



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

N-Channel Junction Silicon FET

## 2SK3557 — High-Frequency Low-Noise Amplifier Applications

### Applications

- AM tuner RF amplification
- Low noise amplifier

### Features

- Large  $|y_{fs}|$
- Small  $C_{iss}$
- Ultrasmall-sized package permitting 2SK3557-applied sets to be made smaller and slimer
- Ultralow noise figure

### Specifications

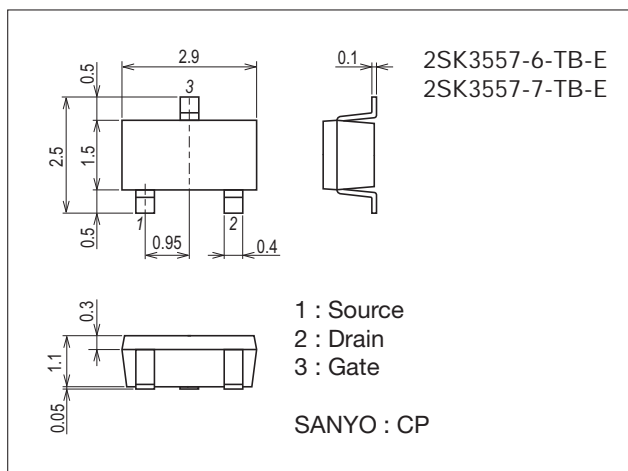
Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$

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	$^\circ\text{C}$

### Package Dimensions

unit : mm (typ)

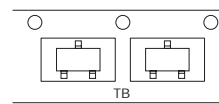
7013A-011



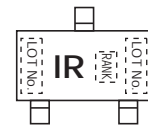
### Product & Package Information

- Package : CP
- JEITA, JEDEC : SC-59, TO-236, SOT-23, TO-236AB
- Minimum Packing Quantity : 3,000 pcs./reel

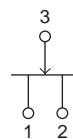
### Packing Type: TL



### Marking



### Electrical Connection



# 2SK3557

## Electrical Characteristics at Ta=25°C

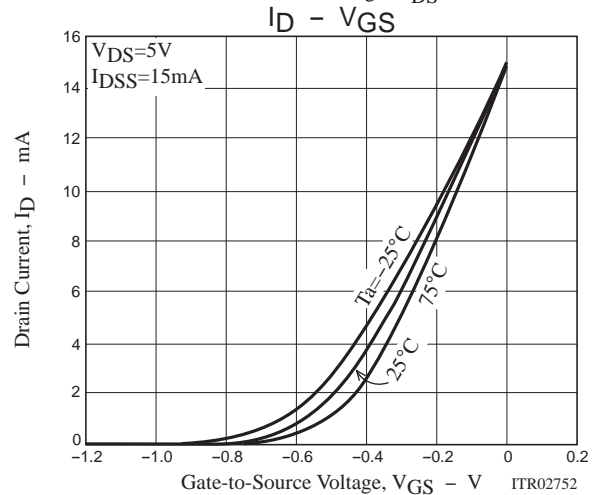
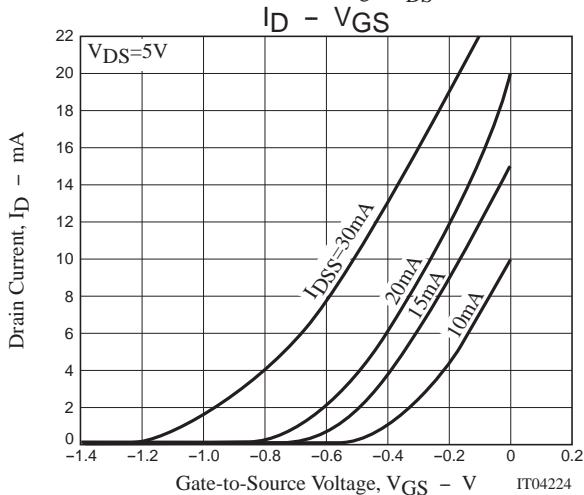
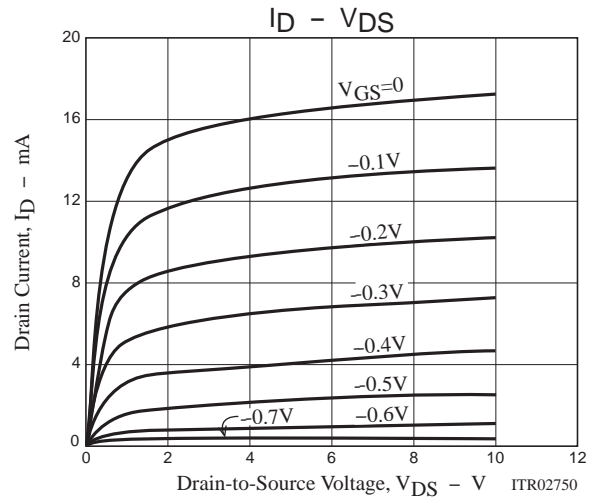
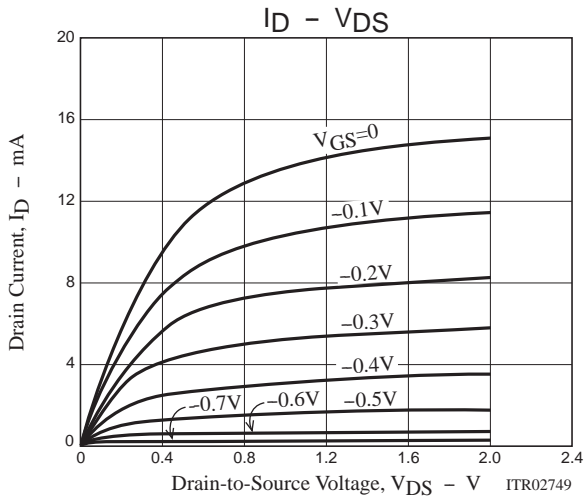
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	V(BR)GD	I <sub>G</sub> =-10μA, V <sub>DS</sub> =0V	-15			V
Gate Cutoff Current	I <sub>GSS</sub>	V <sub>GS</sub> =-10V, V <sub>DS</sub> =0V			-1.0	nA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =5V, I <sub>D</sub> =100μA	-0.3	-0.7	-1.5	V
Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =5V, V <sub>GS</sub> =0V	10*		32*	mA
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>DS</sub> =5V, V <sub>GS</sub> =0V, f=1kHz	24	35		mS
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =5V, V <sub>GS</sub> =0V, f=1MHz		10.0		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>DS</sub> =5V, V <sub>GS</sub> =0V, f=1MHz		2.9		pF
Noise Figure	NF	V <sub>DS</sub> =5V, R <sub>G</sub> =1kΩ, I <sub>D</sub> =1mA, f=1kHz		1.0		dB

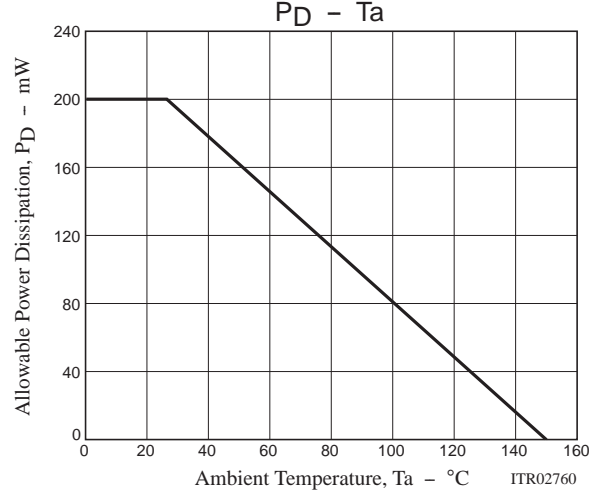
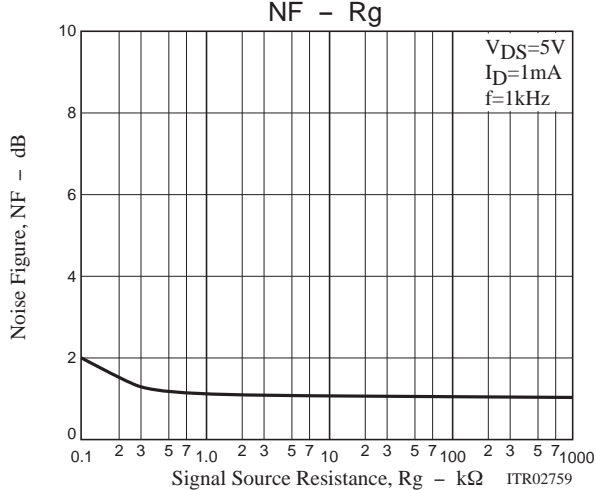
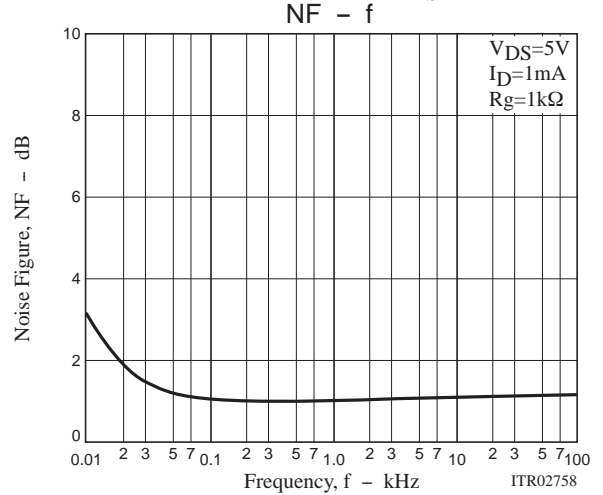
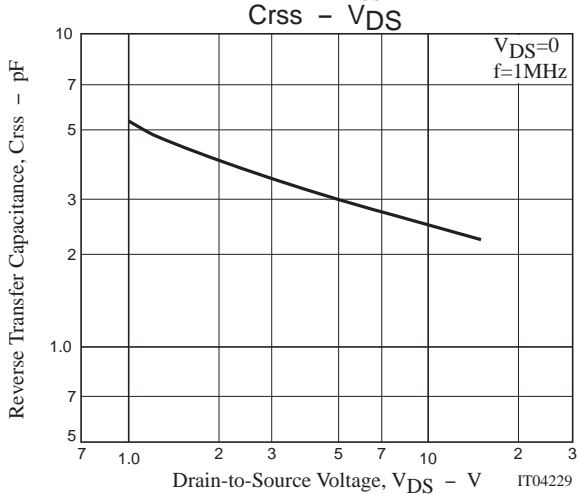
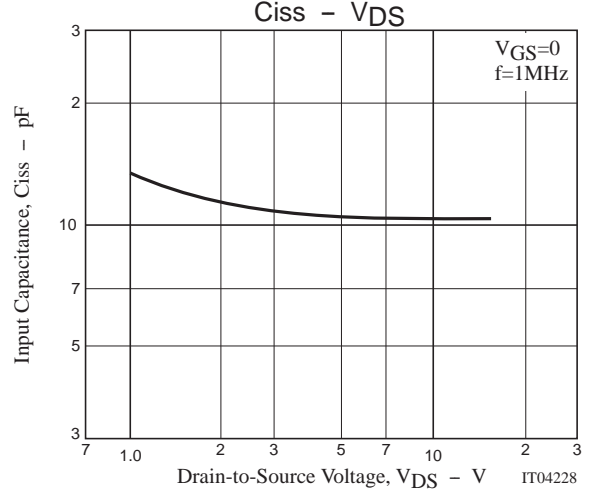
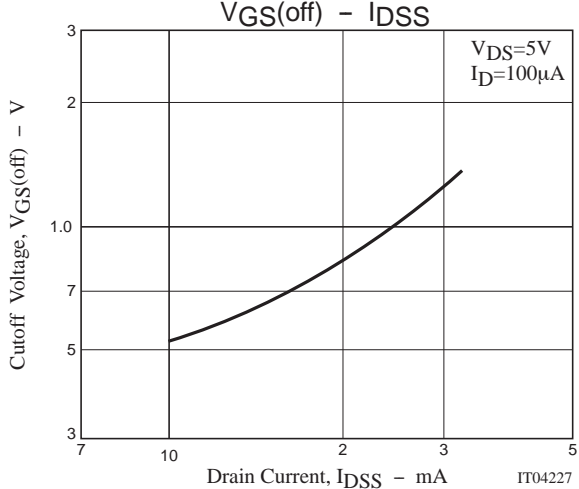
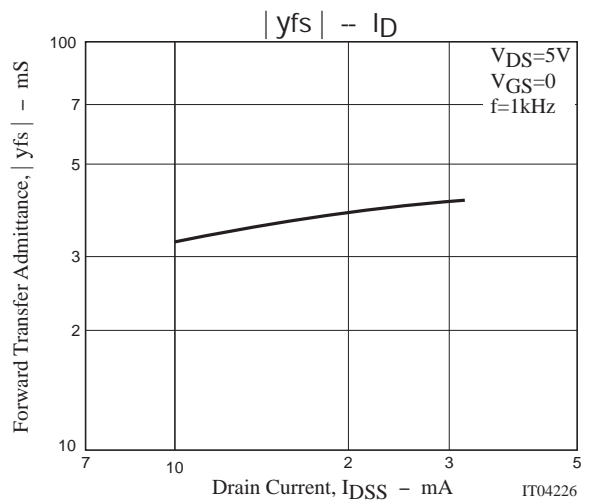
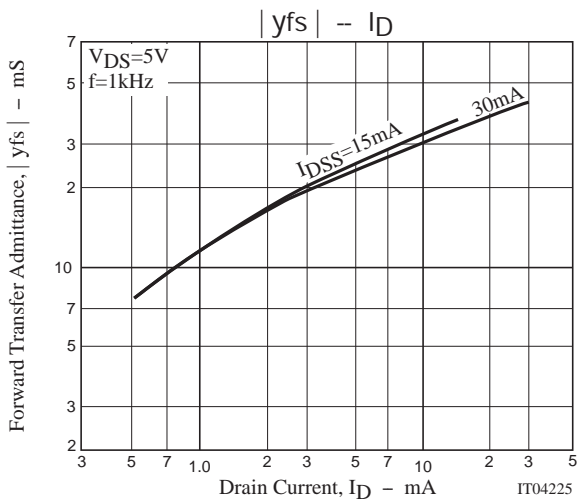
\* : The 2SK3557 is classified by I<sub>DSS</sub> as follows : (unit : mA)

Rank	6	7
I <sub>DSS</sub>	10.0 to 20.0	16.0 to 32.0

## Ordering Information

Device	Package	Shipping	memo
2SK3557-6-TB-E	CP	3,000pcs./reel	Pb Free
2SK3557-7-TB-E	CP	3,000pcs./reel	





Embossed Taping Specification

2SK3557-6-TB-E, 2SK3557-7-TB-E

1. Packing Format

Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
CP	CP	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Packing method



Reel label



NOTE (1)

The LEAD FREE \* description shows that the surface treatment of the terminal is lead free.

Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

2-1. Carrier tape size (unit:mm)



2-2. Device placement direction



Those with one electrode terminal on the feed hole side.....TB

# 2SK3557

## Outline Drawing

2SK3557-6-TB-E, 2SK3557-7-TB-E



## Land Pattern Example



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