



# 2SK435

Silicon N-Channel Junction FET

REJ03G0812-0200  
(Previous ADE-208-1171)  
Rev.2.00  
Aug.10.2005

## Application

Low frequency / High frequency amplifier

## Outline

RENESAS Package code: PRSS0003DB-C  
(Package name: TO-92 (2))



- 1. Drain
- 2. Source
- 3. Gate

## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	$V_{DS}$	22	V
Gate to source voltage	$V_{GSO}$	-22	V
Drain current	$I_D$	100	mA
Gate current	$I_G$	10	mA
Channel power dissipation	Pch	300	mW
Channel temperature	Tch	150	°C
Storage temperature	Tstg	-55 to +150	°C

## Electrical Characteristics

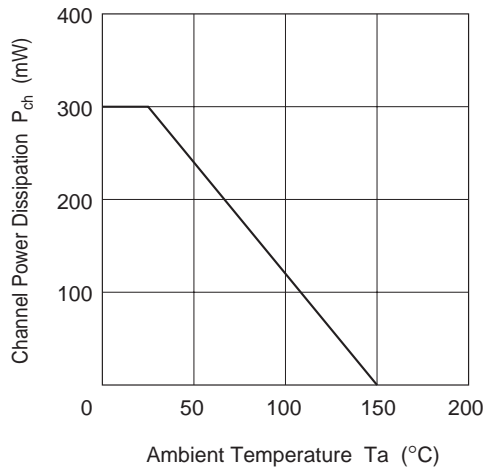
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Gate to source breakdown voltage	$V_{(BR)GSS}$	-22	—	—	V	$I_G = -10 \mu A, V_{DS} = 0$
Gate cutoff current	$I_{GSS}$	—	—	-10	nA	$V_{GS} = -15 V, V_{DS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	—	—	-2.5	V	$V_{DS} = 5 V, I_D = 10 \mu A$
Drain current	$I_{DSS}^{*1}$	12	—	30	mA	$V_{DS} = 5 V, V_{GS} = 0$ , Pulse test
Forward transfer admittance	$ y_{fs} $	20	—	—	mS	$V_{DS} = 5 V, I_D = 10 mA$ , $f = 1 kHz$
Input capacitance	$C_{iss}$	—	9.0	11.0	pF	$V_{DS} = 5 V, V_{GS} = 0$ , $f = 1 MHz$
Reverse transfer capacitance	$C_{rss}$	—	2.8	4.0	pF	$V_{DS} = 5 V, V_{GS} = 0$ , $f = 1 MHz$
Noise figure	NF	—	0.5	3.0	dB	$V_{DS} = 5 V, I_D = 1 mA$ , $f = 1 kHz, R_g = 1 k\Omega$

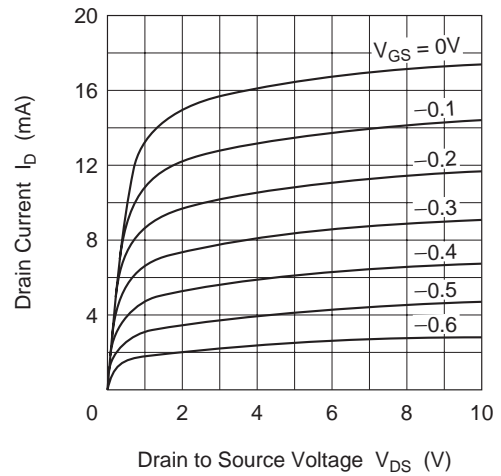
Note: 1. The 2SK435 is grouped by  $I_{DSS}$  as follows.

Grade	C	D
$I_{DSS}$	12 to 22	18 to 30

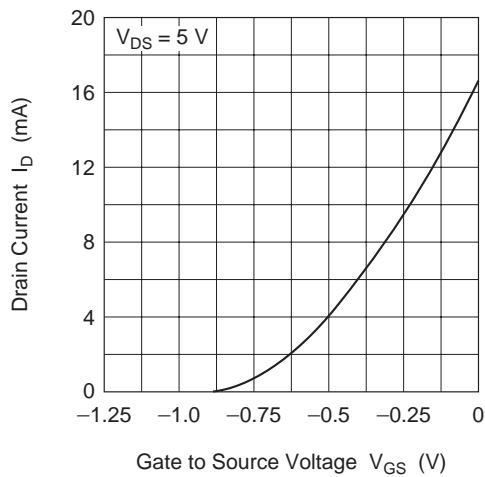
Maximum Channel Dissipation Curve



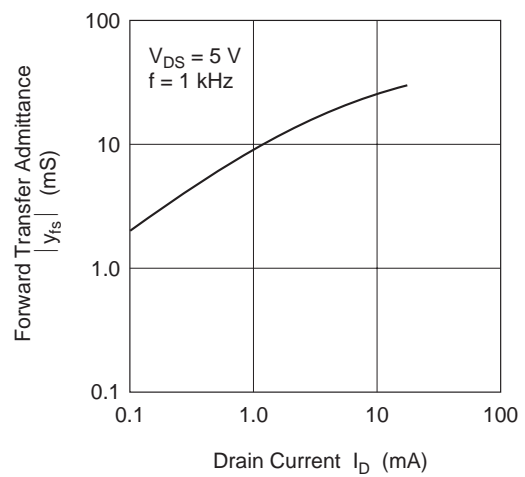
Typical Output Characteristics



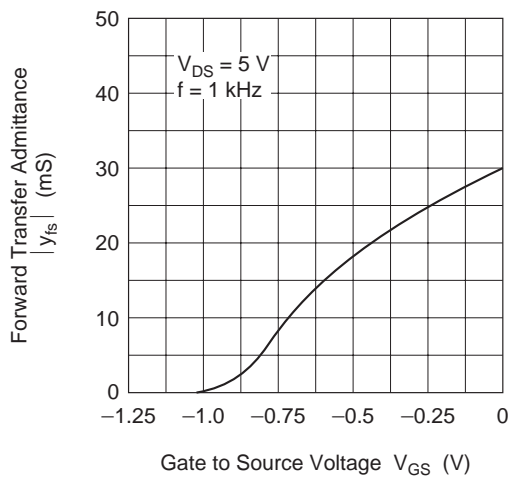
Typical Transfer Characteristics



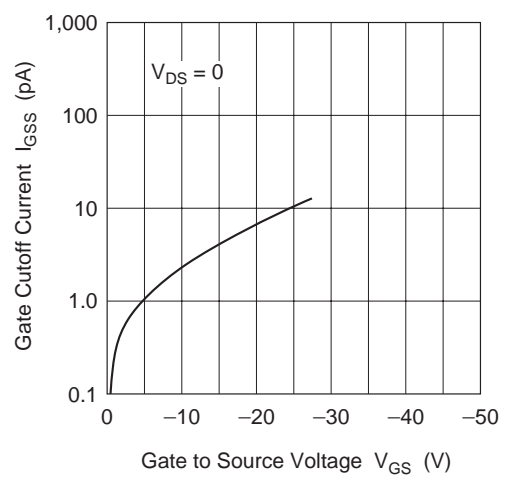
Forward Transfer Admittance vs. Drain Current



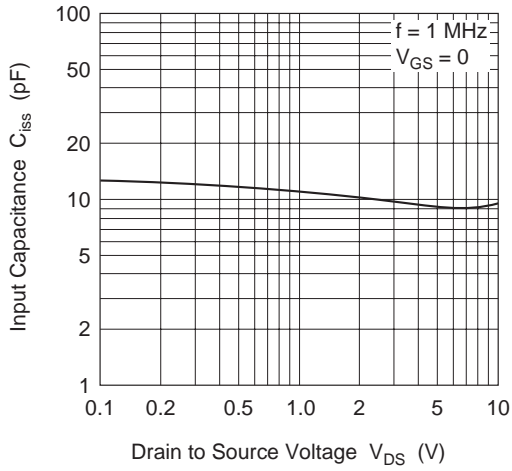
Forward Transfer Admittance vs. Gate to Source Voltage



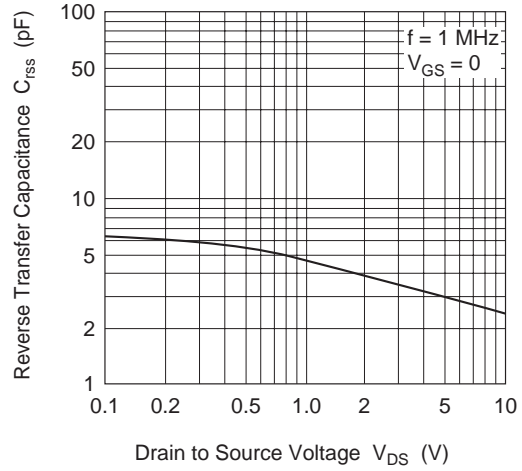
Gate Cutoff Current vs. Gate to Source Voltage



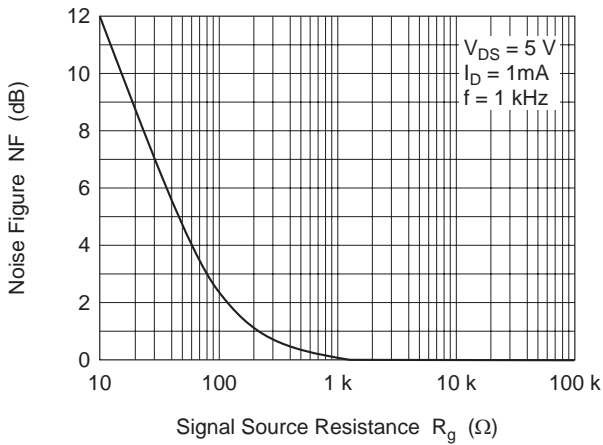
Input Capacitance vs. Drain to Source Voltage



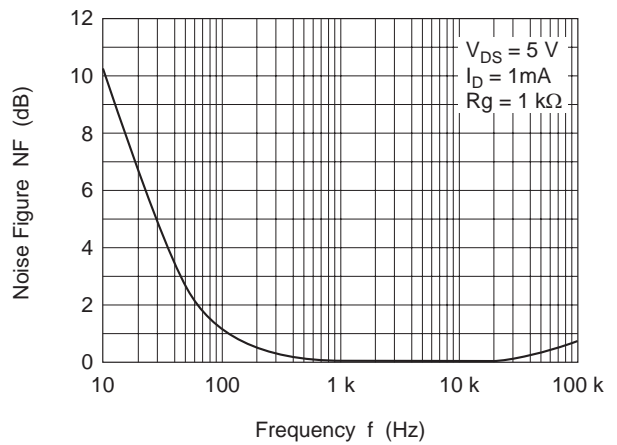
Reverse Transfer Capacitance vs. Drain to Source Voltage



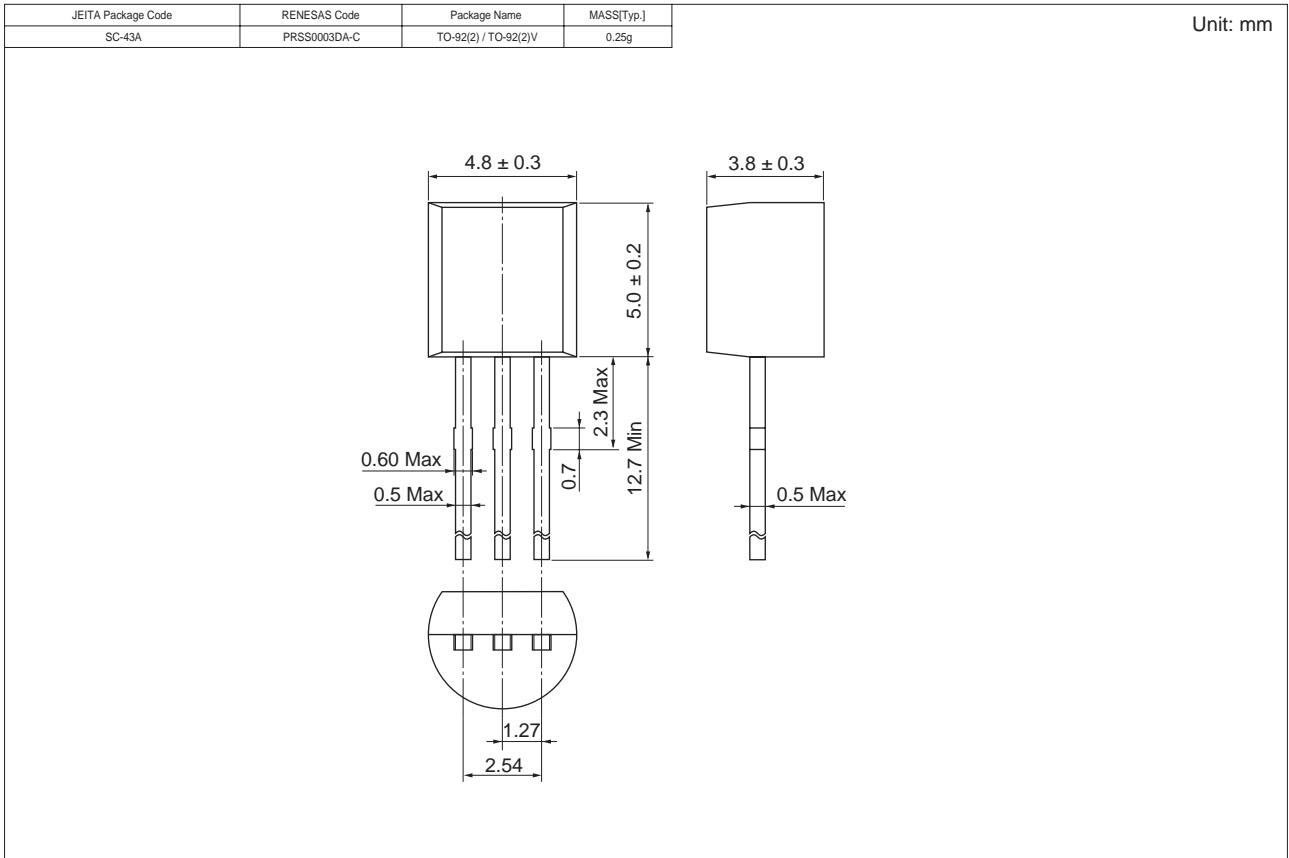
Noise Figure vs. Signal Source Resistance



Noise Figure vs. Frequency



Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SK435CTZ	2500	Radial taping, Hold box
2SK435DTZ	2500	Radial taping, Hold box

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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