Ordering number : EN4423C

SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

N-Channel Silicon MOSFET (Dual Gate)

3SK263 — FM Tuner, VHF Tuner, High-Frequency Amplifier Applications

Features

- Enhancement type
- Small noise figure
- Small cross modulation

Specifications

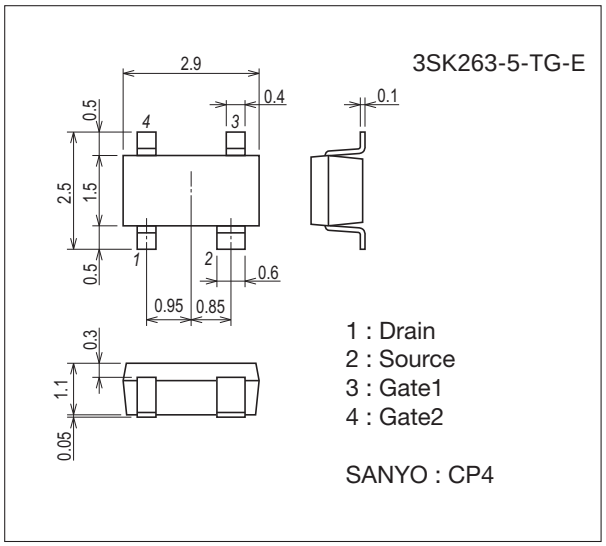
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DS}		15	V
Gate1-to-Source Voltage	V_{G1S}		±8	V
Gate2-to-Source Voltage	V_{G2S}		±8	V
Drain Current	I_D		30	mA
Allowable Power Dissipation	P_D		200	mW
Channel Temperature	Tch		125	°C
Storage Temperature	Tstg		–55 to +125	°C

Package Dimensions

unit : mm (typ)

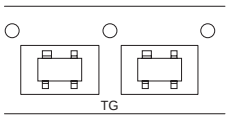
7014A-006



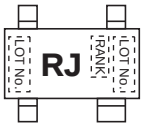
Product & Package Information

- Package : CP4
- JEITA, JEDEC : SC-61, SC-82AB, SOT-143, SOT-343
- Minimum Packing Quantity : 3,000 pcs./reel

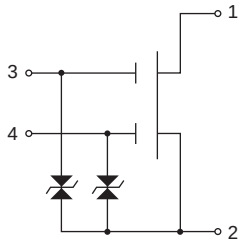
Packing Type: TG



Marking



Electrical Connection



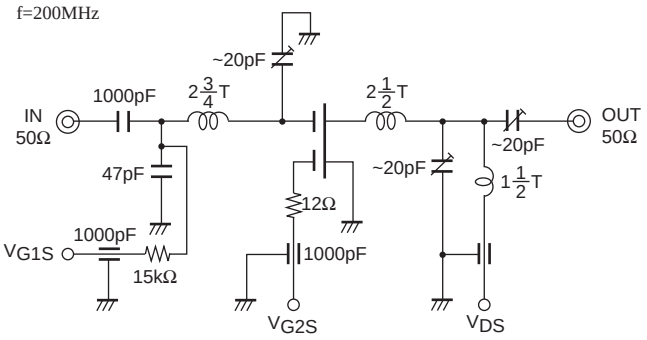
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Voltage	V_{DS}	V_{G1S}=0V, V_{G2S}=0V, I_D=100μA	15			V
Gate1-to-Source Cutoff Voltage	V_{G1S}(off)	V_{DS}=6V, V_{G2S}=4V, I_D=100μA	0	0.7	1.3	V
Gate2-to-Source Cutoff Voltage	V_{G2S}(off)	V_{DS}=6V, V_{G1S}=3V, I_D=100μA	0.1	0.9	1.6	V
Gate1-to-Source Leakage Current	I_{G1SS}	V_{G1S}=±6V, V_{G2S}=V_{DS}=0V			±50	nA
Gate2-to-Source Leakage Current	I_{G2SS}	V_{G2S}=±6V, V_{G1S}=V_{DS}=0V			±50	nA
Zero-Gate Voltage Drain Current	I_{DSX}	V_{DS}=6V, V_{G1S}=1.5V, V_{G2S}=4V	2.5*		24*	mA
Forward Transfer Admittance	| yfs |	V_{DS}=6V, I_D=10mA, V_{G2S}=4V, f=1kHz		14		mS
Input Capacitance	Ciss	V_{DS}=6V, f=1MHz, V_{G1S}=0V, V_{G2S}=4V		2.7		pF
Reverse Transfer Capacitance	Crss			0.015	0.03	pF
Power Gain	PG	V_{DS}=6V, I_D=10mA, V_{G2S}=4V, f=200MHz	18	21		dB
Noise Figure	NF	V_{DS}=6V, I_D=10mA, V_{G2S}=4V, f=200MHz		1.1	2.2	dB

* : The 3SK263 is classified by I_{DSX} as follows : (unit : mA)

Rank	4	5	6
I_{DSX}	2.5 to 6.0	5.0 to 12.0	10.0 to 24.0

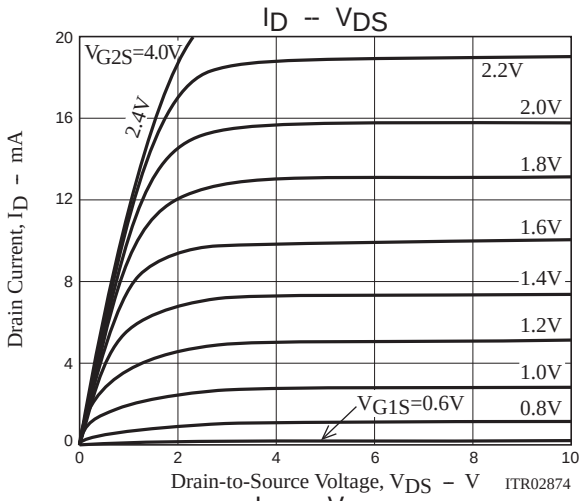
PG, NF Specified Test Circuit

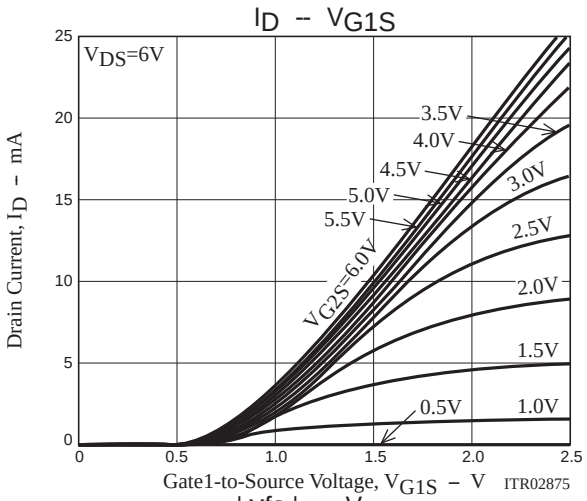


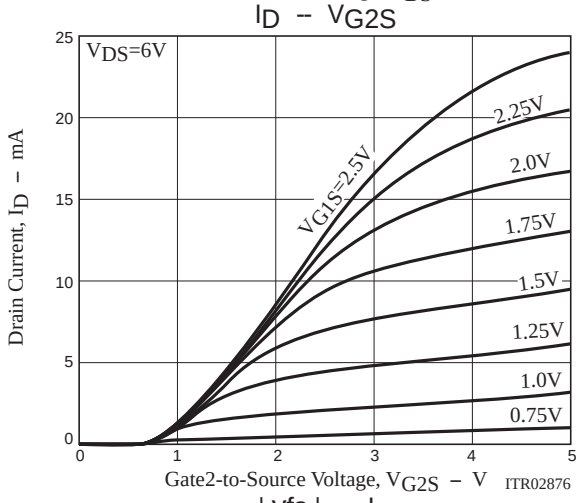
L : 1mmØ enamel wire 10mmØ

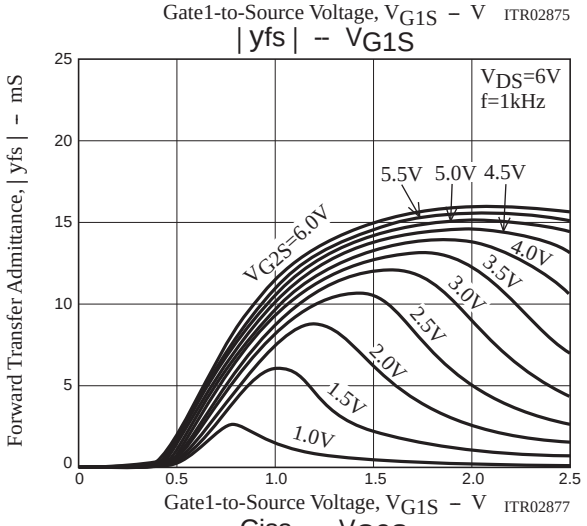
Ordering Information

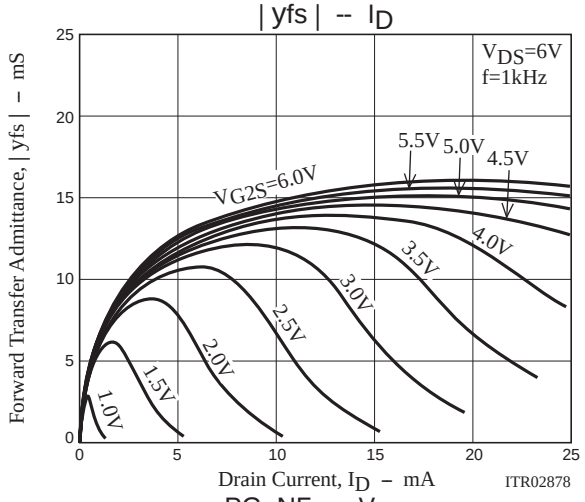
Device	Package	Shipping	memo
3SK263-5-TG-E	CP4	3,000pcs./reel	Pb Free

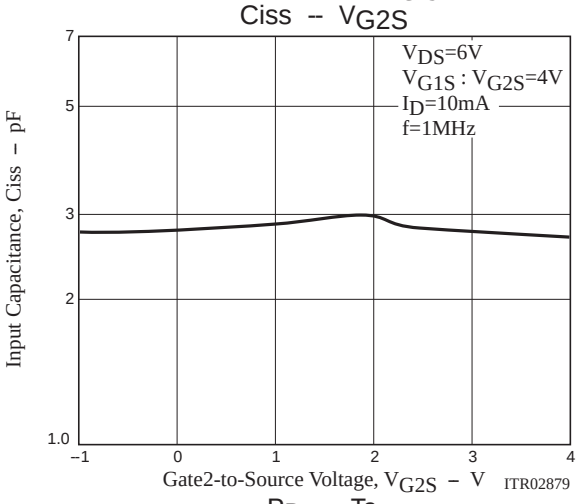

ID -- VDS
VG2S=4.0V
2.4V
2.2V
2.0V
1.8V
1.6V
1.4V
1.2V
1.0V
0.8V
VG1S=0.6V
Drain Current, ID – mA
Drain-to-Source Voltage, VDS – V
ITR02874

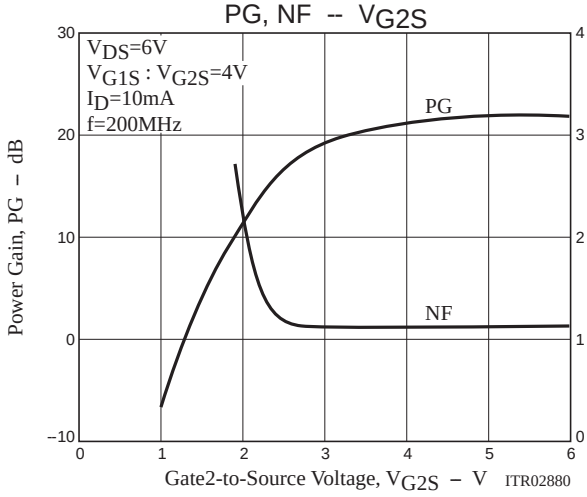

ID -- VG1S
VDS=6V
3.5V
4.0V
4.5V
5.0V
5.5V
VG2S=6.0V
3.0V
2.5V
2.0V
1.5V
0.5V
1.0V
Drain Current, ID – mA
Gate1-to-Source Voltage, VG1S – V
ITR02875

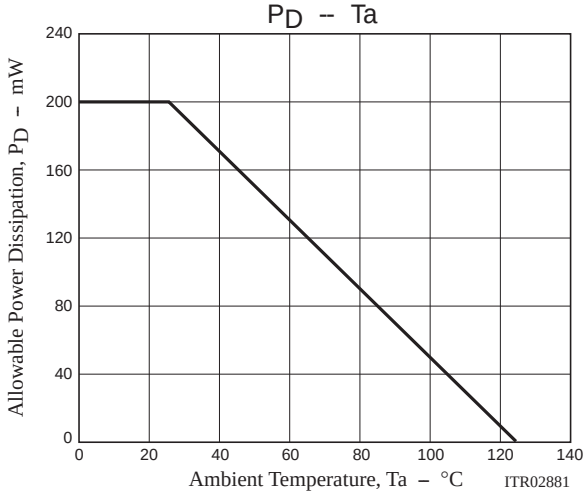

ID -- VG2S
VDS=6V
VG1S=2.5V
2.25V
2.0V
1.75V
1.5V
1.25V
1.0V
0.75V
Drain Current, ID – mA
Gate2-to-Source Voltage, VG2S – V
ITR02876


| yfs | -- VG1S
VDS=6V
f=1kHz
5.5V
5.0V
4.5V
VG2S=6.0V
4.0V
3.5V
3.0V
2.5V
2.0V
1.5V
1.0V
Forward Transfer Admittance, | yfs | – mS
Gate1-to-Source Voltage, VG1S – V
ITR02877


| yfs | -- ID
VDS=6V
f=1kHz
5.5V
5.0V
4.5V
VG2S=6.0V
4.0V
3.5V
3.0V
2.5V
2.0V
1.5V
1.0V
Forward Transfer Admittance, | yfs | – mS
Drain Current, ID – mA
ITR02878


Ciss -- VG2S
VDS=6V
VG1S : VG2S=4V
ID=10mA
f=1MHz
Input Capacitance, Ciss – pF
Gate2-to-Source Voltage, VG2S – V
ITR02879


PG, NF -- VG2S
VDS=6V
VG1S : VG2S=4V
ID=10mA
f=200MHz
PG
NF
Power Gain, PG – dB
Noise Figure, NF – dB
Gate2-to-Source Voltage, VG2S – V
ITR02880


PD -- Ta
Allowable Power Dissipation, PD – mW
Ambient Temperature, Ta – °C
ITR02881

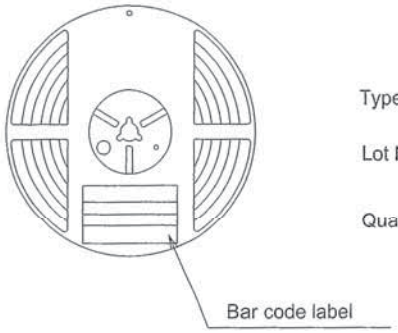
Embossed Taping Specification

3SK263-5-TG-E

Storage package Outline name	Carrier tape Type number	Maximum Number of devices contained (pcs.)			Packing format	
		Reel	Inner box	Outer box	Inner box BOX (C-1)	Outer box BOX (A-7)
CP4	CP4	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

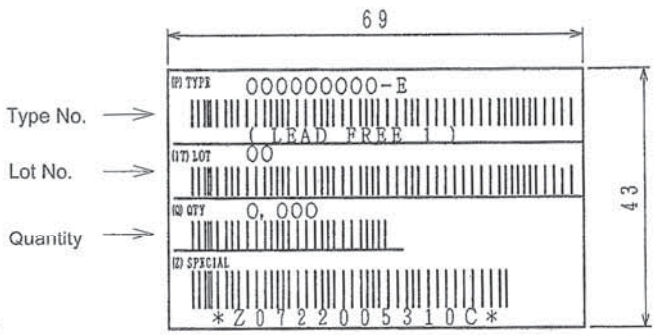
1. Packing format

Packing method



Bar code label (Example)

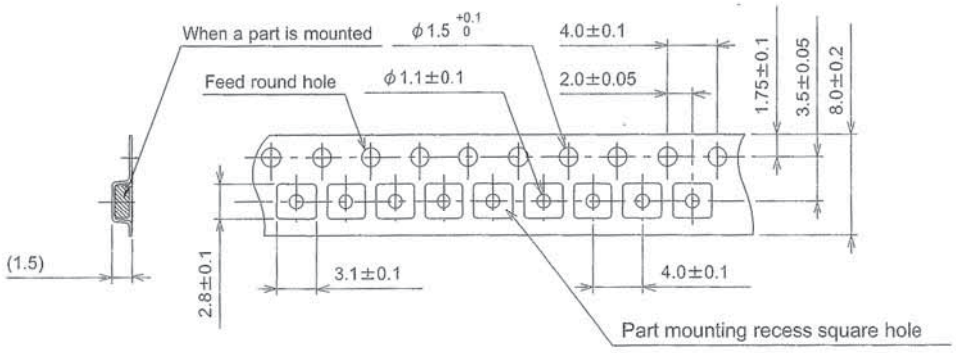
(Unit : mm)



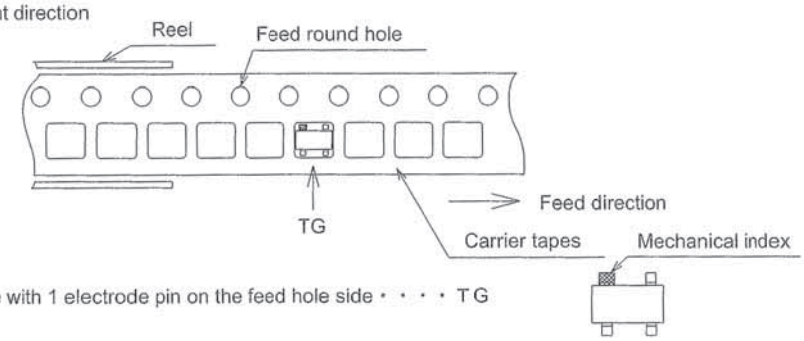
*LEAD FREE 1:
Lead-free External terminal surface treatment product.

2. Taping structure

2—1. Carrier tape size (Unit : mm)



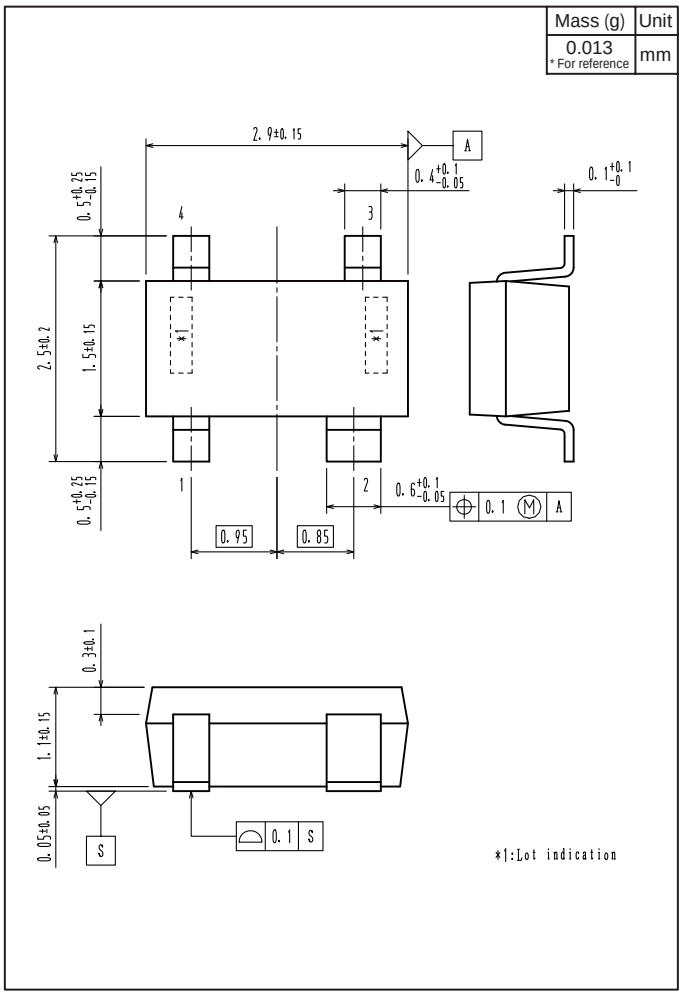
2—2. Parts placement direction



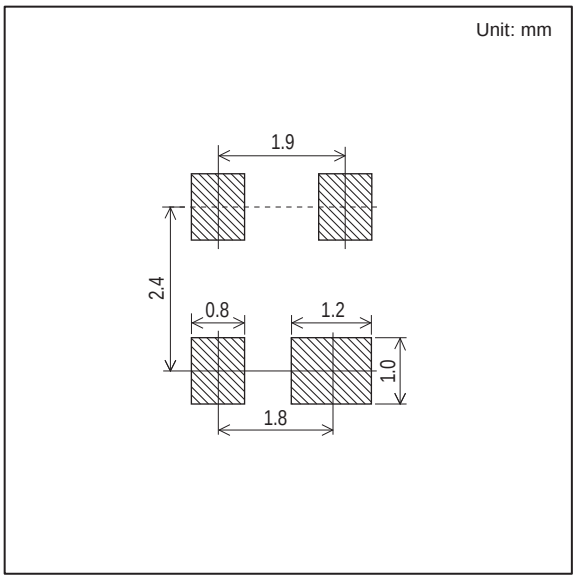
Those with 1 electrode pin on the feed hole side · · · · TG

Outline Drawing

3SK263-5-TG-E



Land Pattern Example



Note on usage : Since the 3SK263 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

This catalog provides information as of September, 2012. Specifications and information herein are subject to change without notice.