



## Low-Noise HF Amplifier Applications

### Applications

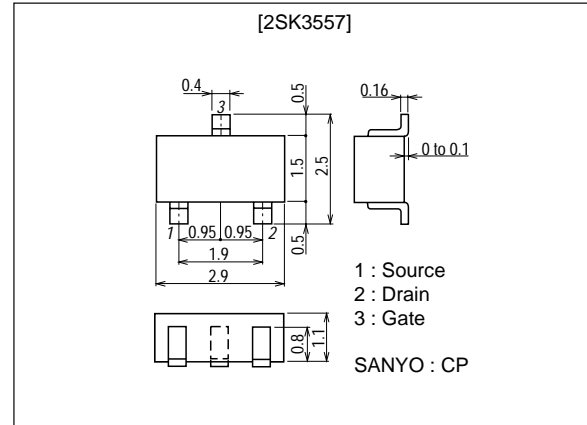
- AM tuner RF amplifier.
- Low noise amplifier.

### Features

- Large  $|y_{fs}|$ .
- Small Ciss.
- Ultrasmall-sized package permitting 2SK3557-applied sets to be made smaller and slimer.
- 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

Marking : IR

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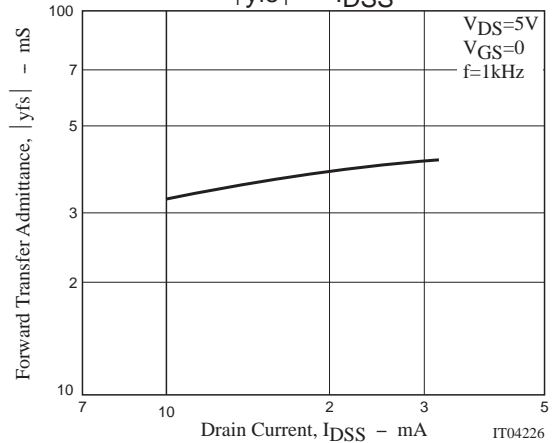
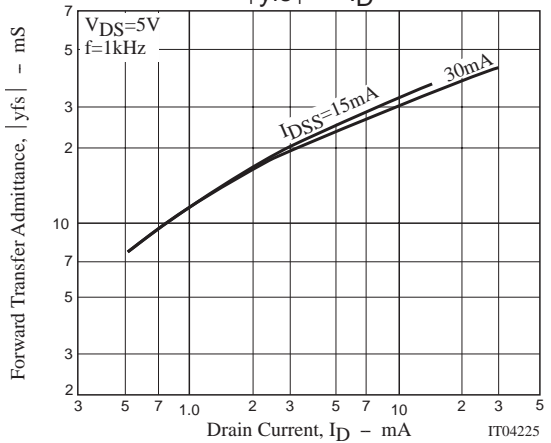
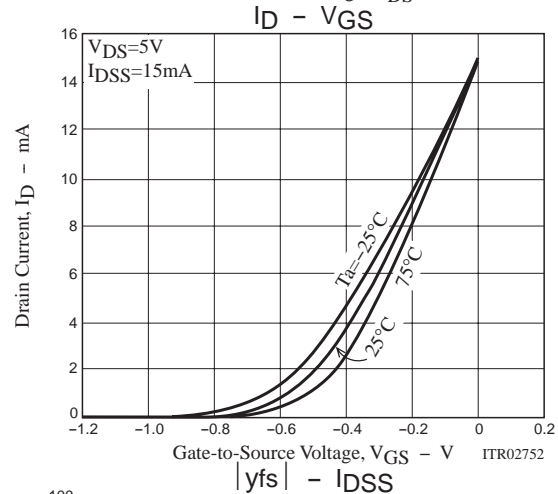
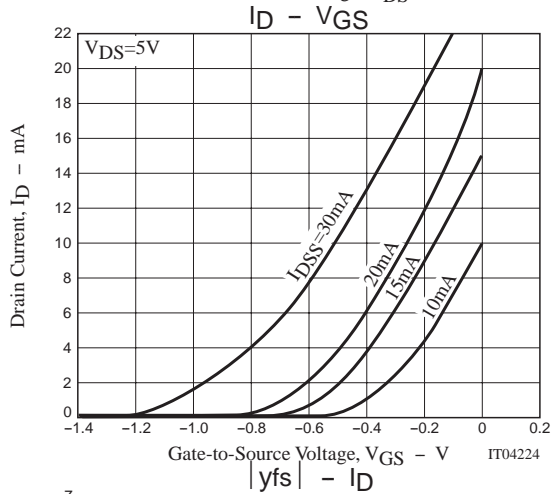
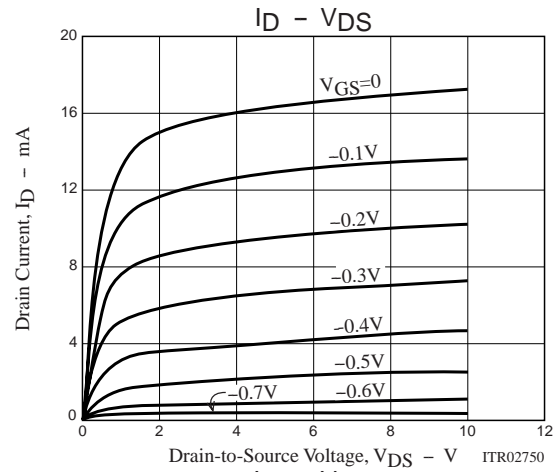
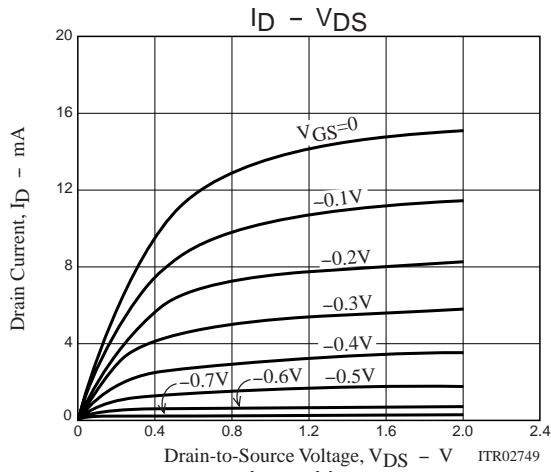
# 2SK3557

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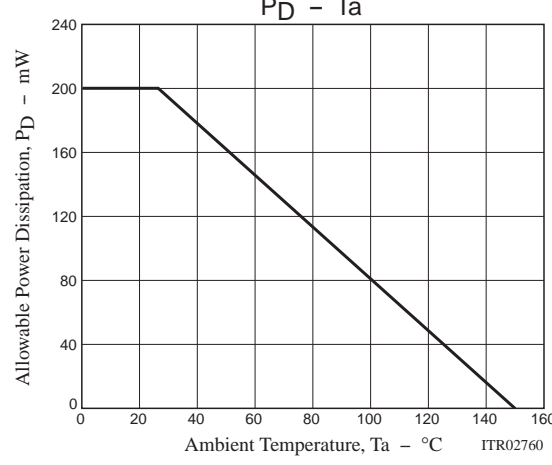
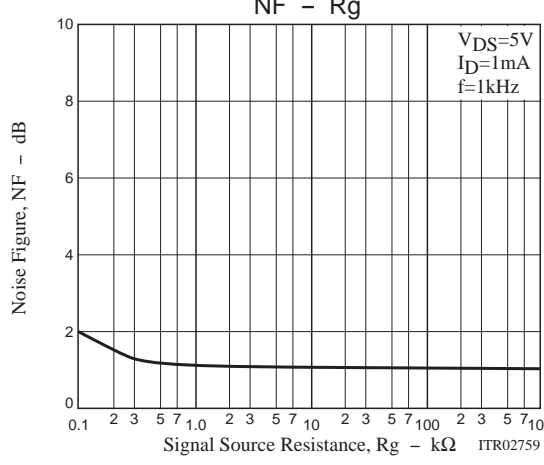
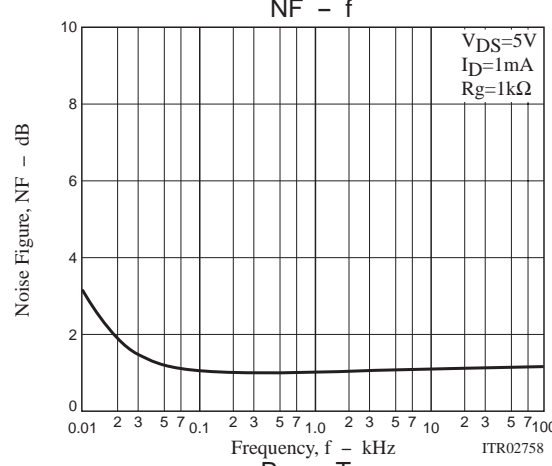
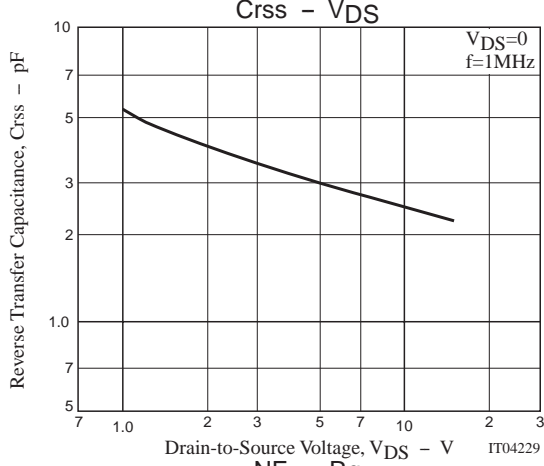
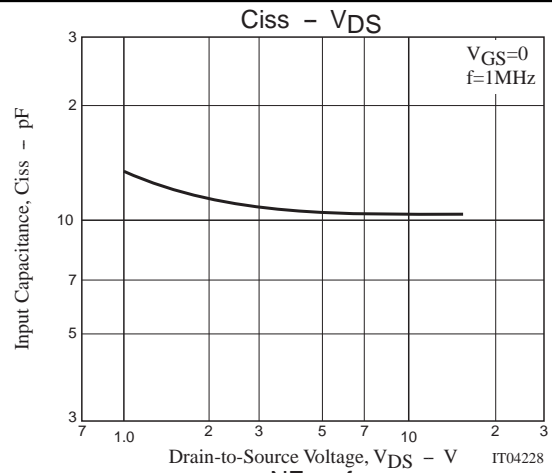
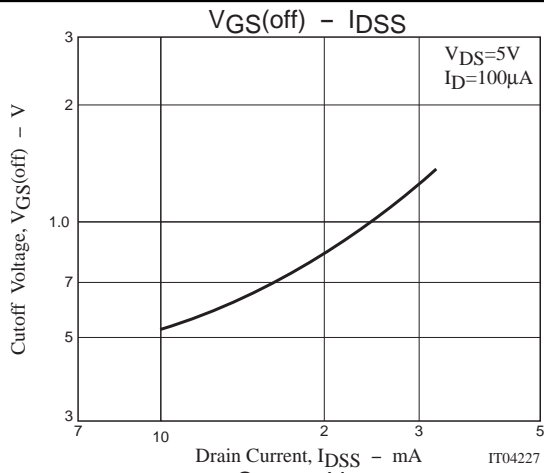
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain Current	$I_{DSS}$	$V_{DS}=5V, V_{GS}=0$	10*		32*	mA
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=5V, V_{GS}=0, f=1kHz$	24	35		mS
Input Capacitance	$C_{iss}$	$V_{DS}=5V, V_{GS}=0, f=1MHz$		10.0		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=5V, V_{GS}=0, f=1MHz$		2.9		pF
Noise Figure	NF	$V_{DS}=5V, R_g=1k\Omega, I_D=1mA, f=1kHz$		1.0		dB

\*The 2SK3557 is classified by  $I_{DSS}$  as follows : (unit : mA)

Rank	6	7
$I_{DSS}$	10.0 to 20.0	16.0 to 32.0



# 2SK3557



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