2SK3391

Silicon N-Channel MOS FET
UHF Power Amplifier

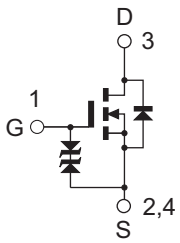
REJ03G0209-0200Z
(Previous ADE-208-847 (Z))
Rev.2.00
Apr.14.2004

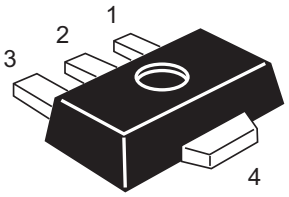
Features

- High power output, High gain, High efficiency
  PG = 18 dB, Pout = 1.6 W, ηadd = 58% min. (f = 836 MHz)
- Compact package capable of surface mounting

Outline

UPAK





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

Note: Marking is “JX“.

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	0.3	A
Drain peak current	$I_{D(pulse)}$ Note1	0.75	A
Channel dissipation	Pch Note2	5	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	–45 to +150	°C

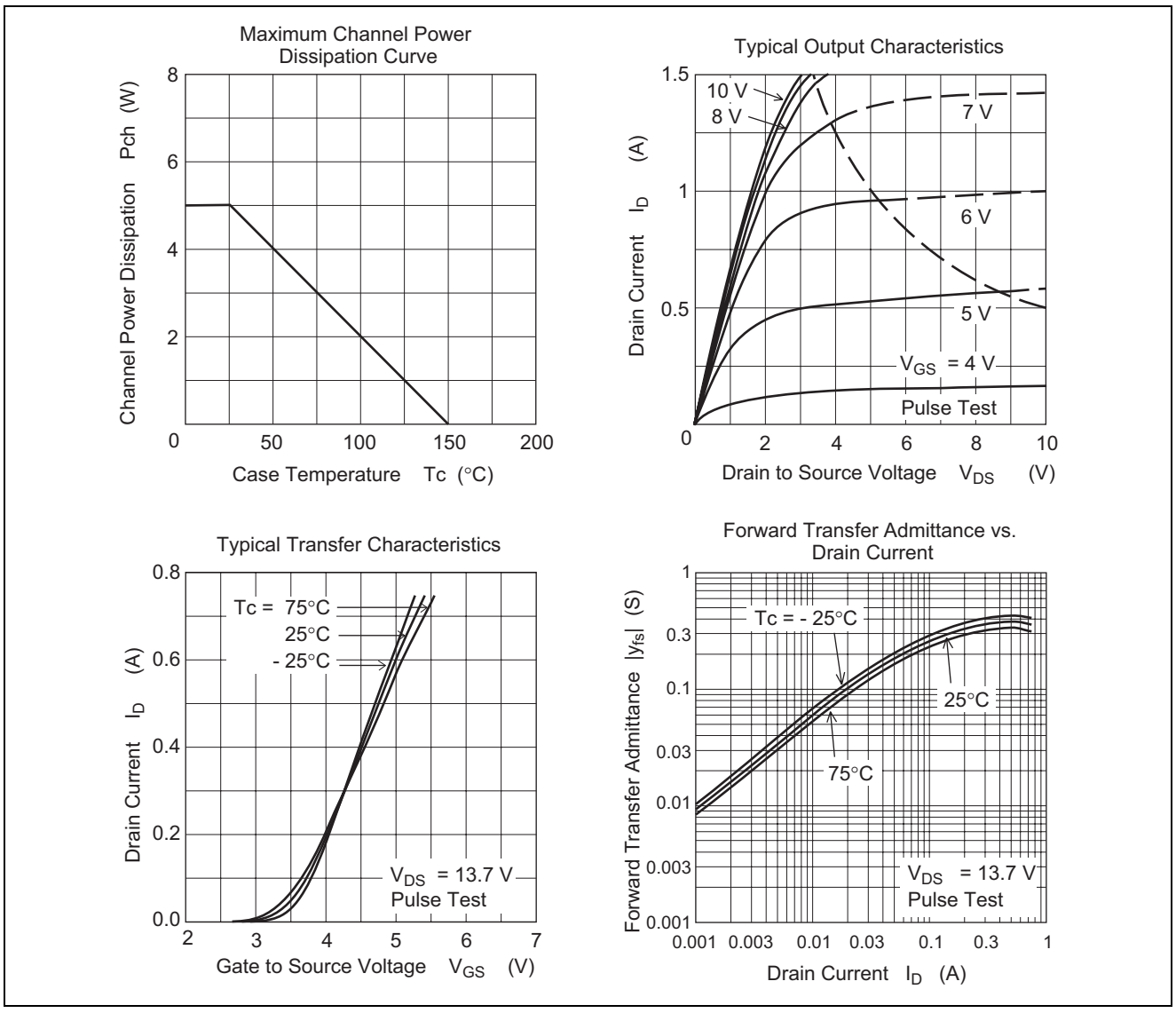
Notes: 1. PW < 1sec, Tch < 150°C
2. Value at Tc = 25°C

Electrical Characteristics

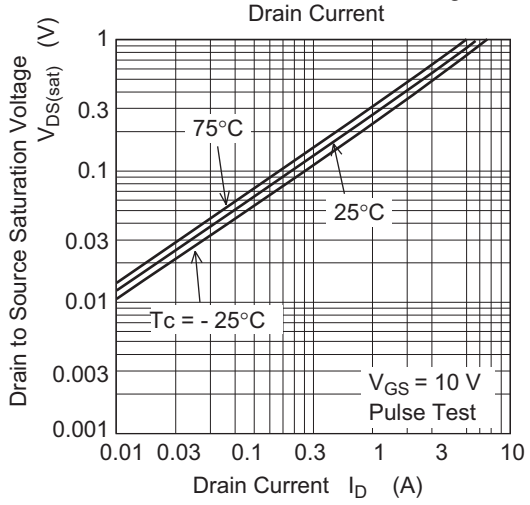
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Zero gate voltage drain current	I_{DSS}	—	—	10	µA	V_{DS} = 13.7 V, V_{GS} = 0
Gate to source leak current	I_{GSS}	—	—	±5	µA	V_{GS} = ±10 V, V_{DS} = 0
Gate to source cutoff voltage	$V_{GS(off)}$	2.3	—	3.1	V	I_D = 1 mA, V_{DS} = 13.7 V
Input capacitance	Ciss	—	10	—	pF	V_{GS} = 5 V, V_{DS} = 0, f = 1 MHz
Output capacitance	Coss	—	3.5	—	pF	V_{DS} = 13.7 V, V_{GS} = 0, f = 1 MHz
Output Power	Pout	1.6	—	—	W	V_{DS} = 13.7 V, I_{DO} = 0.15 A f = 836 MHz, Pin = 25.1 mW
Added Efficiency	ηadd	58	—	—	%	V_{DS} = 13.7 V, I_{DO} = 0.15 A f = 836 MHz, Pin = 25.1 mW

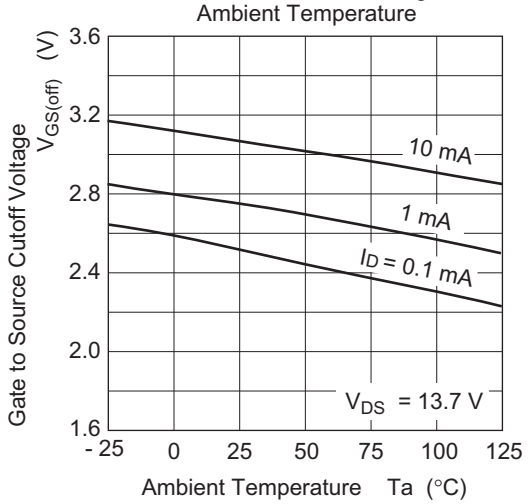
Main Characteristics



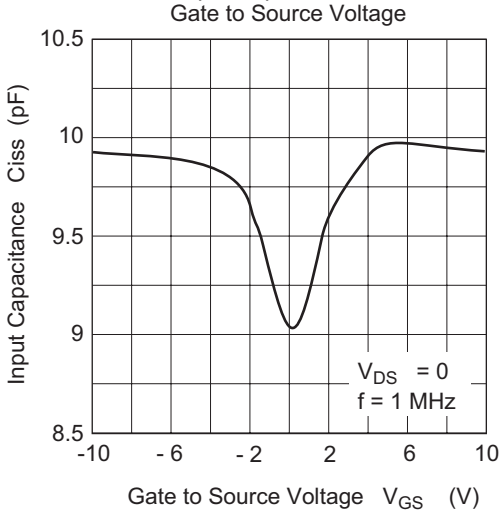
Drain to Source Saturation Voltage vs. Drain Current



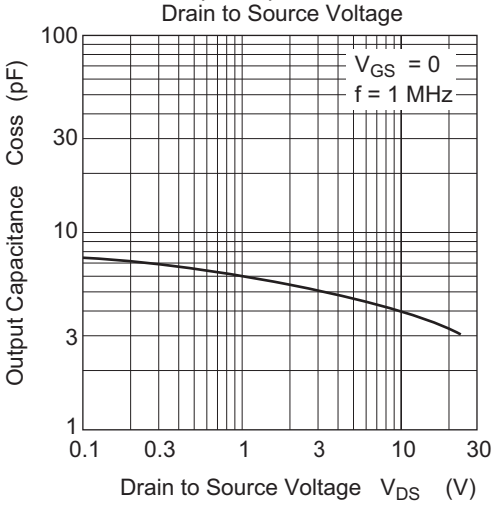
Gate to Source Cutoff Voltage vs. Ambient Temperature



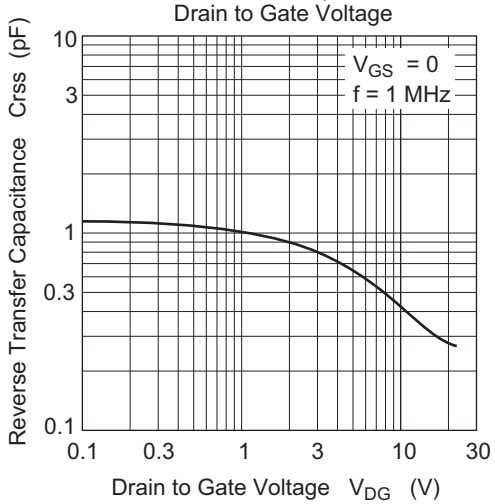
Input Capacitance vs. Gate to Source Voltage



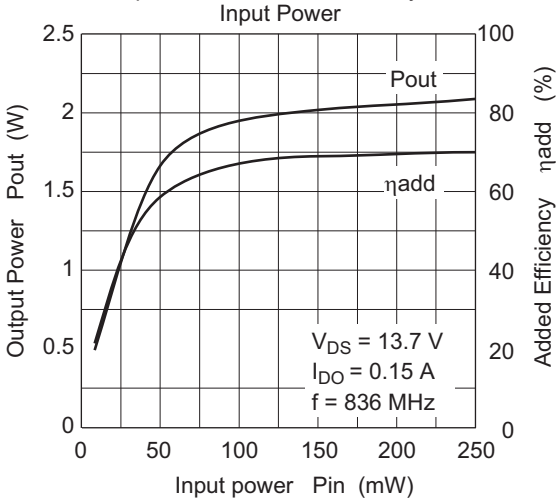
Output Capacitance vs. Drain to Source Voltage



Reverse Transfer Capacitance vs. Drain to Gate Voltage

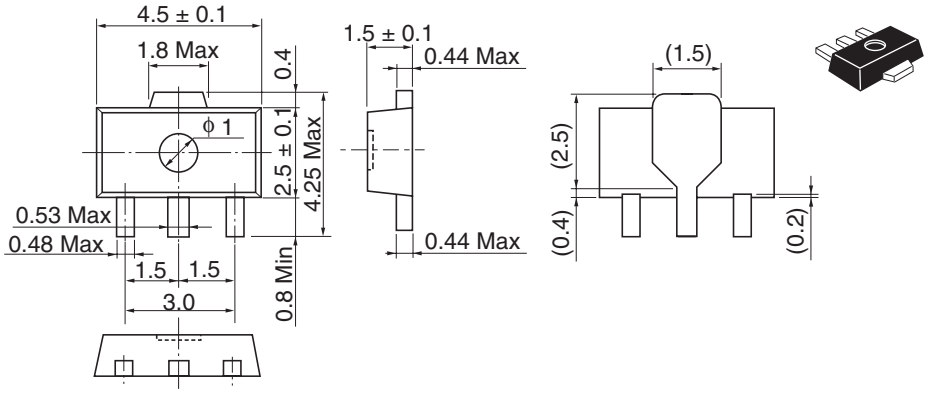


Output Power, Added Efficiency vs. Input Power



Package Dimensions

As of January, 2003
Unit: mm



Package Code	UPAK
JEDEC	—
JEITA	Conforms
Mass (reference value)	0.050 g

Ordering Information

Part Name	Quantity	Shipping Container
2SK3391JX	1000	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.

Renesas Technology Corp. Sales Strategic Planning Div. Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan

RENESAS SALES OFFICES

http://www.renesas.com

Renesas Technology America, Inc.
450 Holger Way, San Jose, CA 95134-1368, U.S.A
Tel: <1> (408) 382-7500 Fax: <1> (408) 382-7501

Renesas Technology Europe Limited.
Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, United Kingdom
Tel: <44> (1628) 585 100, Fax: <44> (1628) 585 900

Renesas Technology Europe GmbH
Dornacher Str. 3, D-85622 Feldkirchen, Germany
Tel: <49> (89) 380 70 0, Fax: <49> (89) 929 30 11

Renesas Technology Hong Kong Ltd.
7/F., North Tower, World Finance Centre, Harbour City, Canton Road, Hong Kong
Tel: <852> 2265-6688, Fax: <852> 2375-6836

Renesas Technology Taiwan Co., Ltd.
FL 10, #99, Fu-Hsing N. Rd., Taipei, Taiwan
Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

Renesas Technology (Shanghai) Co., Ltd.
26/F., Ruijin Building, No.205 Maoming Road (S), Shanghai 200020, China
Tel: <86> (21) 6472-1001, Fax: <86> (21) 6415-2952

Renesas Technology Singapore Pte. Ltd.
1, Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: <65> 6213-0200, Fax: <65> 6278-8001

Colophon .1.0