

2SK2596

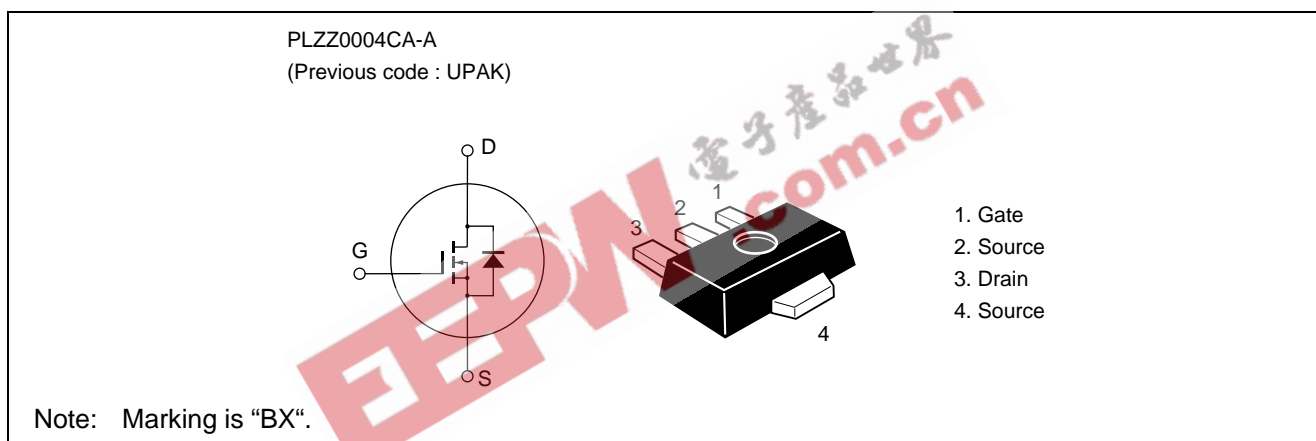
Silicon N-Channel MOS FET UHF Power Amplifier

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



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}	±10	V
Drain current	I _D	0.4	A
Drain peak current	I _{D(pulse)} ^{Note1}	1	A
Channel dissipation	P _{ch} ^{Note2}	3	W
Channel temperature	T _{ch}	150	°C
Storage temperature	T _{stg}	-45 to +150	°C

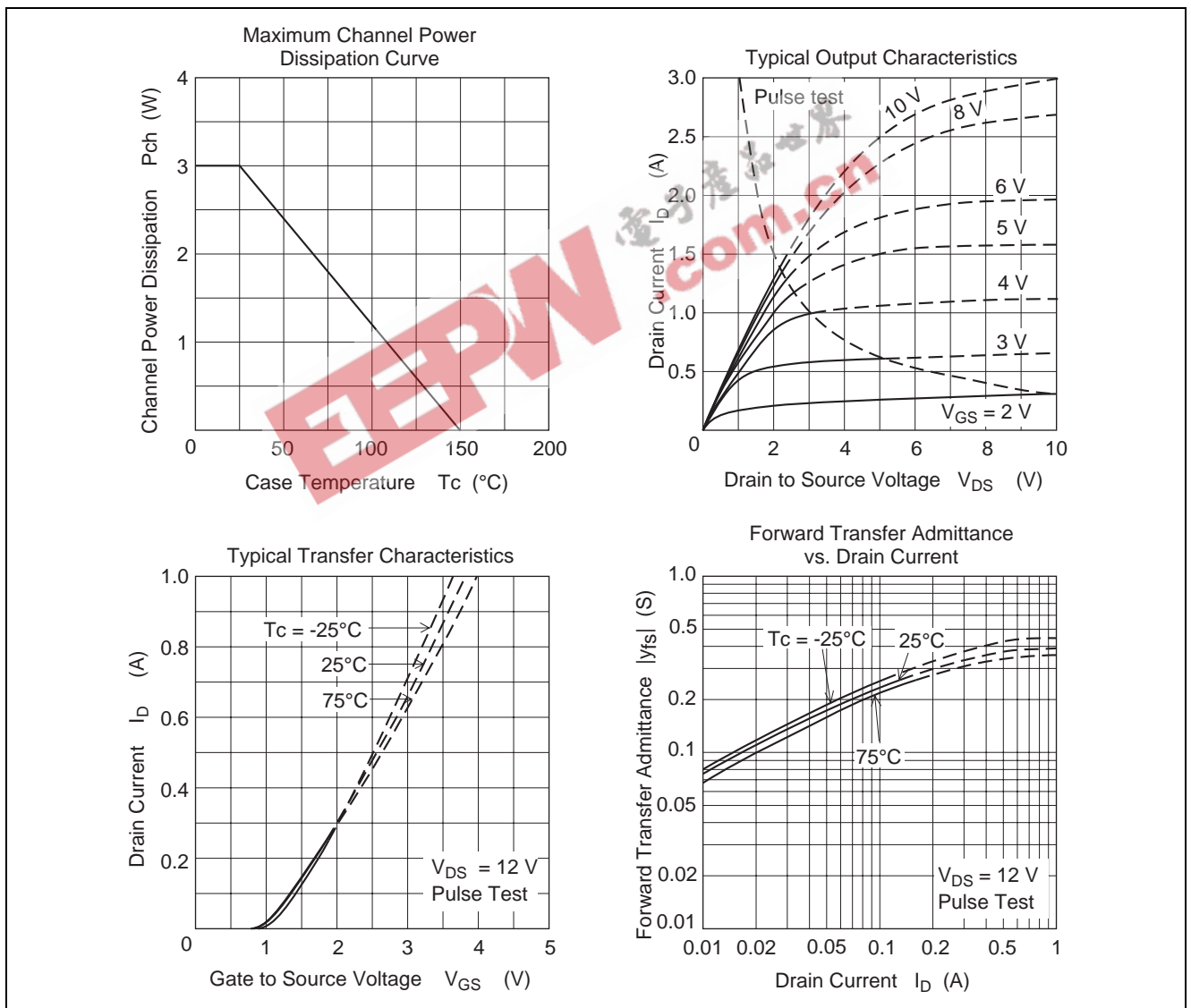
Notes: 1. PW ≤ 10 μs, duty cycle ≤ 1%
2. Value at Tc = 25°C

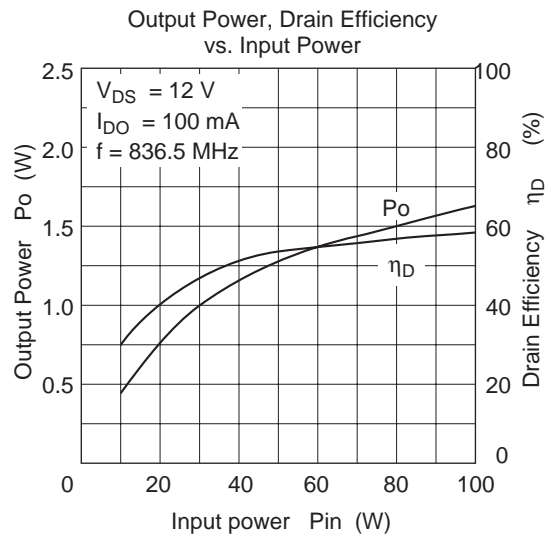
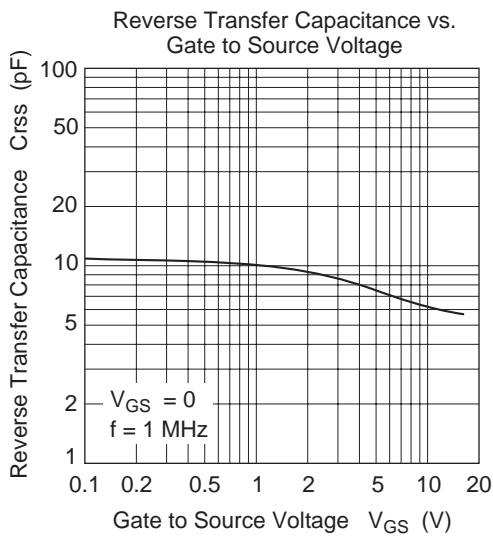
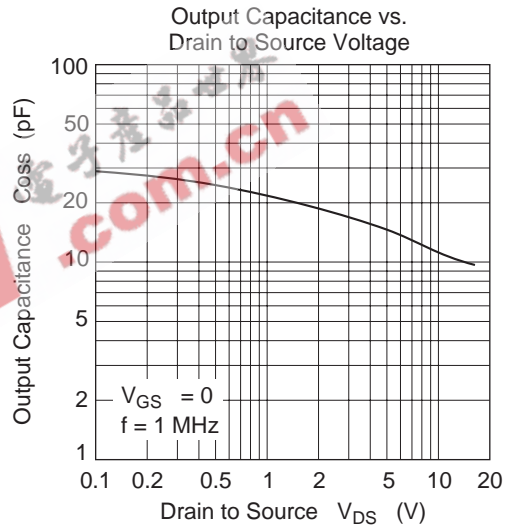
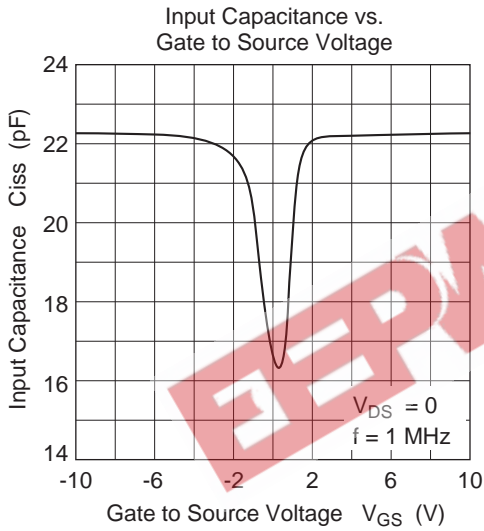
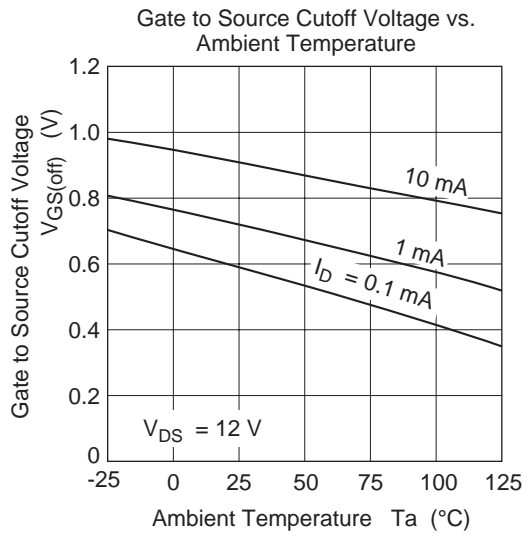
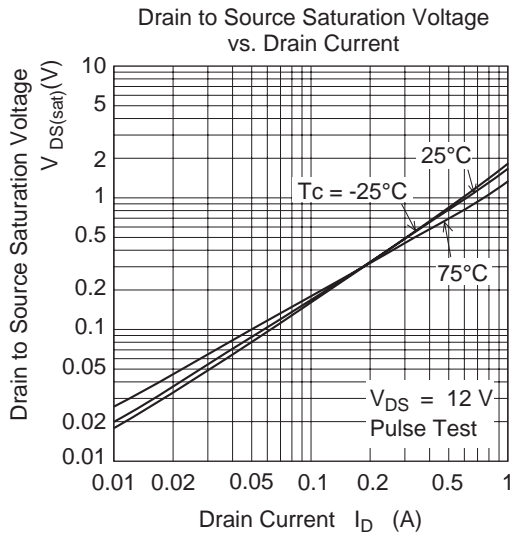
Electrical Characteristics

(Ta = 25°C)

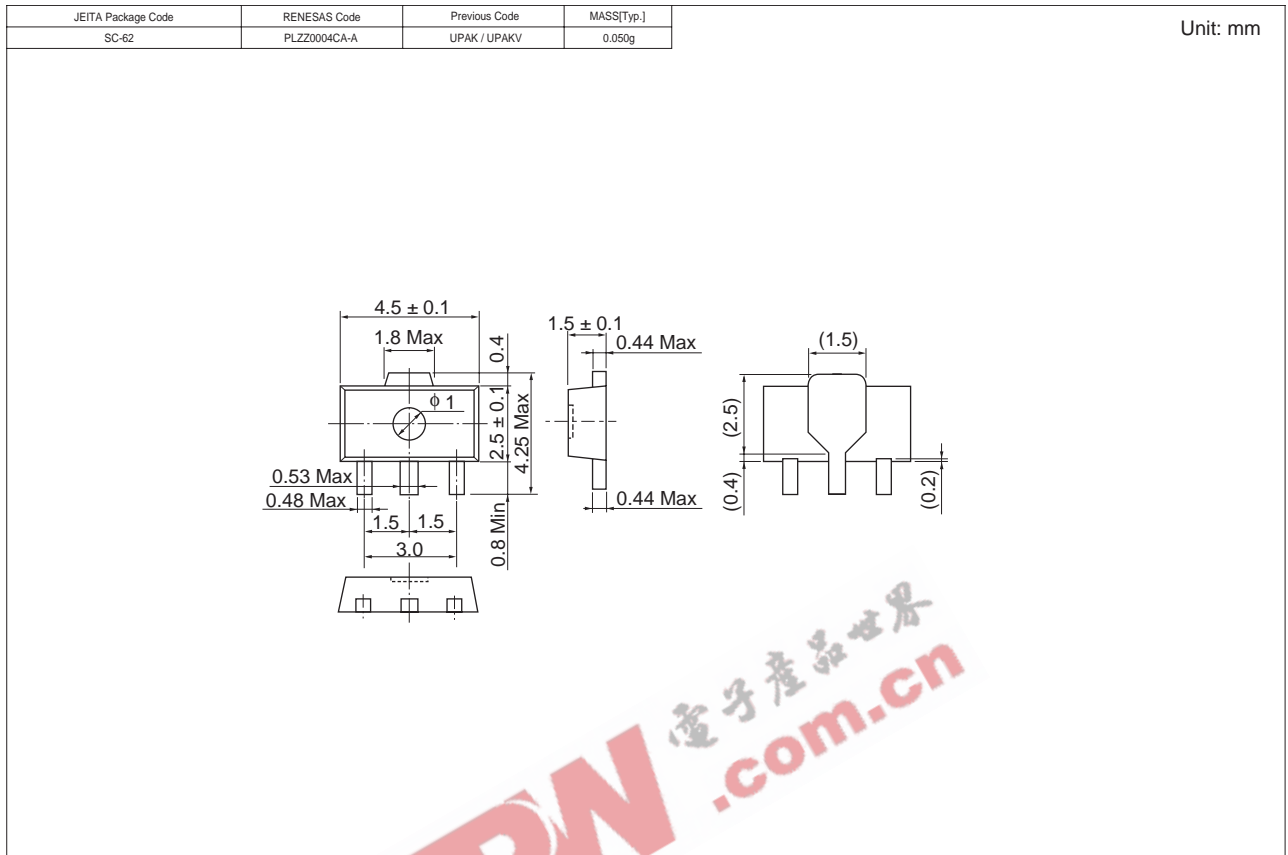
Item	Symbol	Min.	Typ	Max.	Unit	Test Conditions
Zero gate voltage drain current	I_{DSS}	—	—	10	μA	$V_{DS} = 12 V, V_{GS} = 0$
Gate to source leak current	I_{GSS}	—	—	± 5.0	μA	$V_{GS} = \pm 10 V, V_{DS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	0.4	—	1.1	V	$I_D = 2 mA, V_{DS} = 12 V$
Input capacitance	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	η_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	φ178 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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