



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

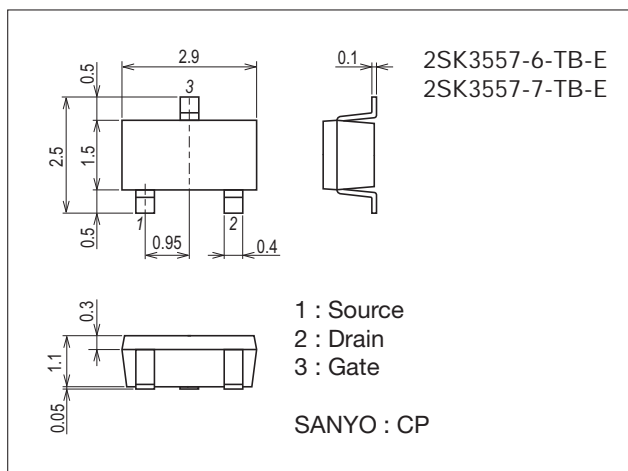
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

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)

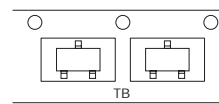
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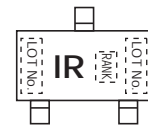
Product & Package Information

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

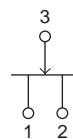
Packing Type: TL



Marking



Electrical Connection



2SK3557

Electrical Characteristics at Ta=25°C

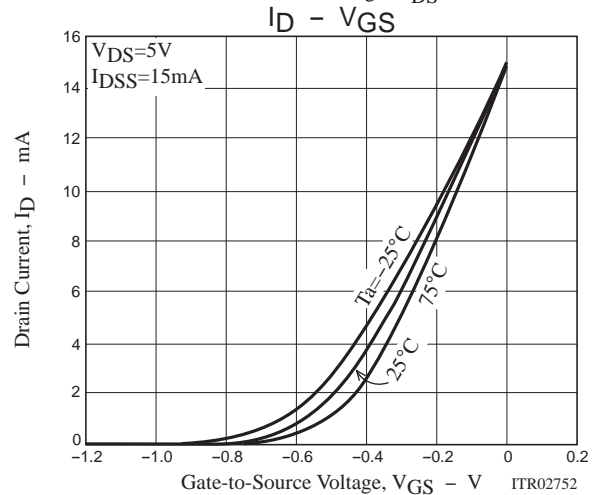
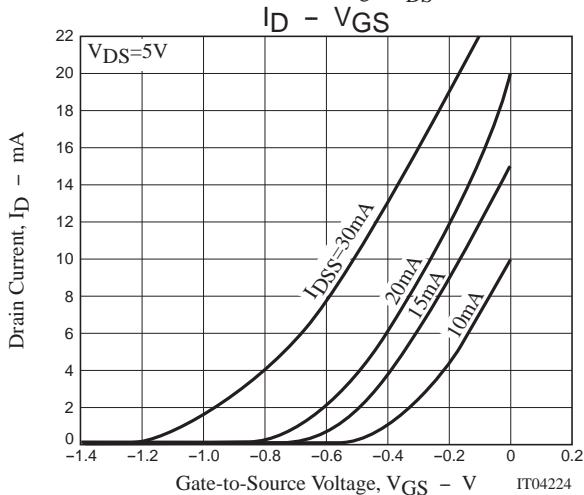
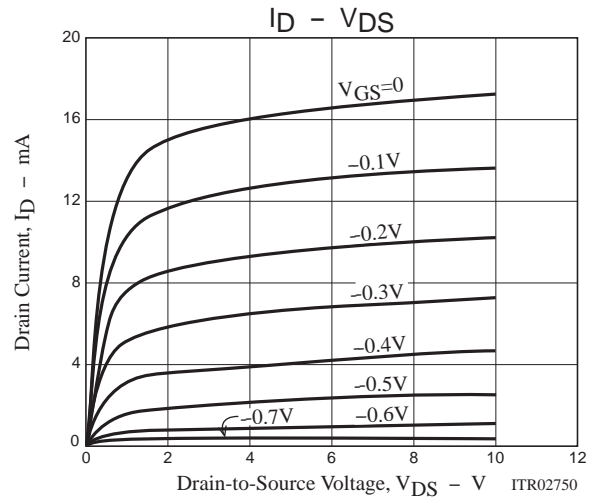
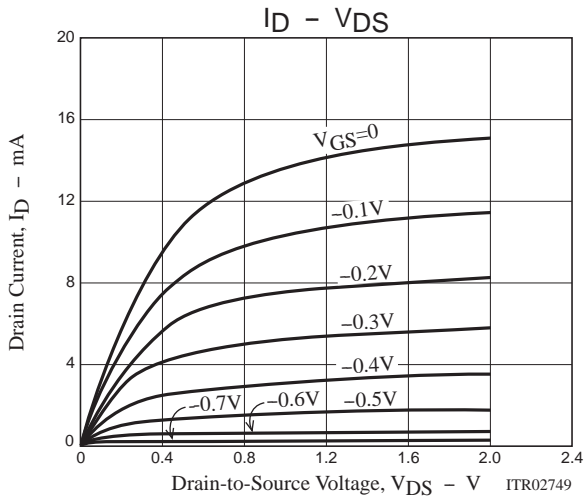
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	V(BR)GDS	I _G =-10μA, V _{DS} =0V	-15			V
Gate Cutoff Current	I _{GSS}	V _{GS} =-10V, V _{DS} =0V			-1.0	nA
Cutoff Voltage	V _{GS(off)}	V _{DS} =5V, I _D =100μA	-0.3	-0.7	-1.5	V
Drain Current	I _{DSS}	V _{DS} =5V,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

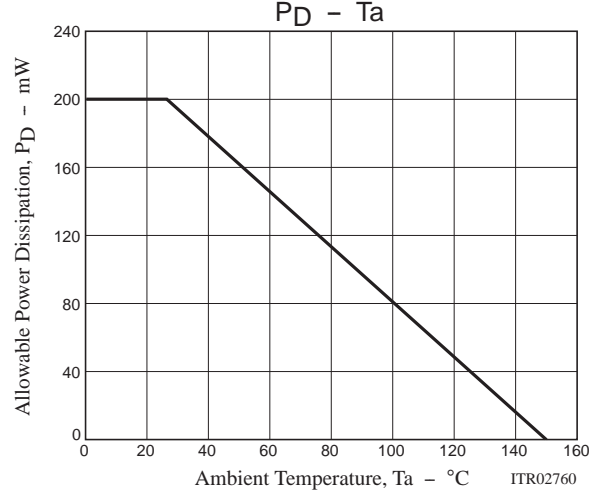
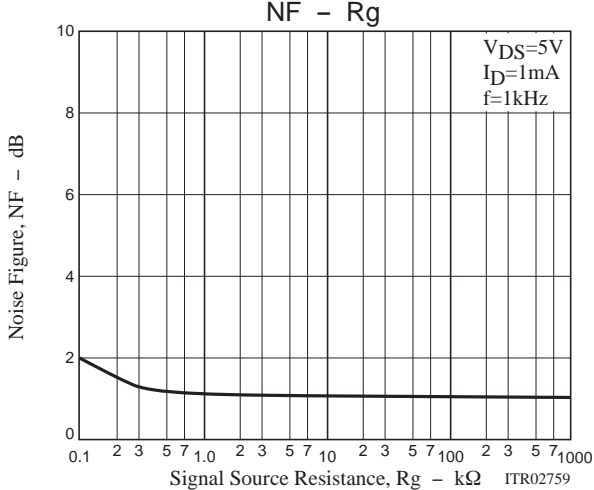
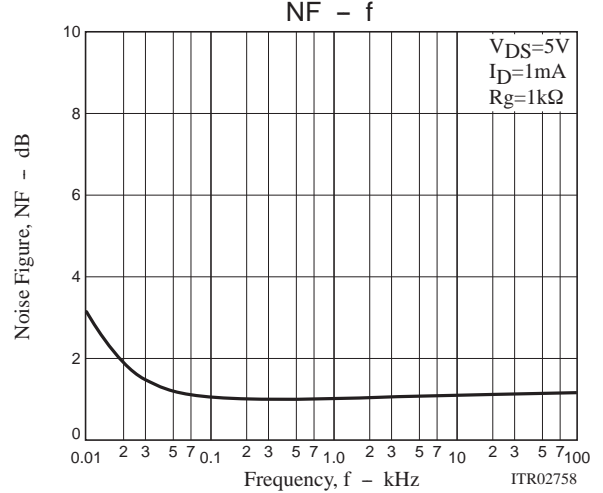
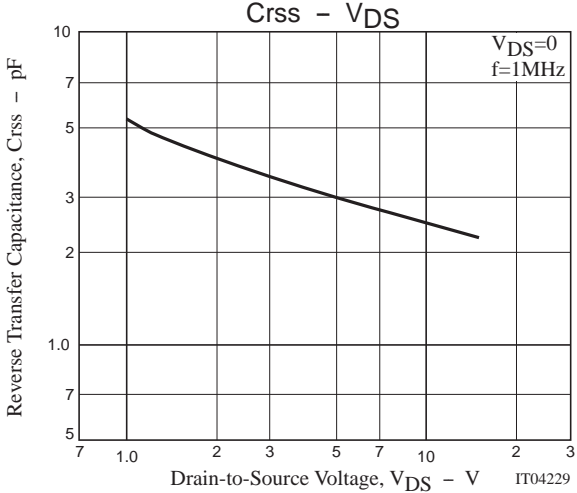
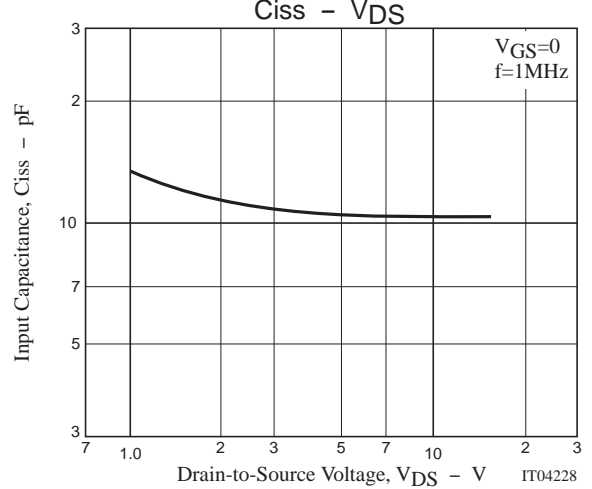
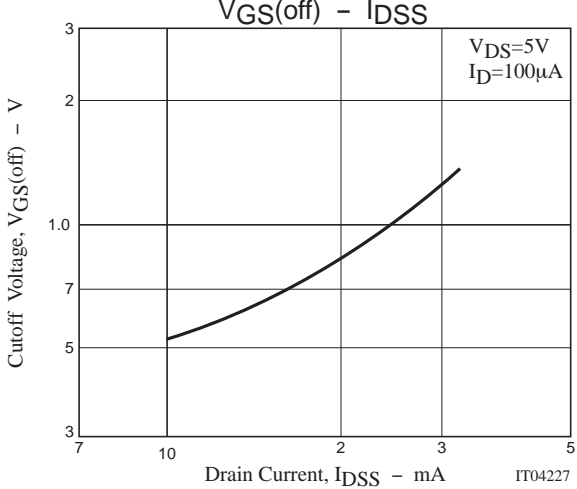
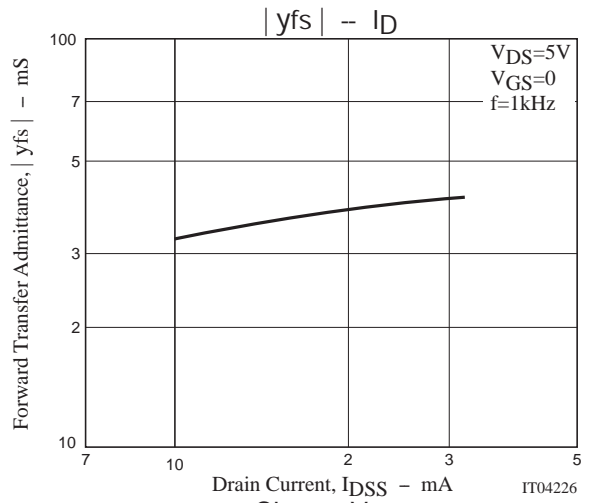
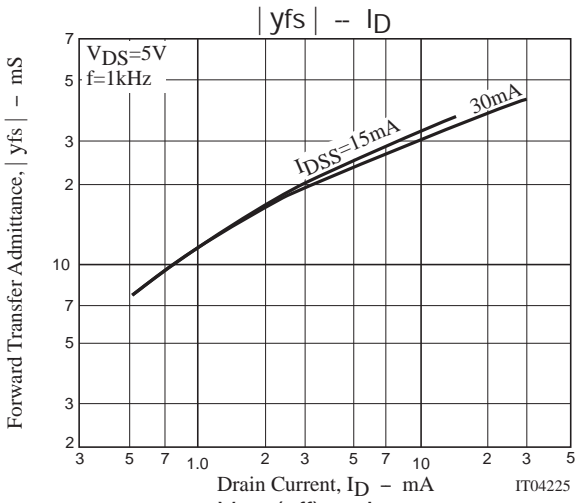
* : The 2SK3557 is classified by I_{DSS} as follows : (unit : mA)

Rank	6	7
I _{DSS}	10.0 to 20.0	16.0 to 32.0

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

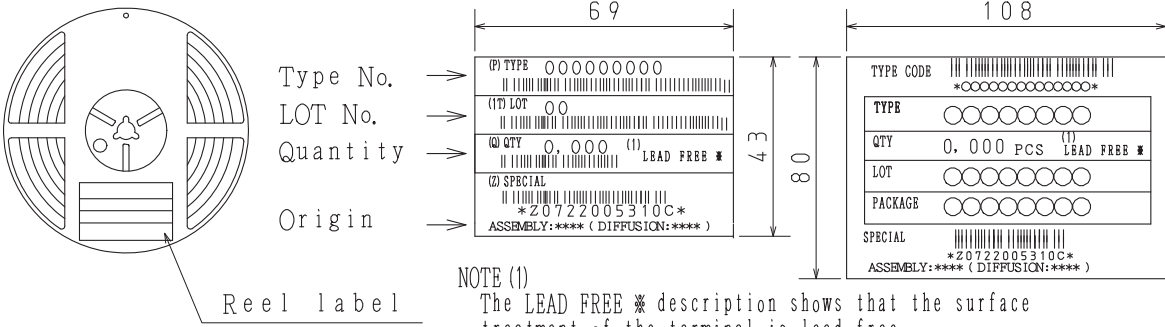
1. Packing Format

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, Inner box label (unit:mm) Outer box label

It is a label at the time of factory shipments. The form of a label may change in physical distribution process.

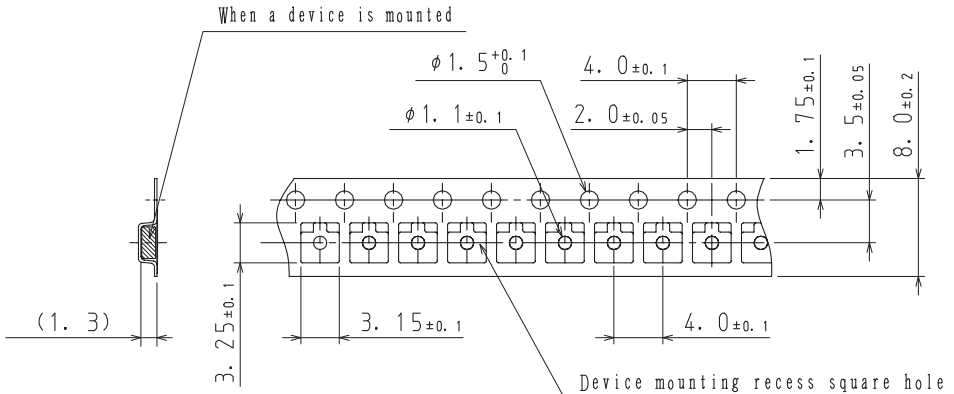


NOTE (1)
The LEAD FREE * description shows that the surface treatment of the terminal is lead free.

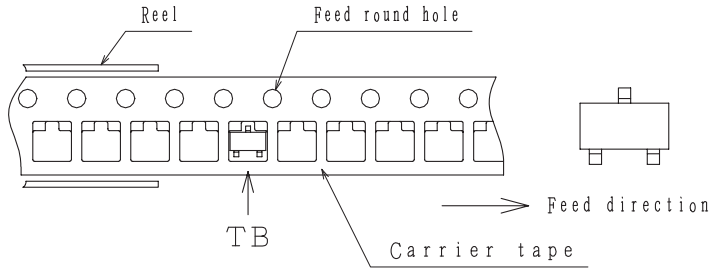
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

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

Outline Drawing

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



Land Pattern Example



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