



# 2SK2394

## Low-Noise HF Amplifier Applications

An ON Semiconductor Company

### Applications

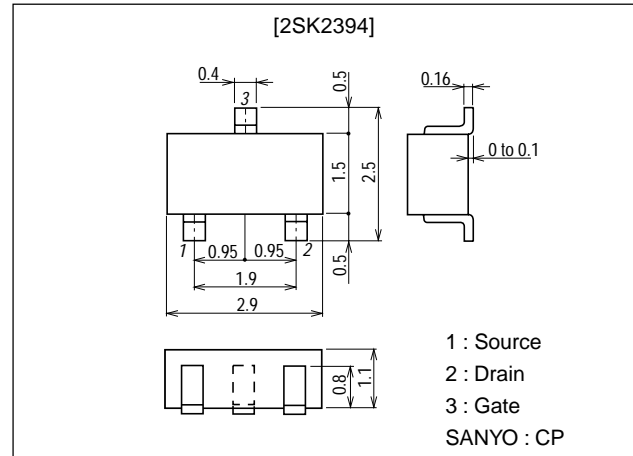
- AM tuner RF amplifier.
- Low-noise amplifier.

### 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 Ta = 25°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	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

#### Electrical Characteristics at Ta = 25°C

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

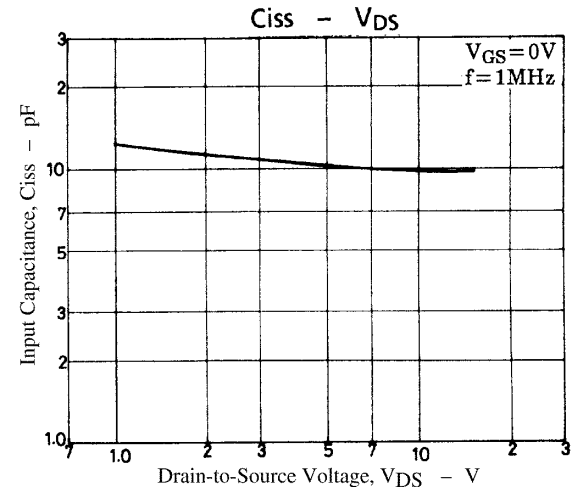
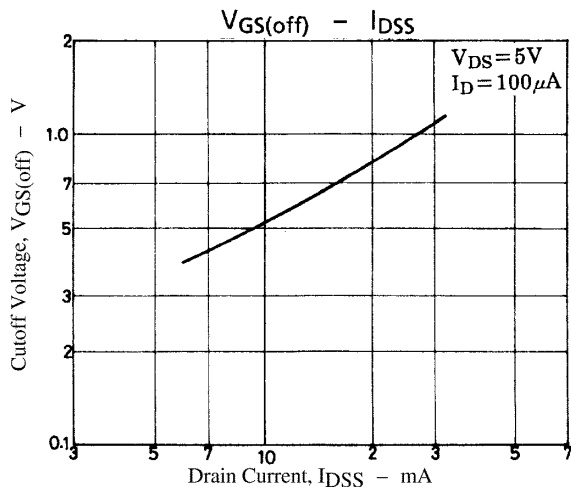
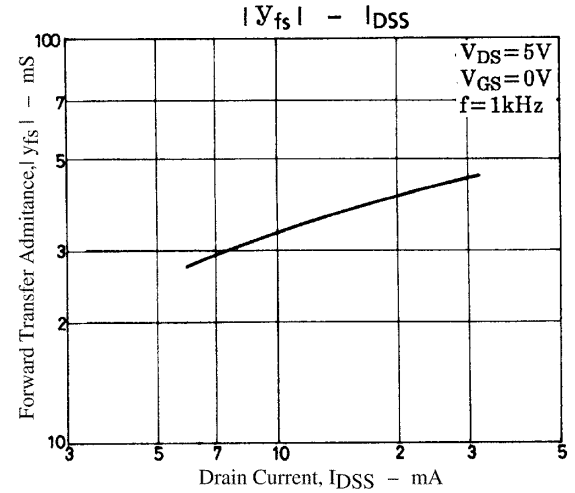
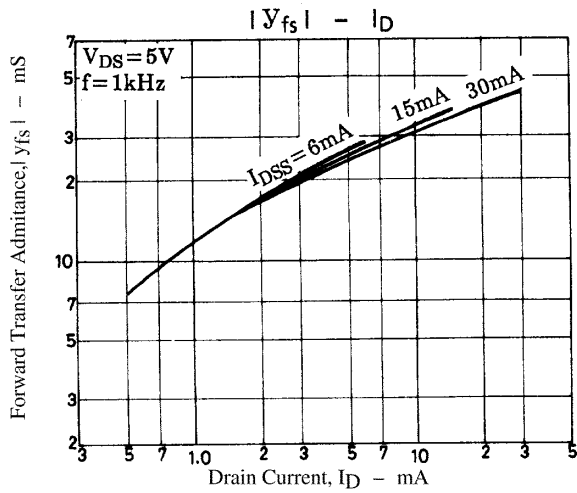
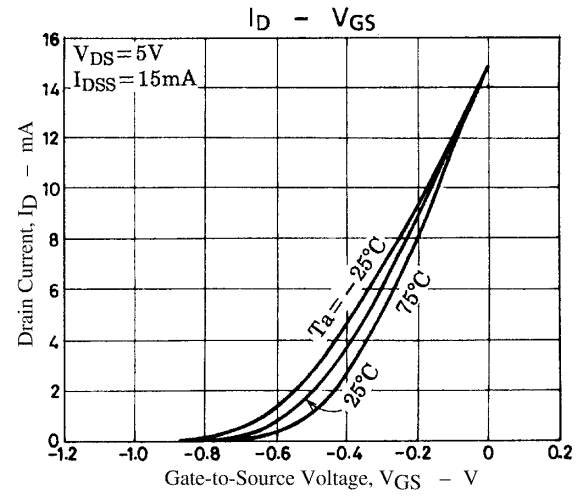
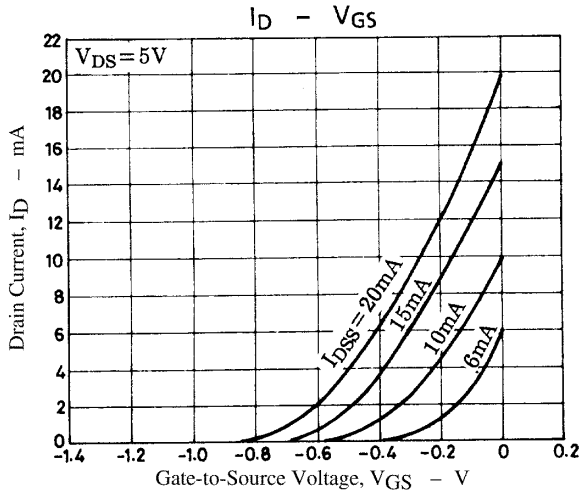
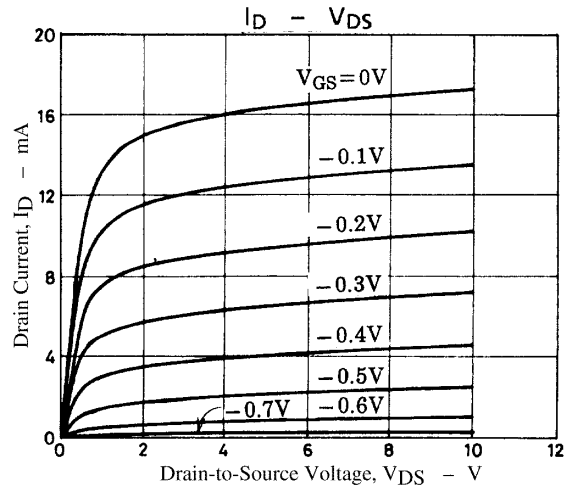
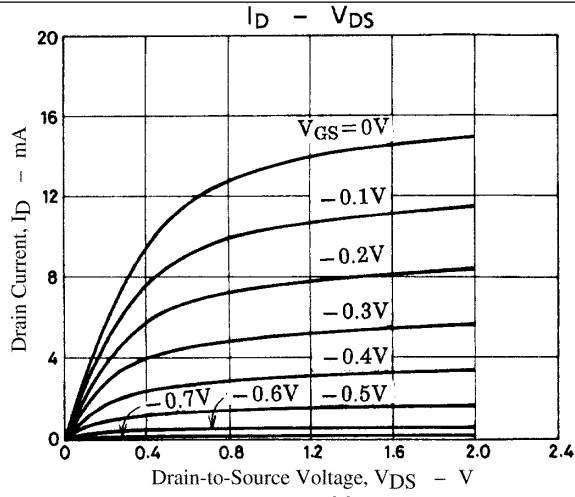
$I_{DSS}$  rank : 5, 6, 7

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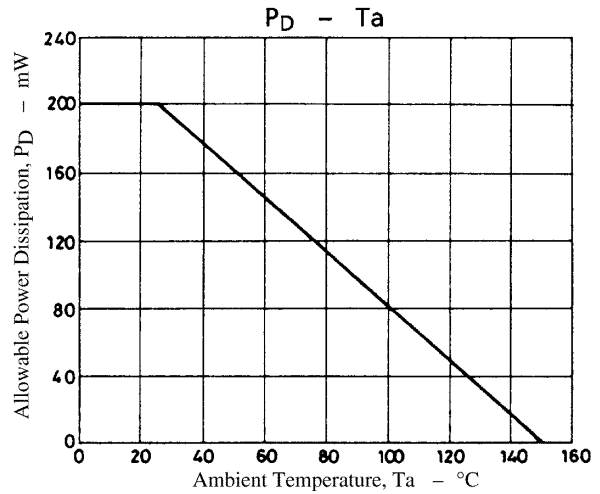
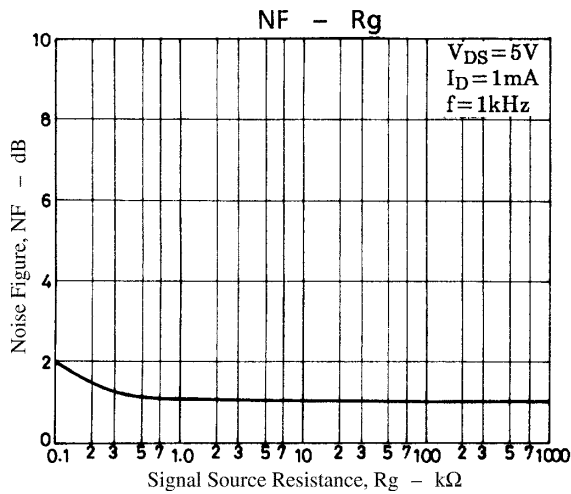
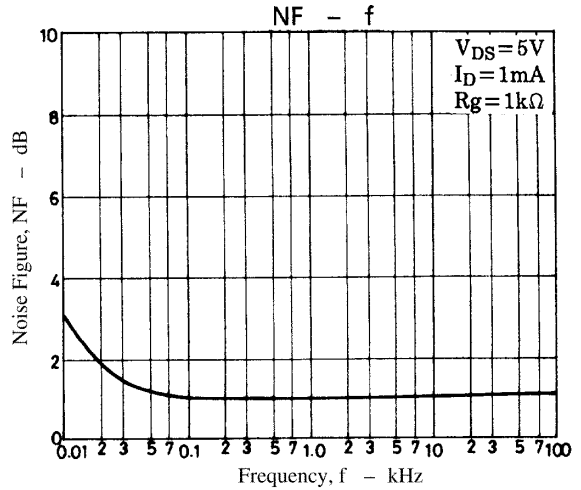
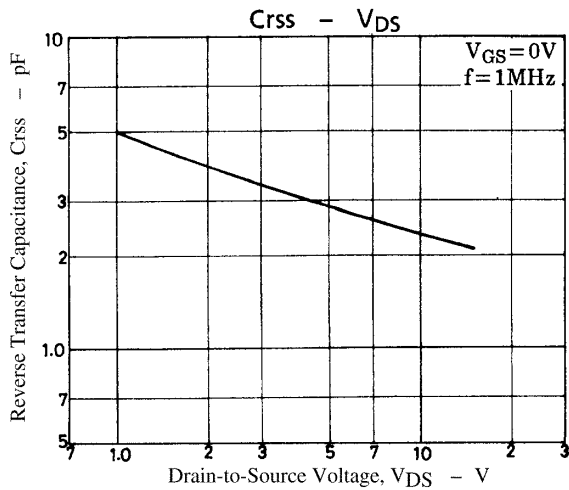
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# 2SK2394



## 2SK2394



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