2SK2596

Silicon N-Channel MOS FET
UHF Power Amplifier

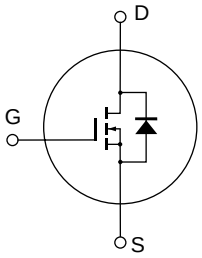
REJ03G0207-0300
(Previous ADE-208-1367(Z))
Rev.3.00
Feb.14.2005

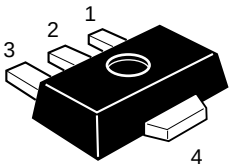
Features

- High power output, High gain, High efficiency
  PG = 12.2 dB, Pout = 30.2 dBm, ηD = 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}	±10	V
Drain current	I_D	0.4	A
Drain peak current	$I_{D(pulse)}$ Note1	1	A
Channel dissipation	Pch Note2	3	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	–45 to +150	°C

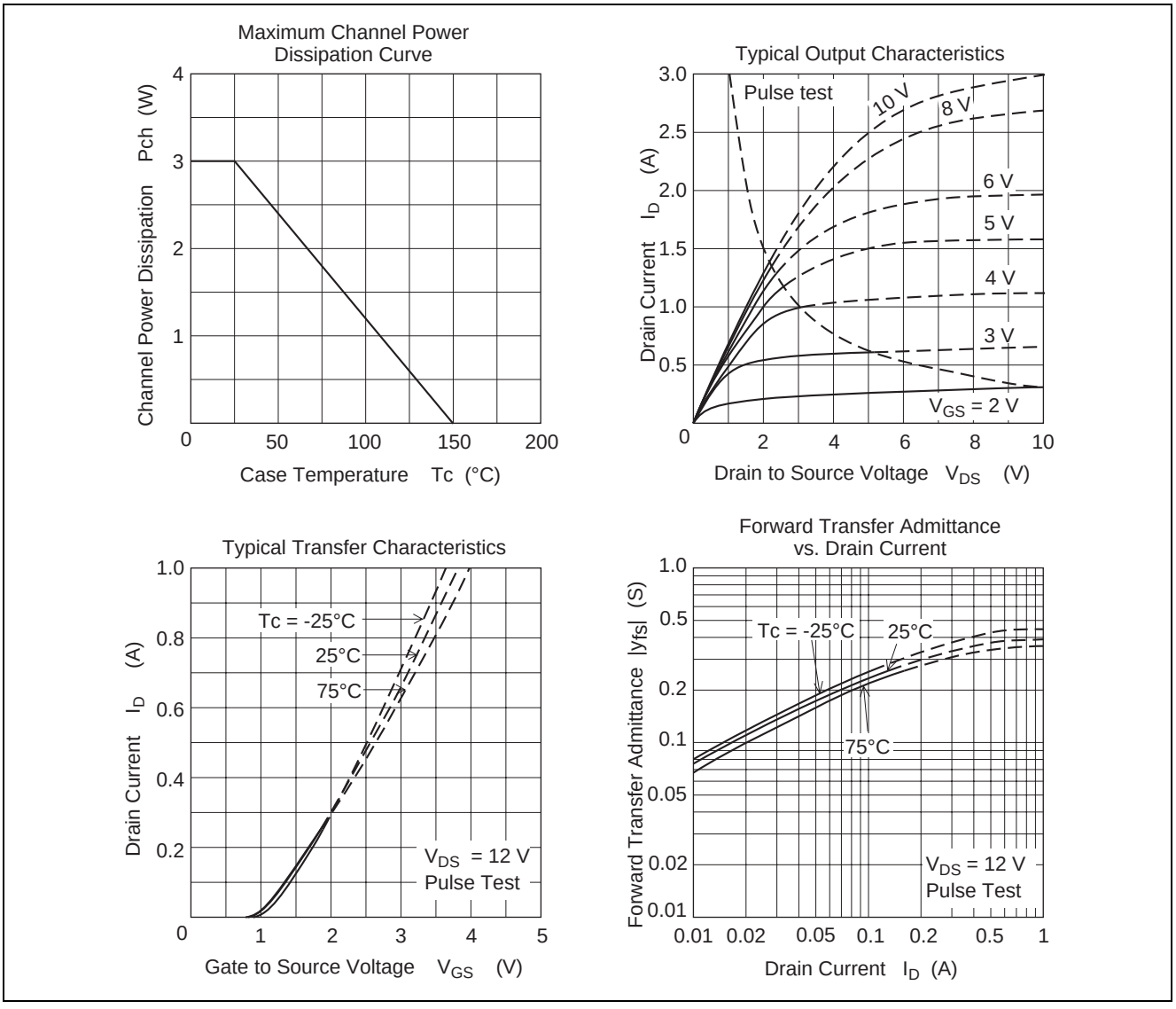
Notes: 1. PW ≤ 10 µs, duty cycle ≤ 1%
2. Value at Tc = 25°C

Electrical Characteristics

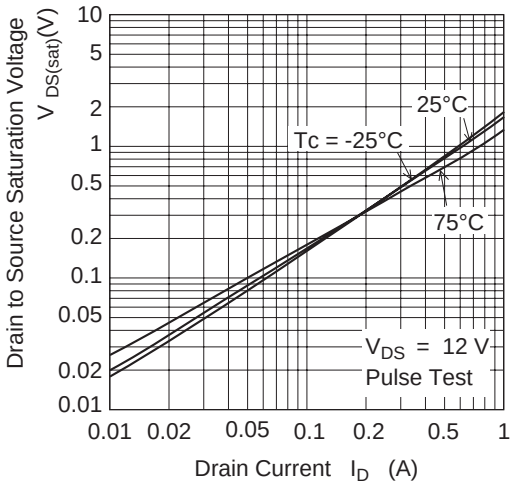
(Ta = 25°C)

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} = ±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	Ciss	—	22	—	pF	V_{GS} = 5 V, V_{DS} = 0, f = 1 MHz
Output capacitance	Coss	—	10.5	—	pF	V_{DS} = 12 V, V_{GS} = 0, f = 1 MHz
Output Power	Pout	30.2	31.46	—	dBm	V_{DS} = 12 V, f = 836.5 MHz Pin = 18 dBm
Drain Efficiency	ηD	45	55	—	%	V_{DS} = 12 V, Pout = 30.2 dBm f = 836.5 MHz, Pin = 18 dBm

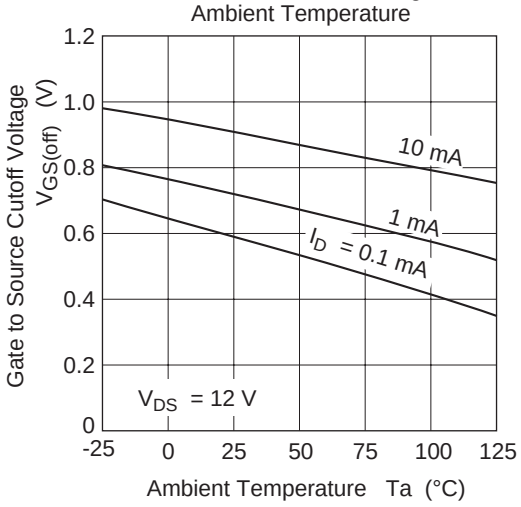
Main Characteristics



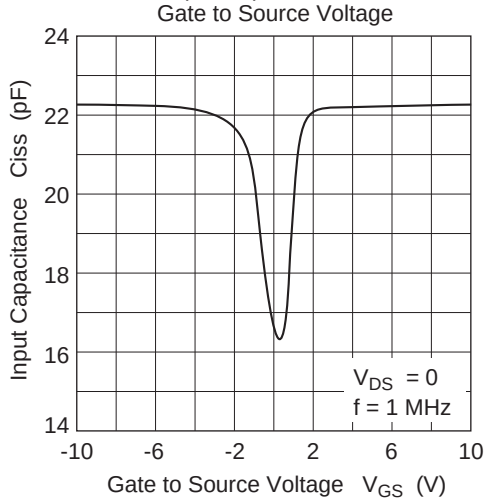
Drain to Source Saturation Voltage vs. Drain Current



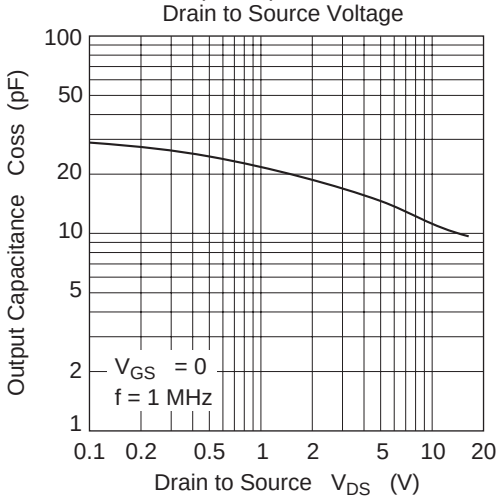
Gate to Source Cutoff Voltage vs. Ambient Temperature



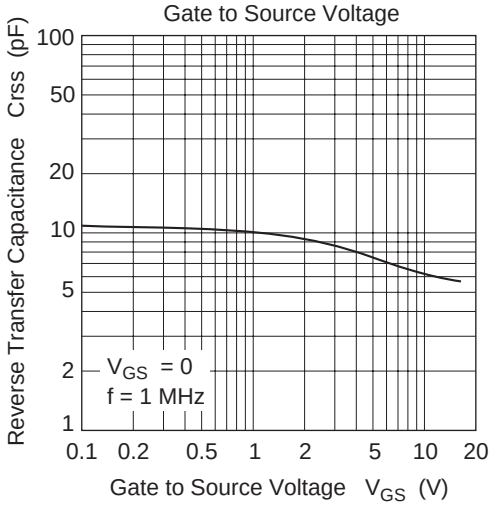
Input Capacitance vs. Gate to Source Voltage



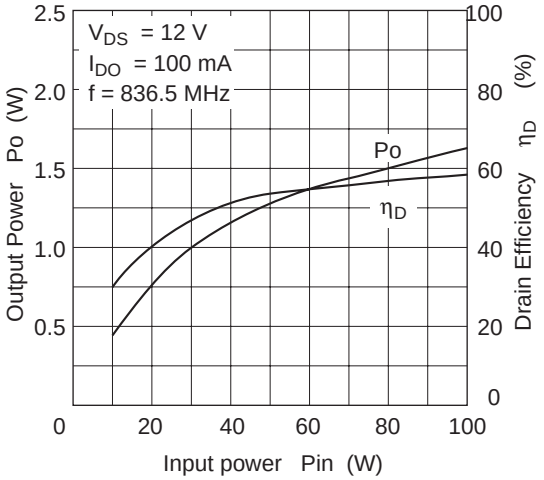
Output Capacitance vs. Drain to Source Voltage



Reverse Transfer Capacitance vs. Gate to Source Voltage



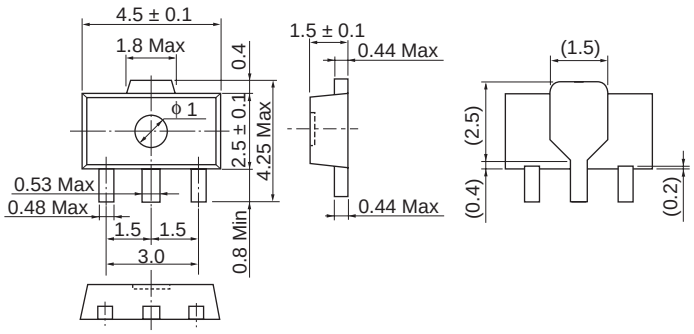
Output Power, Drain Efficiency vs. Input Power



Package Dimensions

JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
SC-62	PLZZ0004CA-A	UPAK / UPAKV	0.050g

Unit: mm



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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