



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

2SK2394 — N-Channel Junction Silicon FET

Low-Noise HF Amplifier Applications

Applications

- AM tuner RF amplifier
- Low-noise amplifier

Features

- Large $|y_{fs}|$
- Small C_{iss}
- Small-sized package permitting 2SK2394-applied sets to be made small slim
- Ultralow noise figure

Specifications

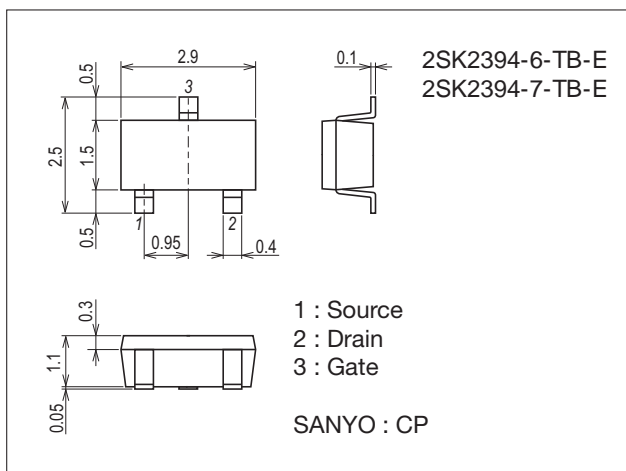
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

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)

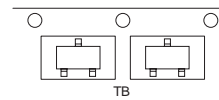
7013A-011



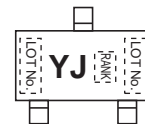
Product & Package Information

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

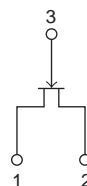
Packing Type: TB



Marking



Electrical Connection



SANYO Semiconductor Co., Ltd.

<http://www.sanyosemi.com/en/network/>

2SK2394

Electrical Characteristics at Ta=25°C

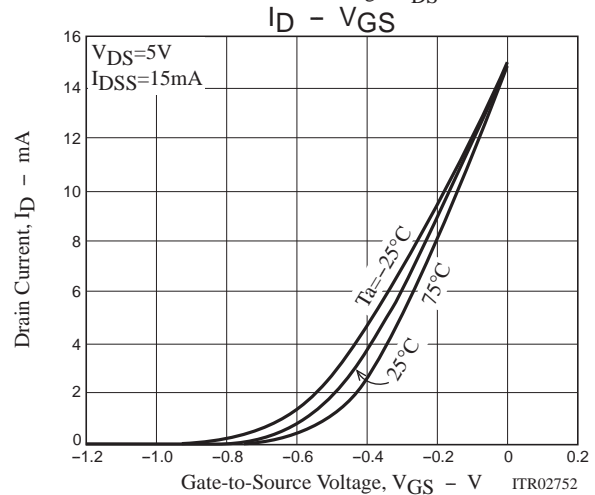
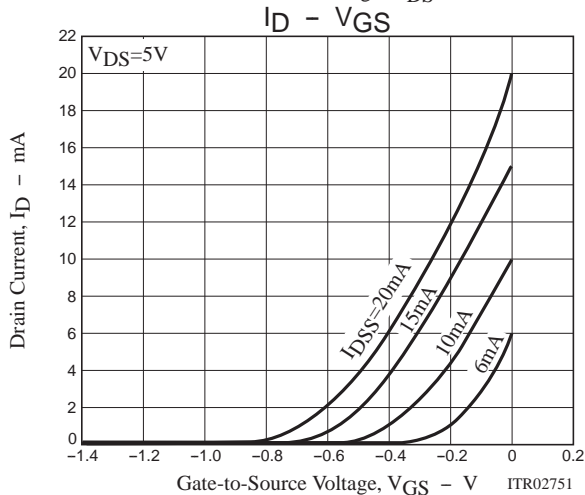
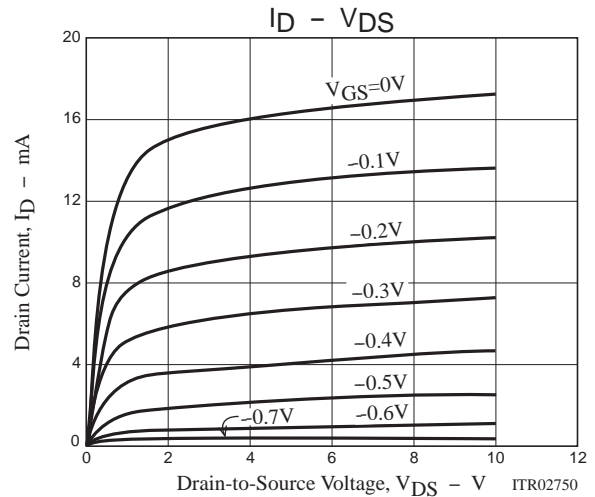
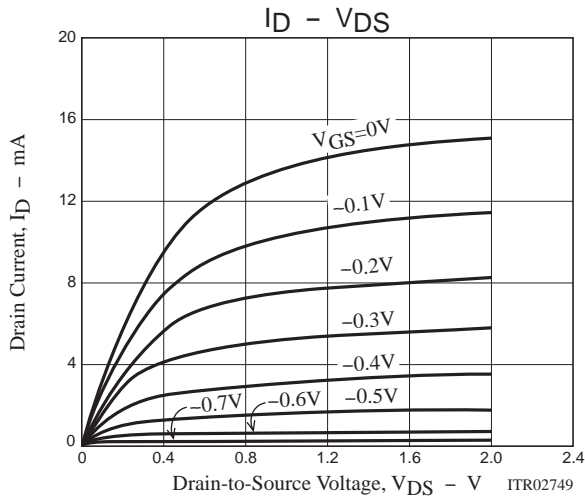
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G = -10\mu A, V_{DS} = 0V$	-15			V
Gate Cutoff Current	I_{GSS}	$V_{GS} = -10V, V_{DS} = 0V$			-1.0	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 5V, I_D = 100\mu A$	-0.3	-0.7	-1.5	V
Drain Current	I_{DSS}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

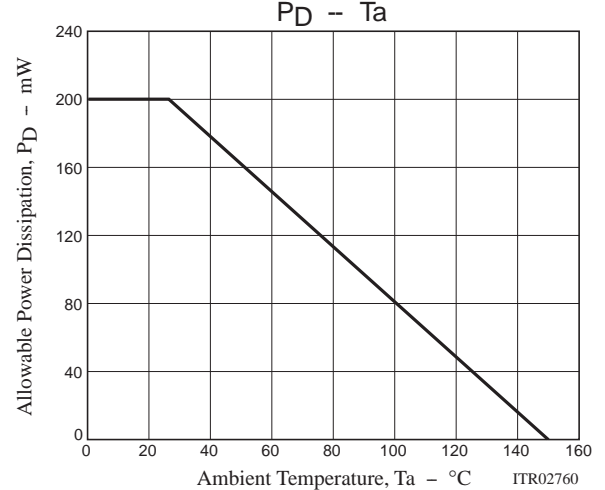
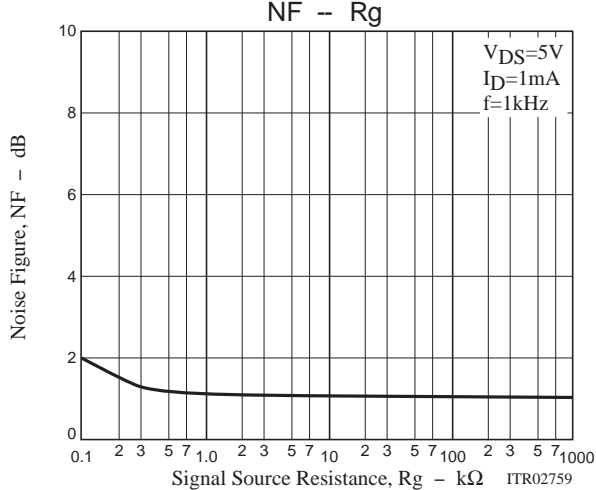
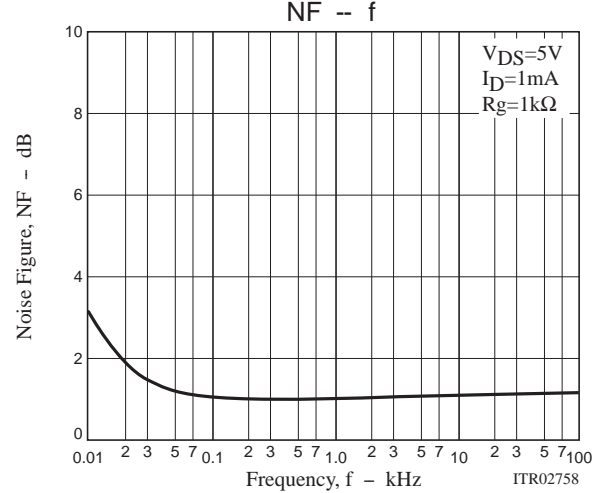
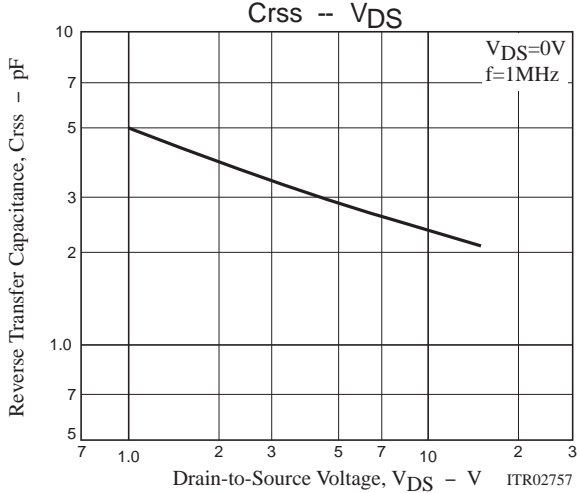
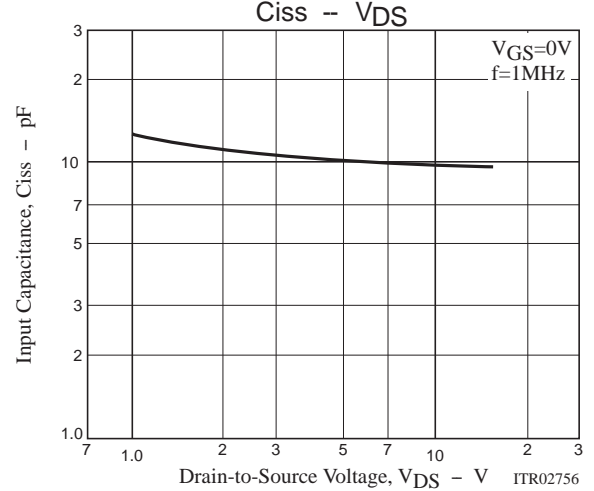
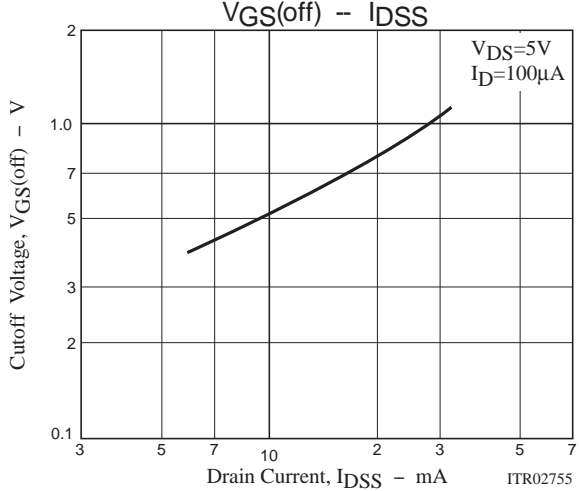
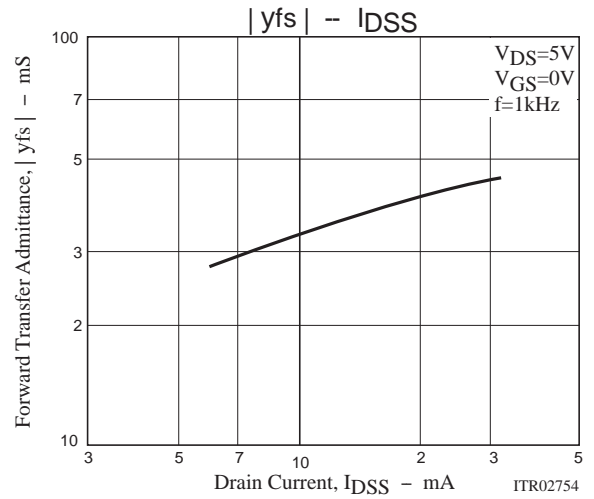
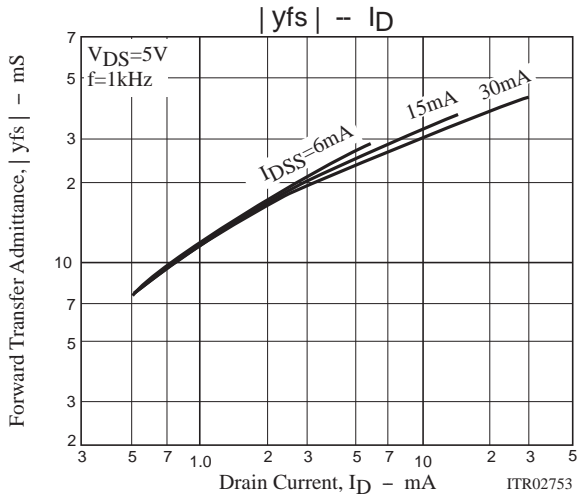
* : The 2SK2394 is classified by I_{DSS} as follows : (unit : mA)

Rank	5	6	7
I_{DSS}	6.0 to 12.0	10.0 to 20.0	16.0 to 32.0

Ordering Information

Device	Package	Shipping	memo
2SK2394-6-TB-E	CP	3,000pcs./reel	Pb Free
2SK2394-7-TB-E	CP	3,000pcs./reel	





Embossed Taping Specification

2SK2394-6-TB-E, 2SK2394-7-TB-E

1. Packing Format

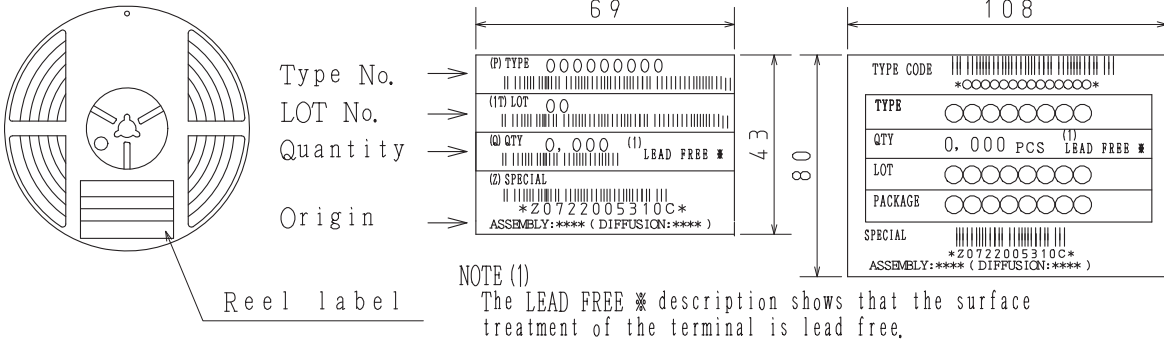
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
CP	CP	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

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.

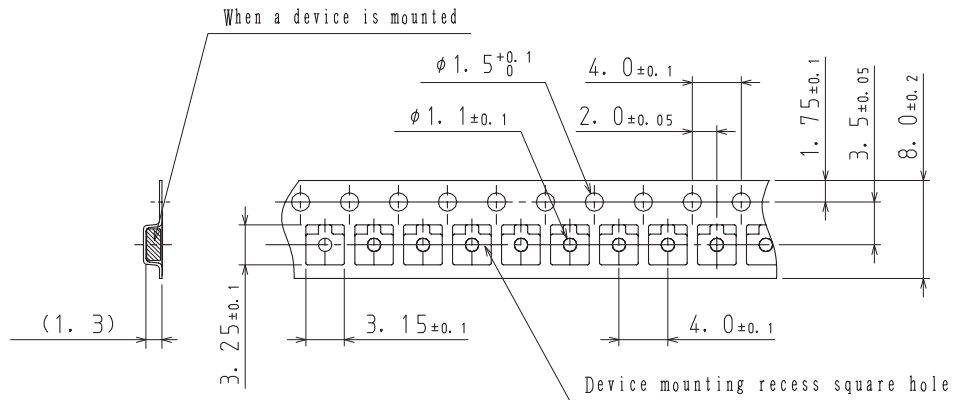
Packing method



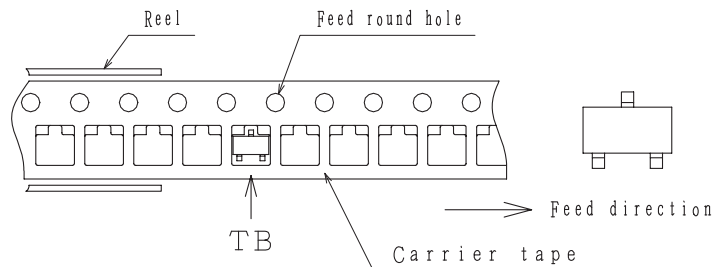
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



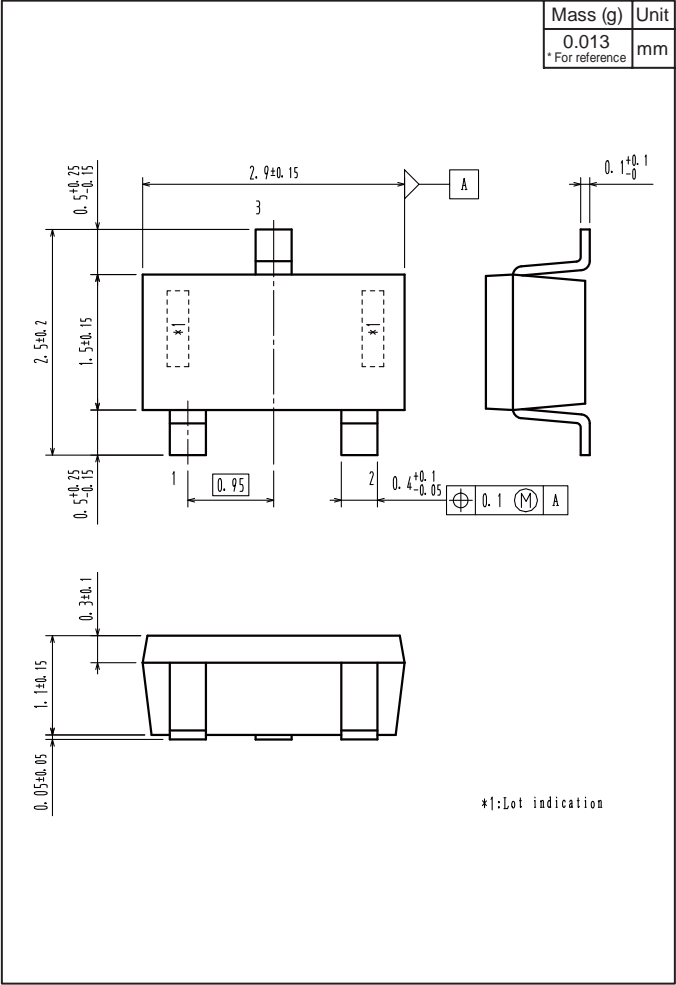
2-2. Device placement direction



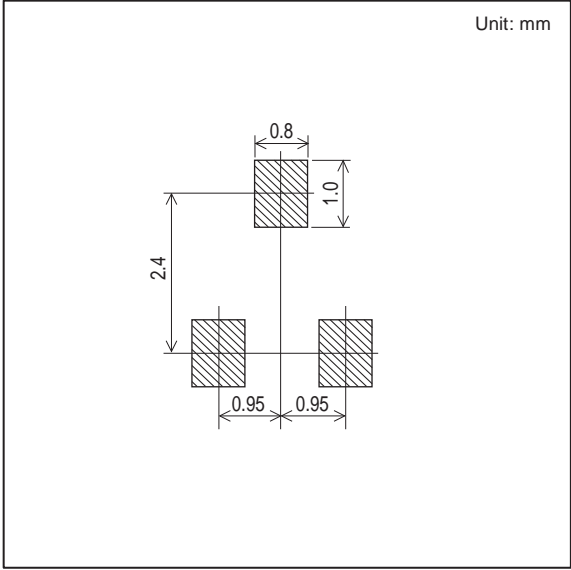
Those with one electrode terminal on the feed hole side.....TB

Outline Drawing

2SK2394-6-TB-E, 2SK2394-7-TB-E



Land Pattern Example



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