

# 2SK2596

## Silicon N-Channel MOS FET UHF Power Amplifier

REJ03G0207-0300  
(Previous ADE-208-1367(Z))  
Rev.3.00  
Feb.14.2005

### Features

- High power output, High gain, High efficiency  
PG = 12.2 dB, Pout = 30.2 dBm,  $\eta_D = 45\%$  min. (f = 836.5 MHz)
- Compact package capable of surface mounting

### Outline

PLZZ0004CA-A  
(Previous code : UPAK)

1. Gate  
2. Source  
3. Drain  
4. Source

Note: Marking is "BX".

This Device is sensitive to Electro Static Discharge. An Adequate handling procedure is requested.

### Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	$V_{DSS}$	17	V
Gate to source voltage	$V_{GSS}$	$\pm 10$	V
Drain current	$I_D$	0.4	A
Drain peak current	$I_{D(pulse)}$ <sup>Note1</sup>	1	A
Channel dissipation	$P_{ch}$ <sup>Note2</sup>	3	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	-45 to +150	°C

Notes: 1.  $PW \leq 10 \mu s$ , duty cycle  $\leq 1\%$

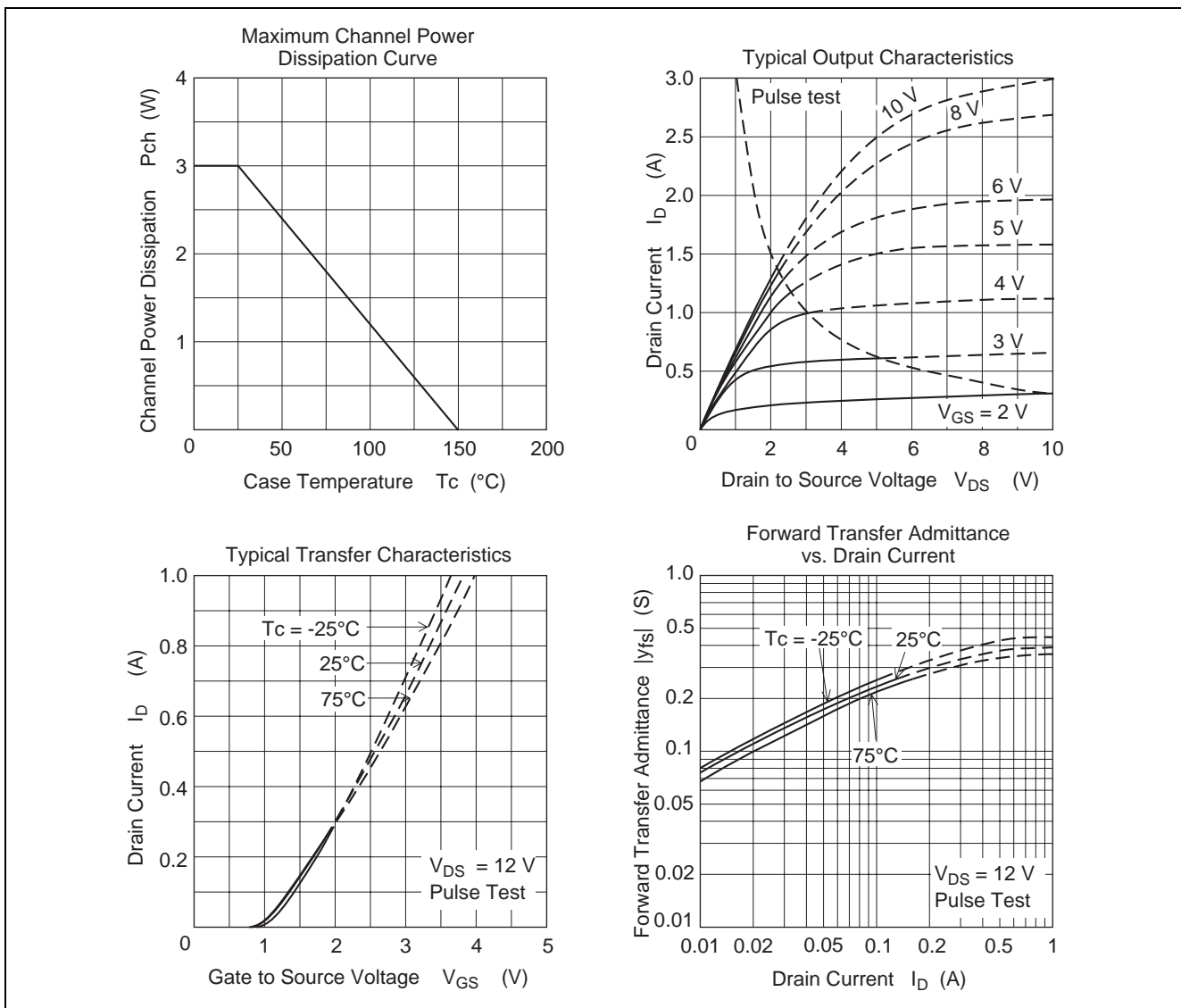
2. Value at Tc = 25°C

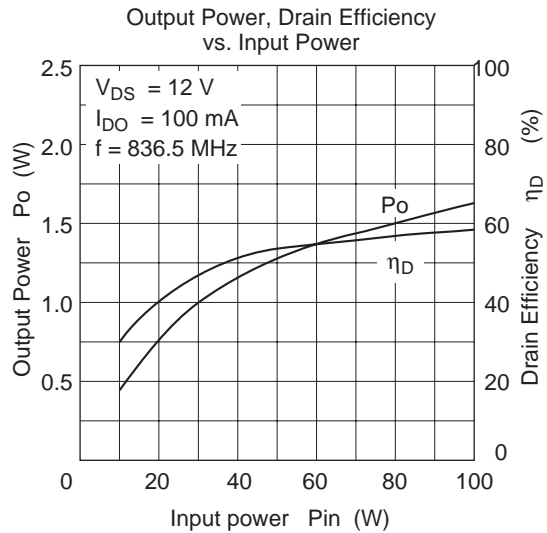
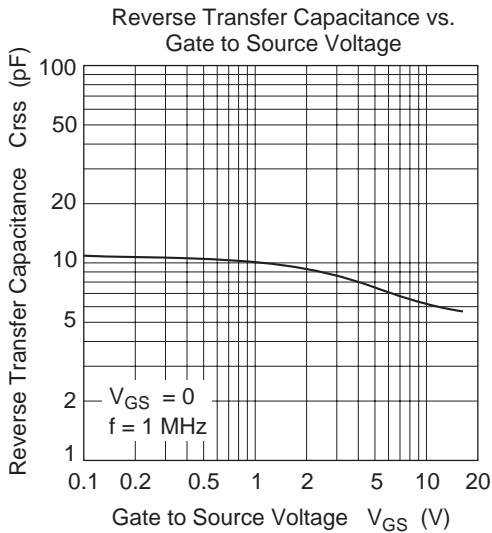
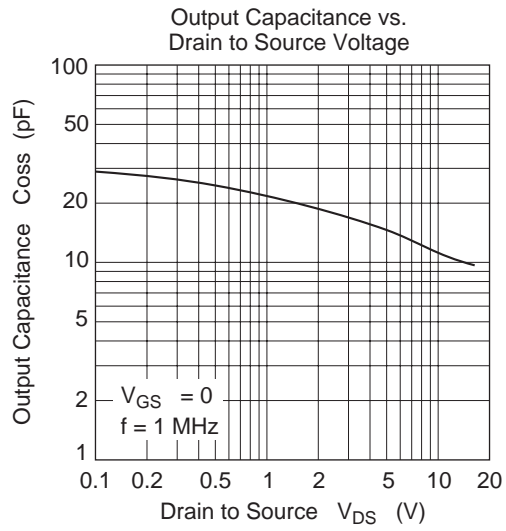
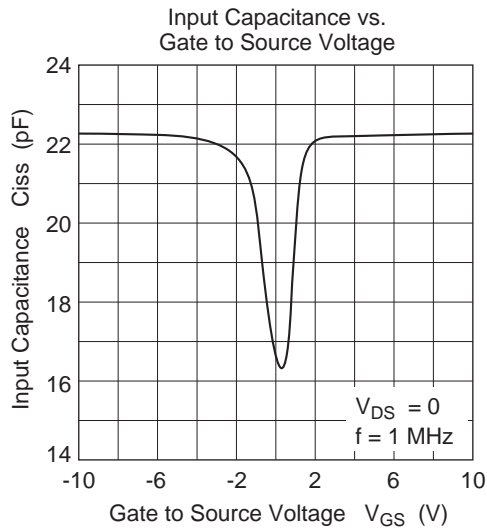
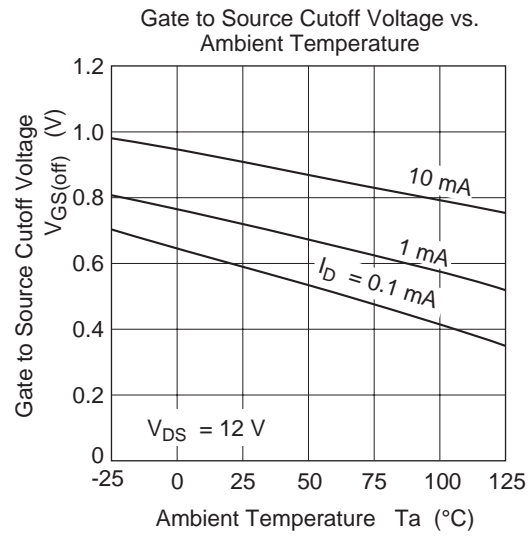
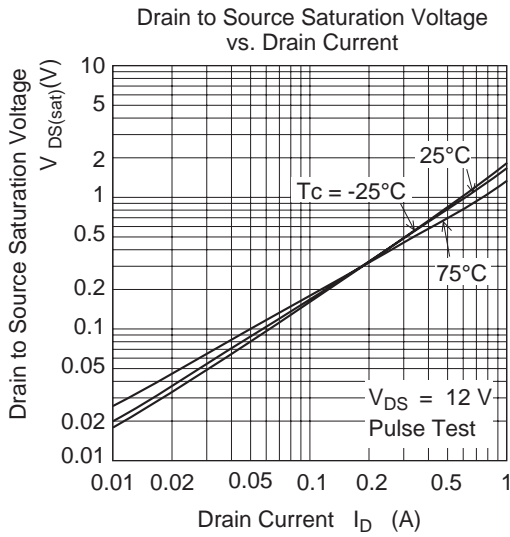
**Electrical Characteristics**

(Ta = 25°C)

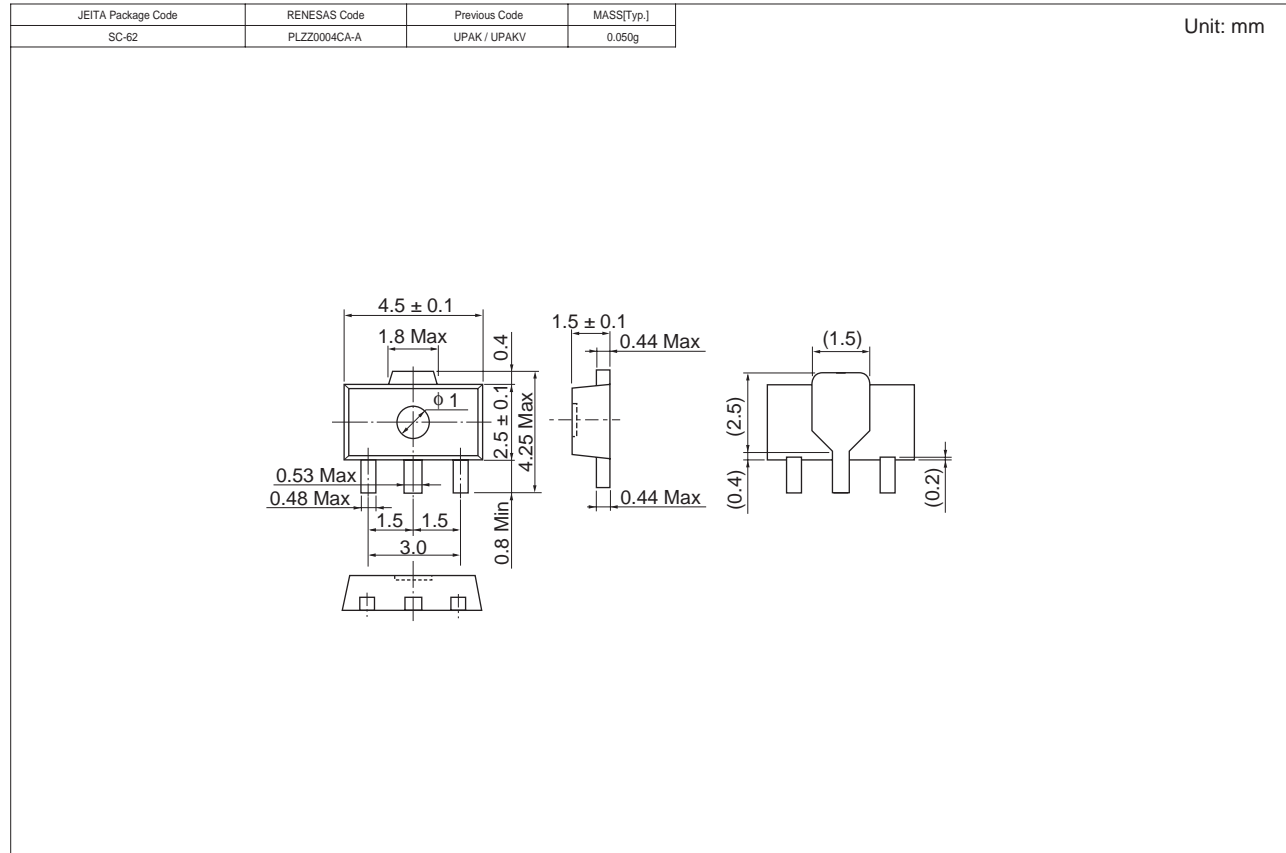
Item	Symbol	Min.	Typ	Max.	Unit	Test Conditions
Zero gate voltage drain current	$I_{DSS}$	—	—	10	$\mu A$	$V_{DS} = 12 V, V_{GS} = 0$
Gate to source leak current	$I_{GSS}$	—	—	$\pm 5.0$	$\mu A$	$V_{GS} = \pm 10 V, V_{DS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	0.4	—	1.1	V	$I_D = 2 mA, V_{DS} = 12 V$
Input capacitance	$C_{iss}$	—	22	—	pF	$V_{GS} = 5 V, V_{DS} = 0, f = 1 MHz$
Output capacitance	$C_{oss}$	—	10.5	—	pF	$V_{DS} = 12 V, V_{GS} = 0, f = 1 MHz$
Output Power	$P_{out}$	30.2	31.46	—	dBm	$V_{DS} = 12 V, f = 836.5 MHz$ $P_{in} = 18 dBm$
Drain Efficiency	$\eta_D$	45	55	—	%	$V_{DS} = 12 V, P_{out} = 30.2 dBm$ $f = 836.5 MHz, P_{in} = 18 dBm$

**Main Characteristics**





## Package Dimensions



## Ordering Information

Part Name	Quantity	Shipping Container
2SK2596BX	1000	$\phi 178$ taping

Note: For some grades, production may be terminated. Please contact the Renesas sales office to check the state of production before ordering the product.

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