



2SK3557

N-Channel JFET 15V, 10 to 32mA, 35mS, CP

ON Semiconductor®

<http://onsemi.com>

Applications

- AM tuner RF amplification
- 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

Specifications

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

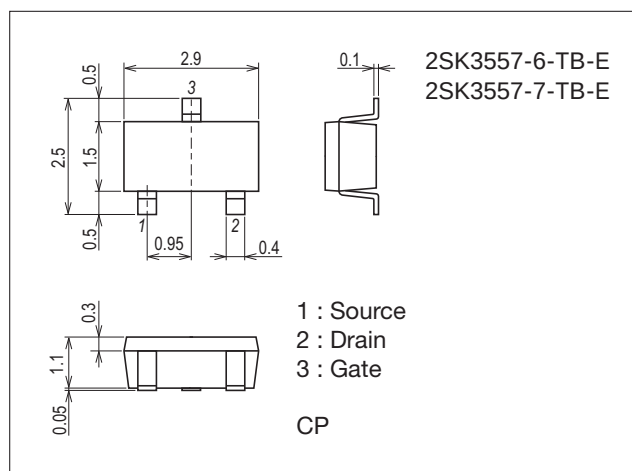
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSX}		15	V
Gate-to-Drain Voltage	V_{GDS}		-15	V
Gate Current	I_G		10	mA
Drain Current	I_D		50	mA
Allowable Power Dissipation	P_D		200	mW
Junction Temperature	T_j		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Package Dimensions

unit : mm (typ)

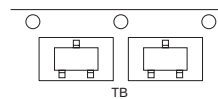
7013A-011



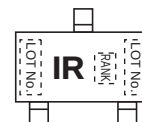
Product & Package Information

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

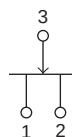
Packing Type: TL



Marking



Electrical Connection



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

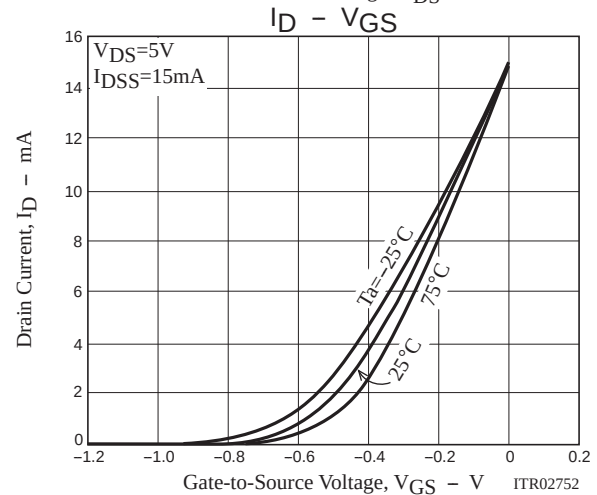
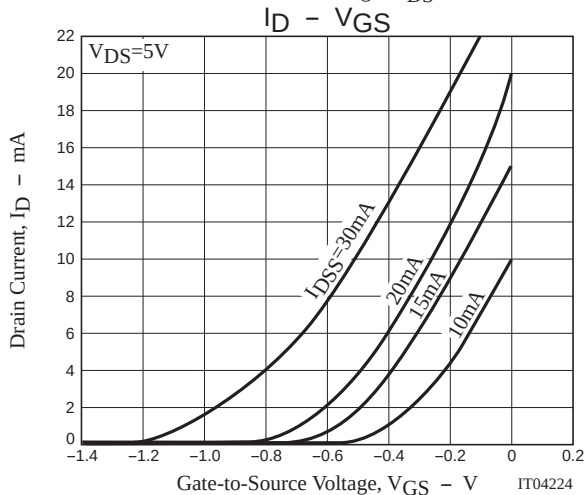
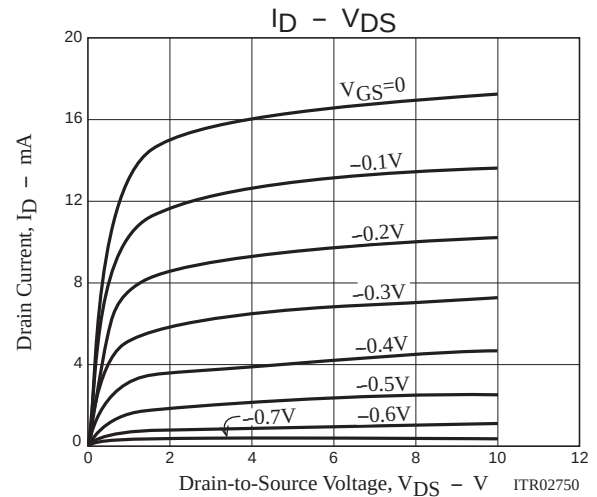
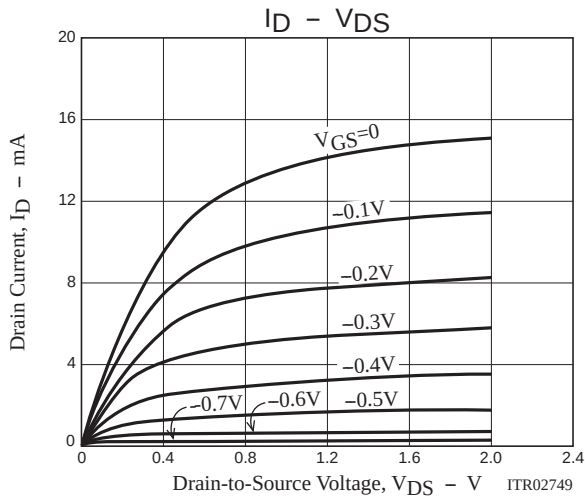
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G=-10\mu\text{A}$, $V_{DS}=0\text{V}$	-15			V
Gate Cutoff Current	I_{GSS}	$V_{GS}=-10\text{V}$, $V_{DS}=0\text{V}$			-1.0	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=5\text{V}$, $I_D=100\mu\text{A}$	-0.3	-0.7	-1.5	V
Drain Current	I_{DSS}	$V_{DS}=5\text{V}$, $V_{GS}=0\text{V}$	10*		32*	mA
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=5\text{V}$, $V_{GS}=0\text{V}$, $f=1\text{kHz}$	24	35		mS
Input Capacitance	C_{iss}	$V_{DS}=5\text{V}$, $V_{GS}=0\text{V}$, $f=1\text{MHz}$		10.0		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=5\text{V}$, $V_{GS}=0\text{V}$, $f=1\text{MHz}$		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

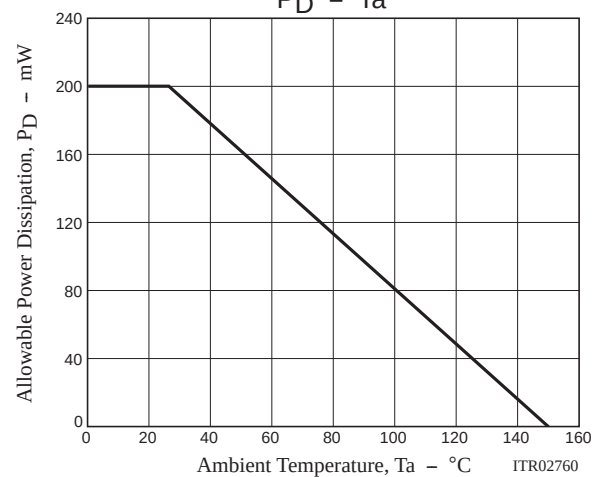
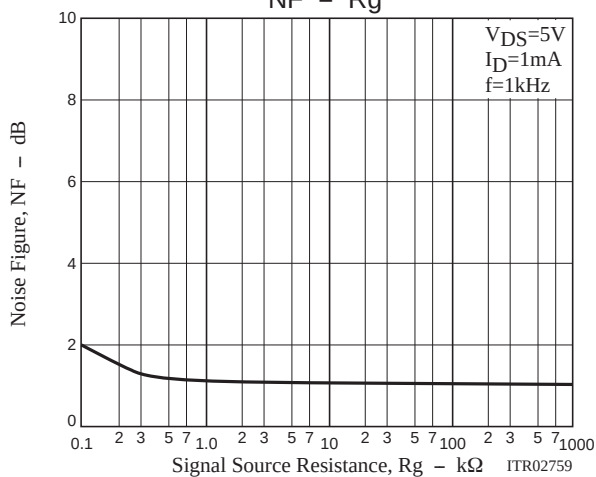
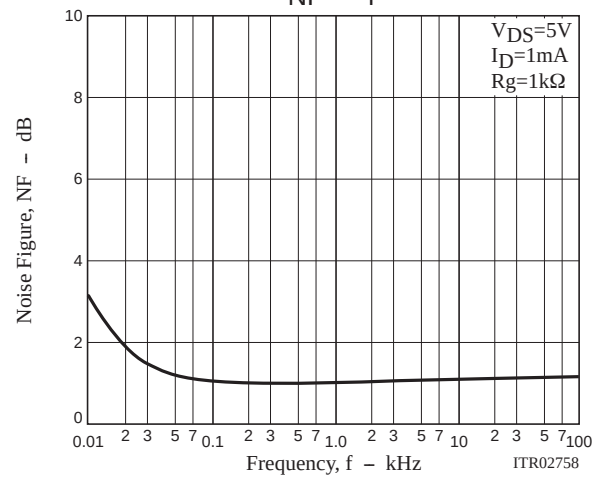
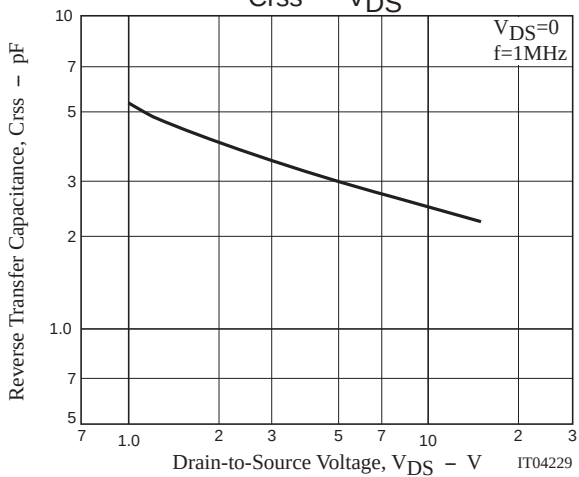
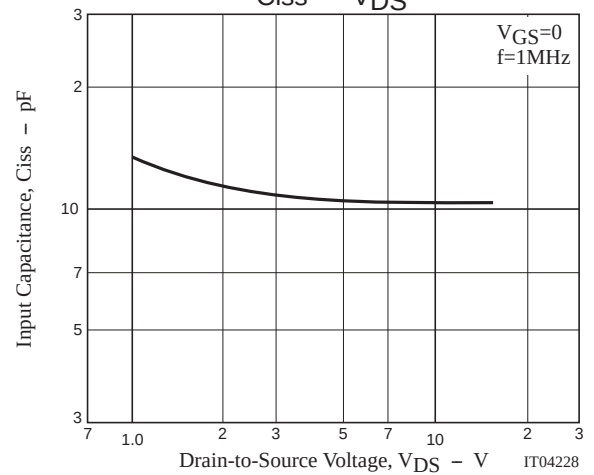
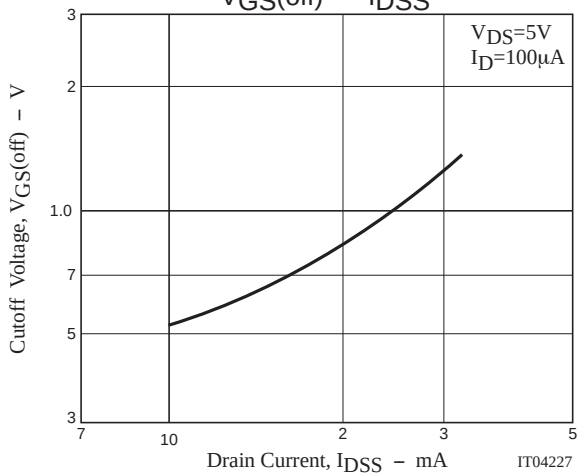
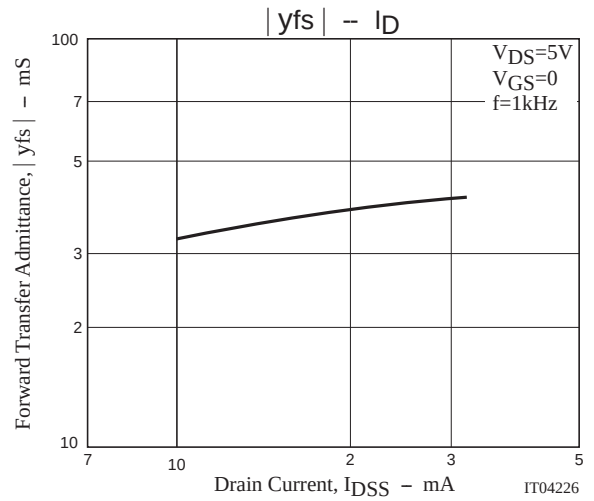
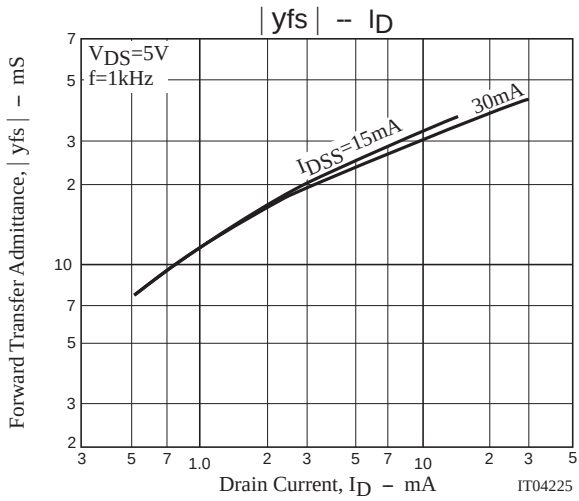
* : The 2SK3557 is classified by I_{DSS} as follows : (unit : mA)

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

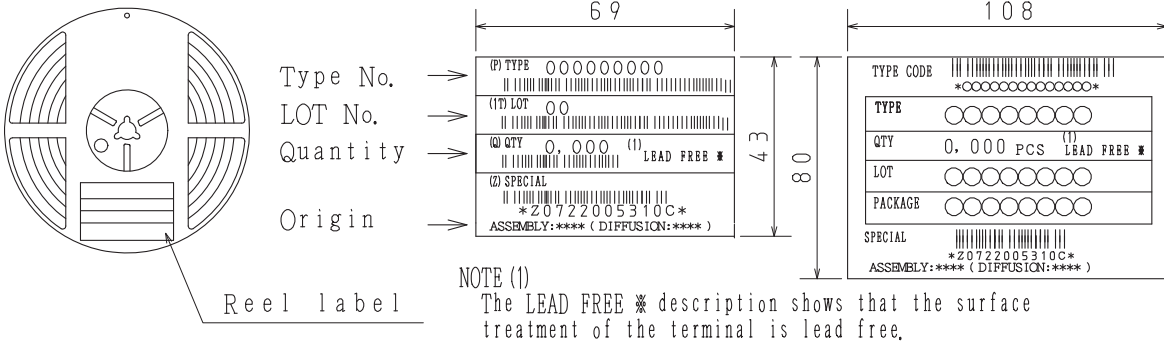
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
CP	CP	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

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.

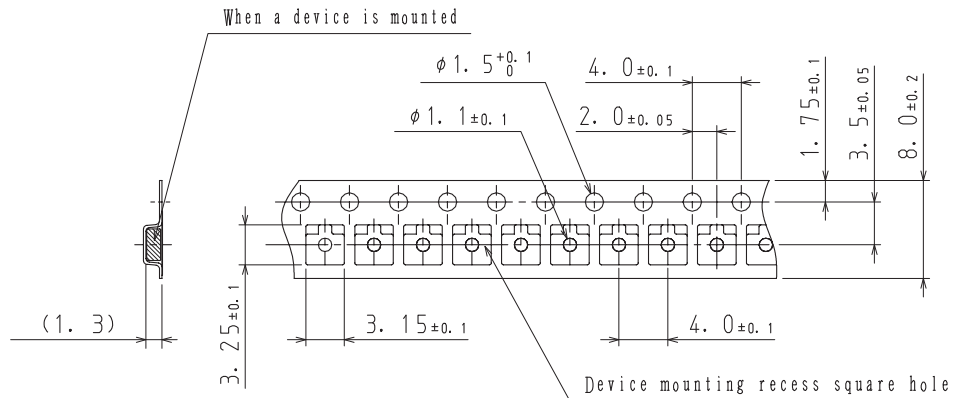
Packing method



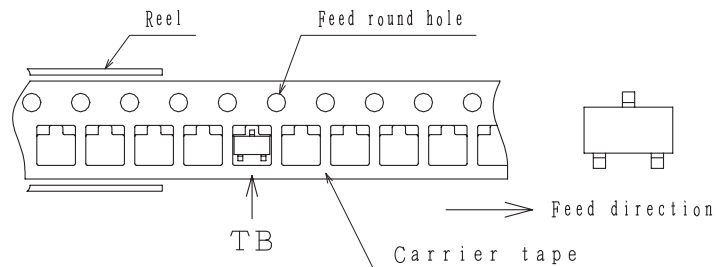
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



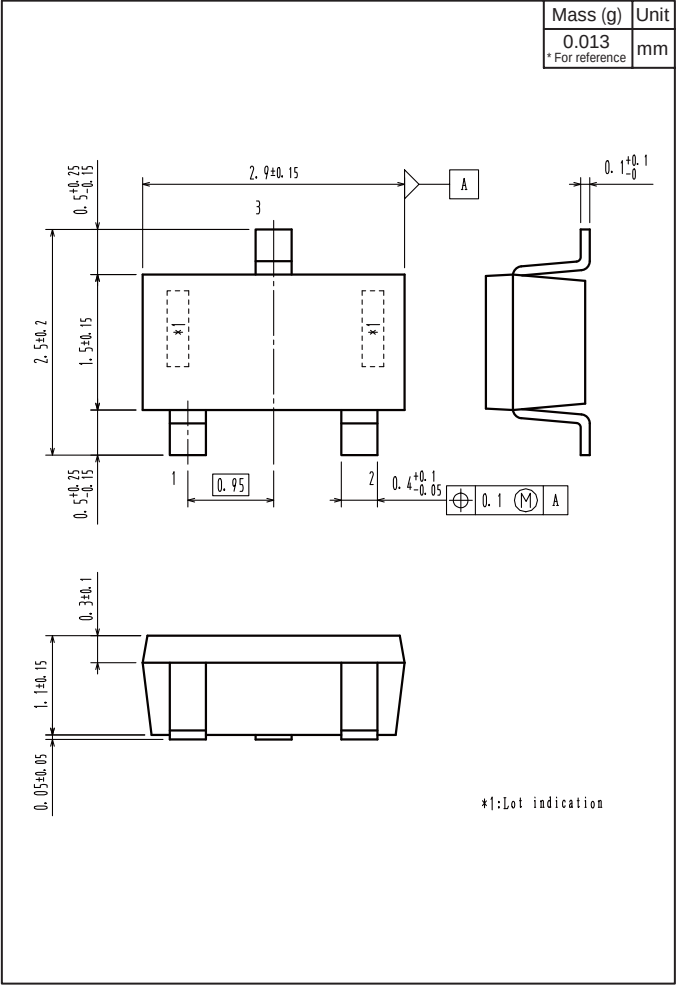
2-2. Device placement direction



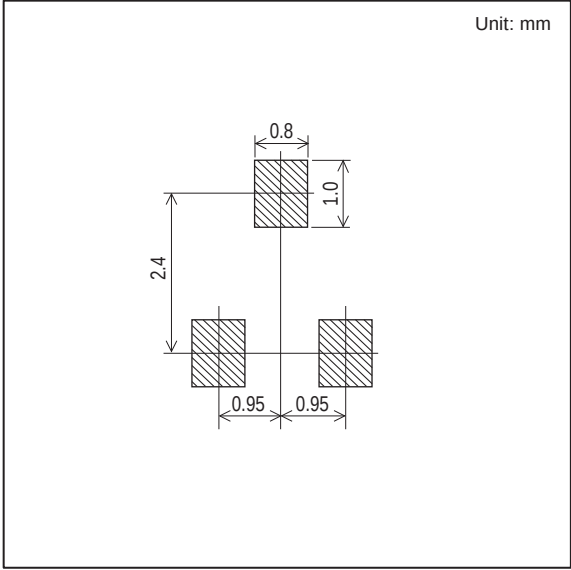
Those with one electrode terminal on the feed hole side.....TB

Outline Drawing

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



Land Pattern Example



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