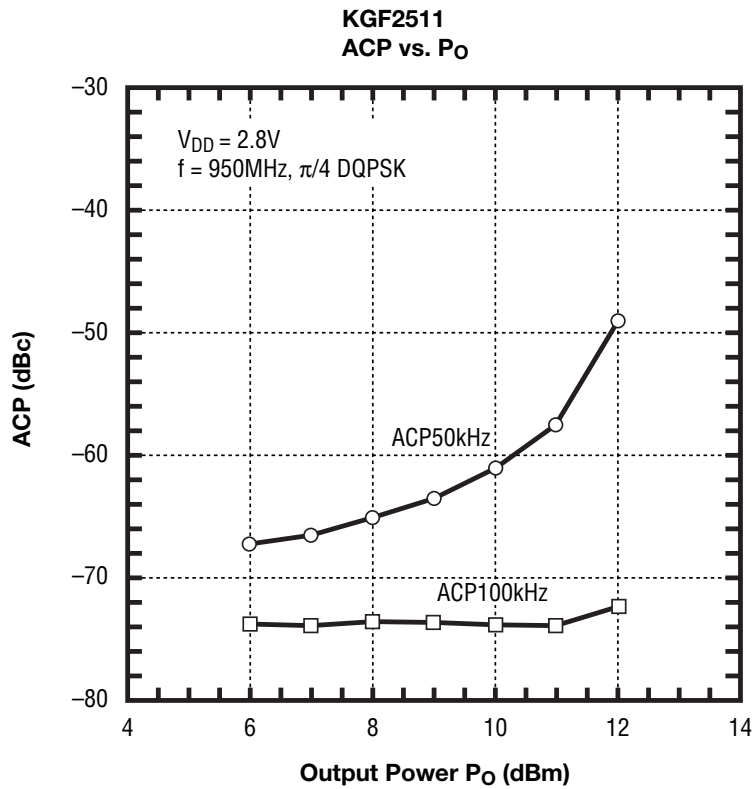
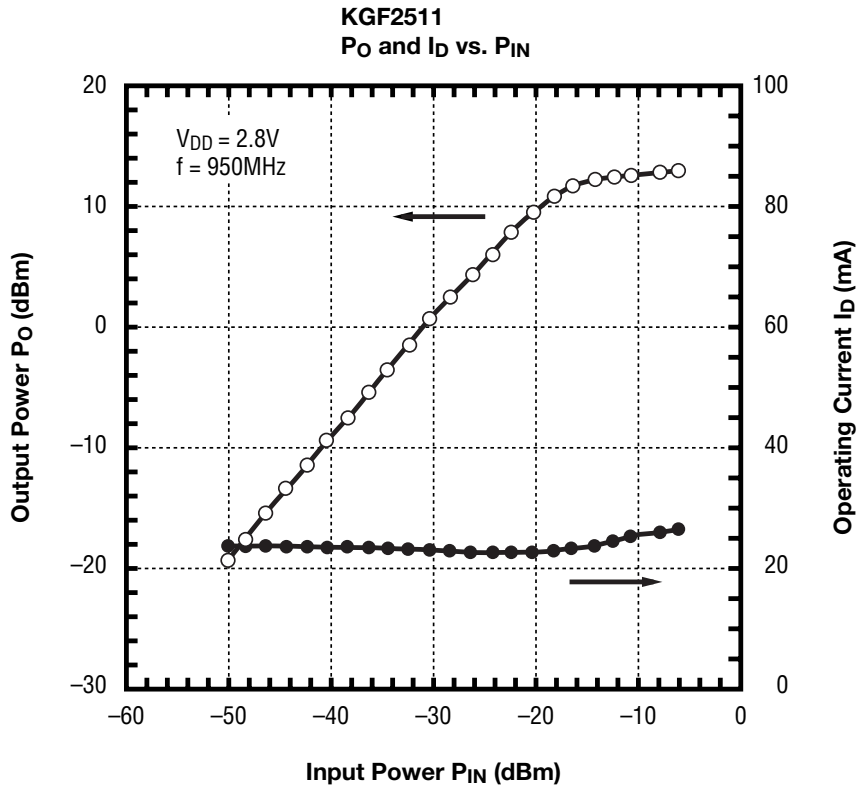
Item	Symbol	Conditions	Unit	Min.	Max.
Supply Voltage	V_{DD}	$T_a = 25^{\circ}\text{C}$	V	—	7
Total power dissipation	P_{TOT}	$T_a = 25^{\circ}\text{C}$	mW	—	300
Operating temperature	T_{OPE}	—	$^{\circ}\text{C}$	-35	+85
Storage temperature	T_{STG}	—	$^{\circ}\text{C}$	-45	+125

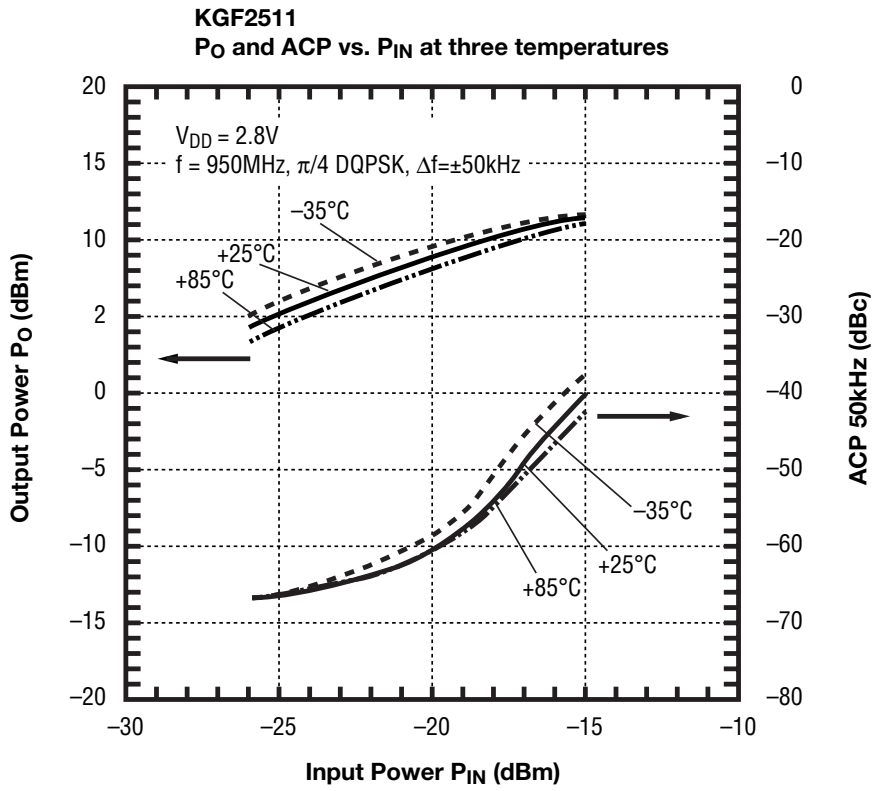
ELECTRICAL CHARACTERISTICS

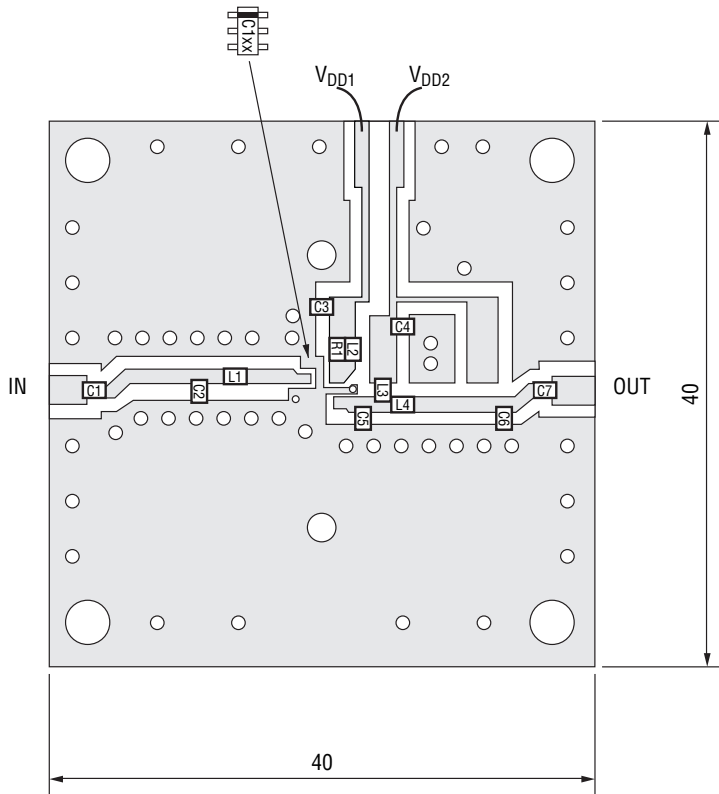
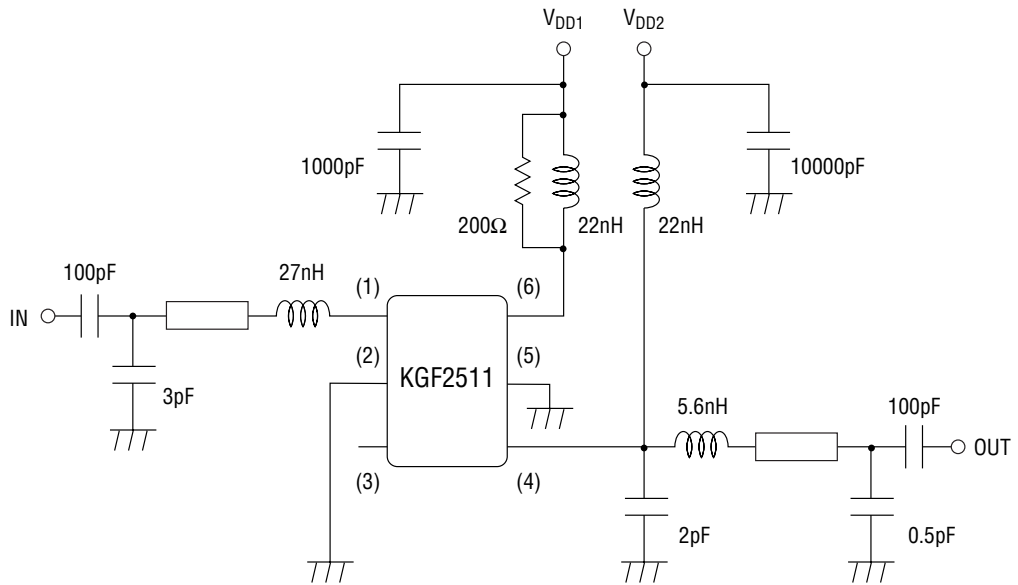
(Ta = 25°C)

Item	Symbol	Conditions	Unit	Min.	Typ.	Max.
Frequency	f	—	MHz	889	—	960
Operating current	I_{DD}	(*1), $P_{IN} = -20$ dBm	mA	—	24	28
Linear Gain	G_{LIN}	(*1), $P_{IN} = -30$ dBm	dB	27	30	—
Output Power	P_O	(*1), $P_{IN} = -20$ dBm	dBm	8	10	—
Adjacent channel power 1	ACP1	(*1), $P_O = 8$ dBm ± 50 kHz offset	dBc	—	-60	-55
Adjacent channel power 2	ACP2	(*1), $P_O = 8$ dBm ± 100 kHz offset	dBc	—	-70	-65

*1 Self-bias condition: $V_{DD} = 2.8$ V, $\pi/4$ DQPSK







C1:	100	pF
C2:	3	pF
C3:	1000	pF
C4:	10000	pF
C5:	2	pF
C6:	0.5	pF
C7:	100	pF
L1:	27	nH
L2:	22	nH
L3:	22	nH
L4:	5.6	nH
R1:	200	Ω

(unit: mm)

Substrate: Teflon-fiberglass
(0.8mm³, 18μm³ Cu plated both side, ε_r = 2.6)

NOTICE

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.
3. When designing your product, please use our product below the specified maximum ratings and within the specified operating ranges including, but not limited to, operating voltage, power dissipation, and operating temperature.
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.
5. Neither indemnity against nor license of a third party's industrial and intellectual property right, etc. is granted by us in connection with the use of the product and/or the information and drawings contained herein. No responsibility is assumed by us for any infringement of a third party's right which may result from the use thereof.
6. The products listed in this document are intended for use in general electronics equipment for commercial applications (e.g., office automation, communication equipment, measurement equipment, consumer electronics, etc.). These products are not authorized for use in any system or application that requires special or enhanced quality and reliability characteristics nor in any system or application where the failure of such system or application may result in the loss or damage of property, or death or injury to humans. Such applications include, but are not limited to, traffic and automotive equipment, safety devices, aerospace equipment, nuclear power control, medical equipment, and life-support systems.
7. Certain products in this document may need government approval before they can be exported to particular countries. The purchaser assumes the responsibility of determining the legality of export of these products and will take appropriate and necessary steps at their own expense for these.
8. No part of the contents contained herein may be reprinted or reproduced without our prior permission.
9. MS-DOS is a registered trademark of Microsoft Corporation.

Copyright 1998 Oki Electric Industry Co., Ltd.
