

**2SK2394**

## Low-Noise HF Amplifier Applications

### Applications

- AM tuner RF amplifier.
- Low-noise amplifier.

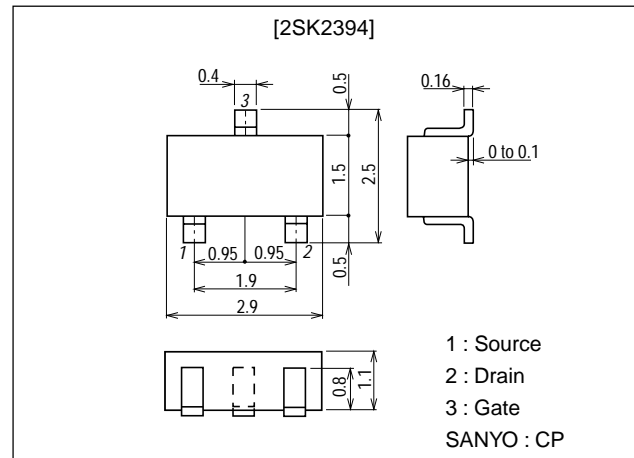
### Features

- Large  $|y_{fs}|$ .
- Small Ciss.
- Small-sized package permitting 2SK2394-applied sets to be made small slim.
- Ultralow noise figure.

### Package Dimensions

unit:mm

2050A



### Specifications

#### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSX}$		15	V
Gate-to-Drain Voltage	$V_{GDS}$		-15	V
Gate Current	$I_G$		10	mA
Drain Current	$I_D$		50	mA
Allowable Power Dissipation	$P_D$		200	mW
Junction Temperature	$T_J$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

#### Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G = -10\mu\text{A}$ , $V_{DS} = 0$	-15			V
Gate Cutoff Current	$I_{GSS}$	$V_{GS} = -10\text{V}$ , $V_{DS} = 0$			-1.0	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 5\text{V}$ , $I_D = 100\mu\text{A}$	-0.3	-0.7	-1.5	V
Drain Current	$I_{DSS}$	$V_{DS} = 5\text{V}$ , $V_{GS} = 0$	6.0*		32.0*	mA
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 5\text{V}$ , $V_{GS} = 0$ , $f = 1\text{kHz}$	20	38		mS
Input Capacitance	Ciss	$V_{DS} = 5\text{V}$ , $V_{GS} = 0$ , $f = 1\text{MHz}$		10.0		pF
Reverse Transfer Capacitance	Crss	$V_{DS} = 5\text{V}$ , $V_{GS} = 0$ , $f = 1\text{MHz}$		2.9		pF
Noise Figure	NF	$V_{DS} = 5\text{V}$ , $R_g = 1\text{k}\Omega$ , $I_D = 1\text{mA}$ , $f = 1\text{kHz}$		1.0		dB

\* : The 2SK2394 is classified by  $I_{DSS}$  as follows : (unit : mA)

6.0	5	12.0	10.0	6	20.0	16.0	7	32.0
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Marking : YJ

 $I_{DSS}$  rank : 5, 6, 7

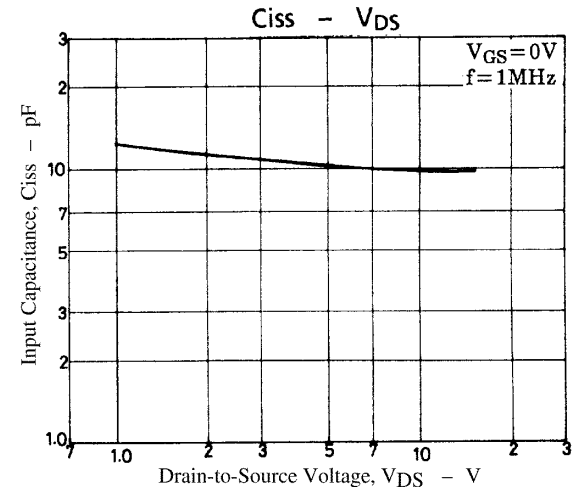
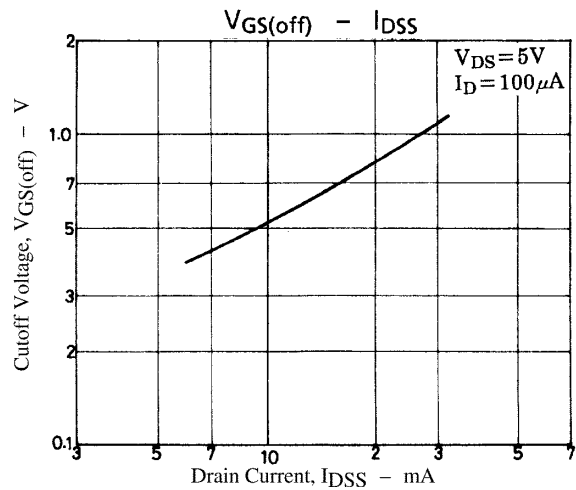
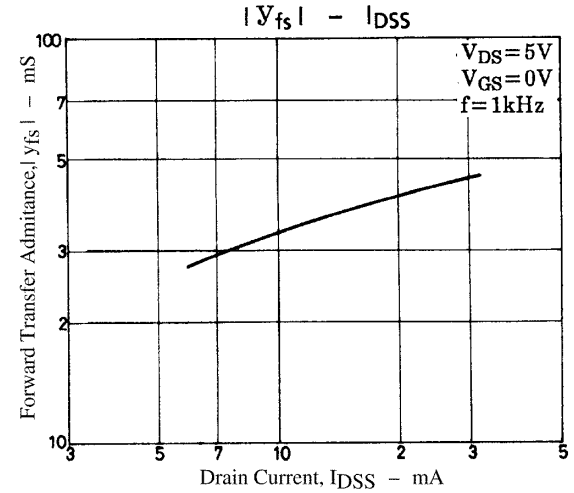
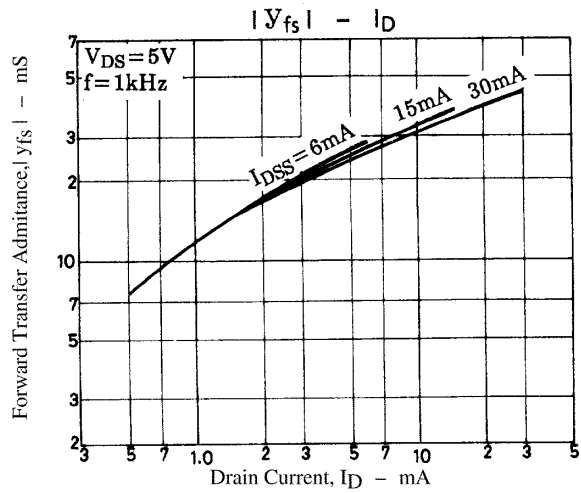
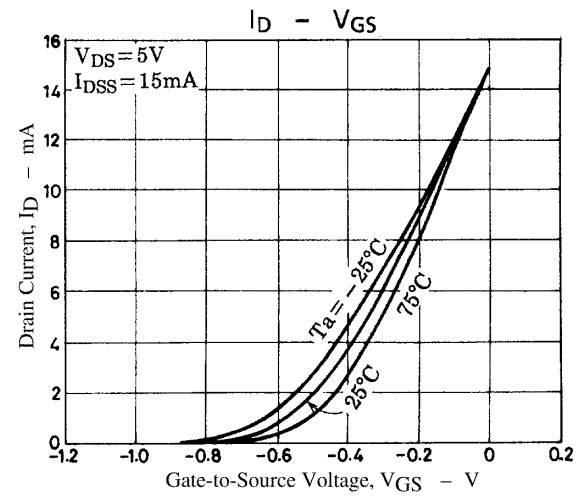
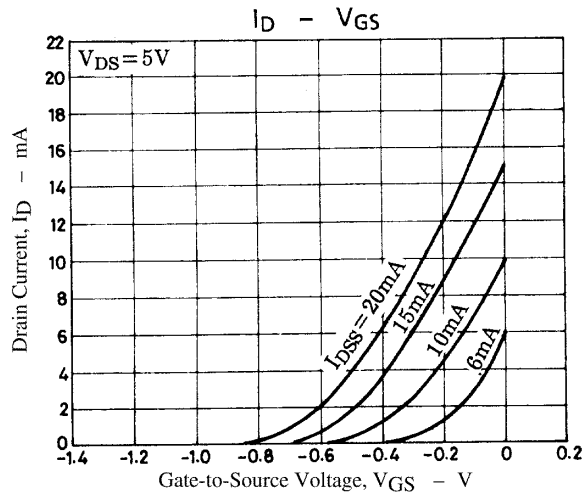
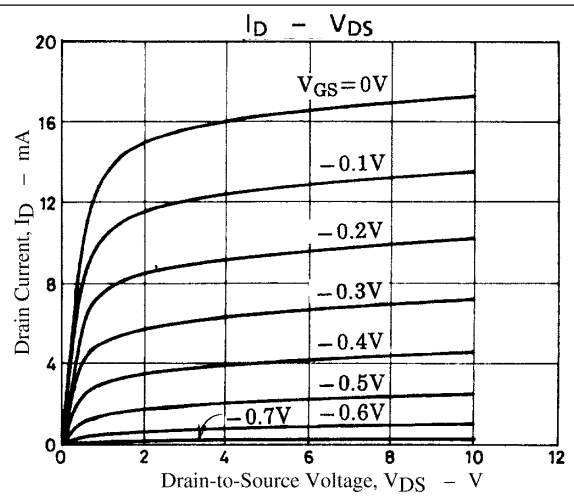
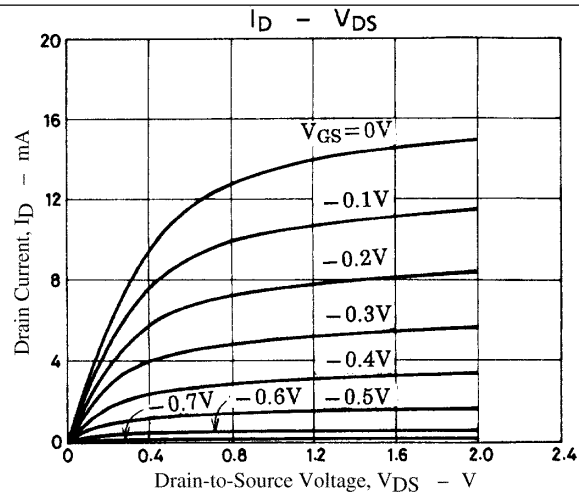
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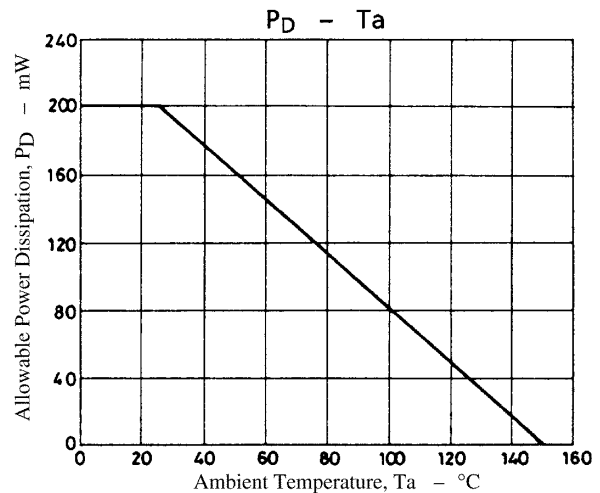
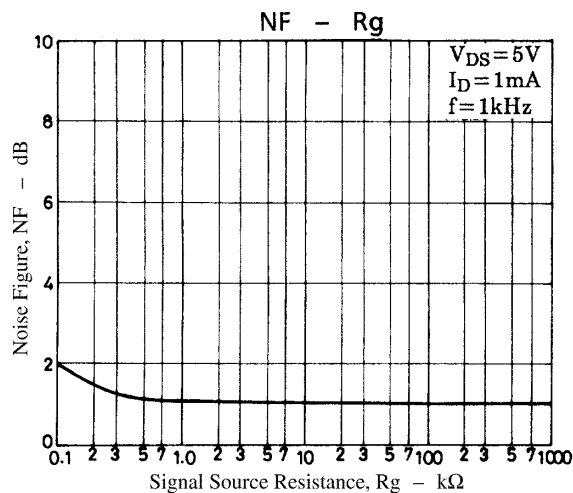
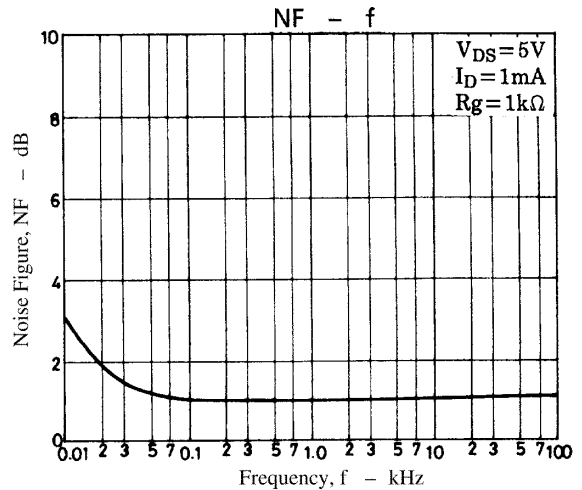
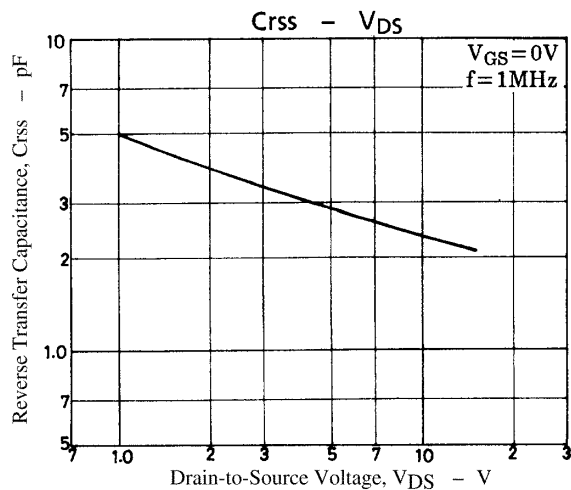
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**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

22299TS/73094MT (KOTO) BX-1128 No.4839-1/3





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