



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## MCH3914 — N-Channel Junction Silicon FET High-Frequency Amplifier, Analog Switch Applications

### Features

- $|y_{fs}|$  is large
- $C_{iss}$  is small
- Small package
- FBET process
- Halogen free compliance

### Specifications

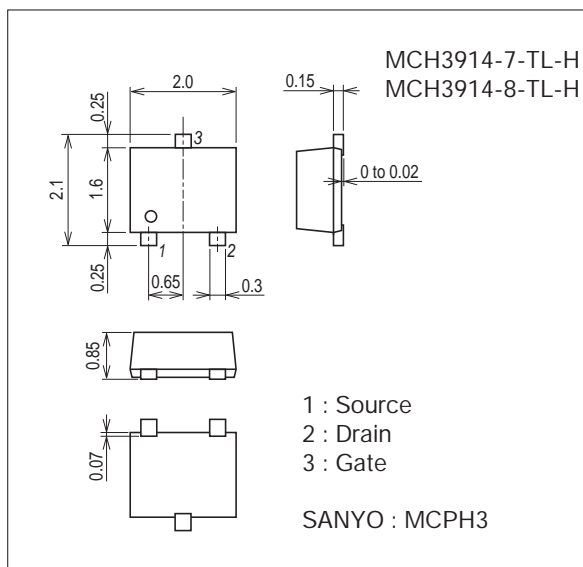
Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSX}$		15	V
Gate-to-Drain Voltage	$V_{GDS}$		-15	V
Gate Current	$I_G$		5	mA
Drain Current	$I_D$		50	mA
Allowable Power Dissipation	$P_D$	When mounted on ceramic substrate (600mm <sup>2</sup> x0.8mm)	300	mW
Junction Temperature	$T_J$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

### Package Dimensions

unit : mm (typ)

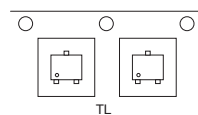
7019A-006



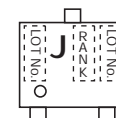
### Product & Package Information

- Package : MCPH3
- JEITA, JEDEC : SC-70, SOT-323
- Minimum Packing Quantity : 3,000 pcs./reel

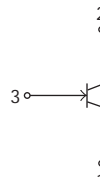
### Packing Type : TL



### Marking



### Electrical Connection



# MCH3914

## Electrical Characteristics at Ta=25°C

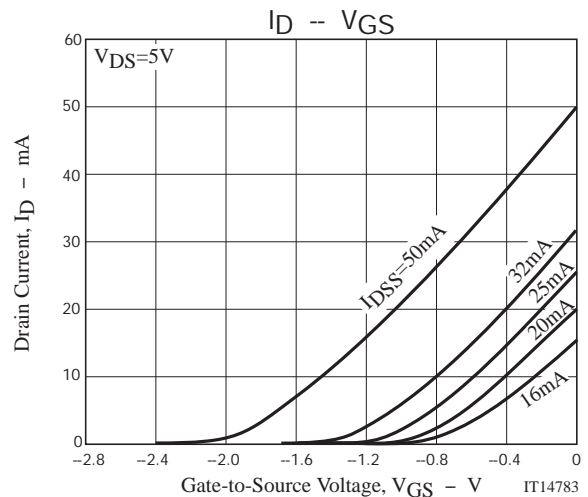
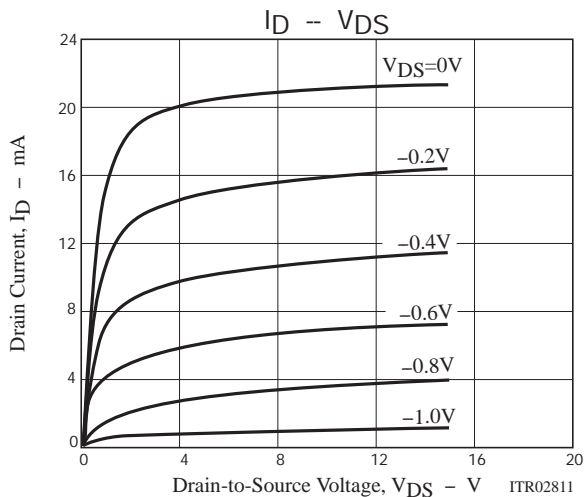
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	V(BR)GDS	I <sub>G</sub> =-10μA, V <sub>DS</sub> =0V	-15			V
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =-10V, V <sub>DS</sub> =0V			-1.0	nA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =5V, I <sub>D</sub> =10μA	-0.6	-1.4	-3.0	V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =5V, V <sub>GS</sub> =0V	16.0*		50.0*	mA
Forward Transfer Admittance	y <sub>fs</sub>  1	V <sub>DS</sub> =5V, I <sub>D</sub> =10mA, f=1kHz	14	21		mS
	y <sub>fs</sub>  2	V <sub>DS</sub> =5V, V <sub>GS</sub> =0V, f=1kHz	14	29		mS
Input Capacitance	Ciss	V <sub>DS</sub> =5V, V <sub>GS</sub> =0V, f=1MHz		4.9		pF
Reverse Transfer Capacitance	Crss			1.4		pF

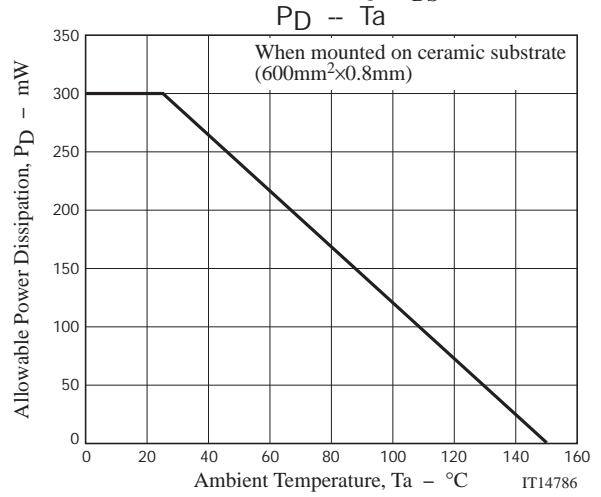
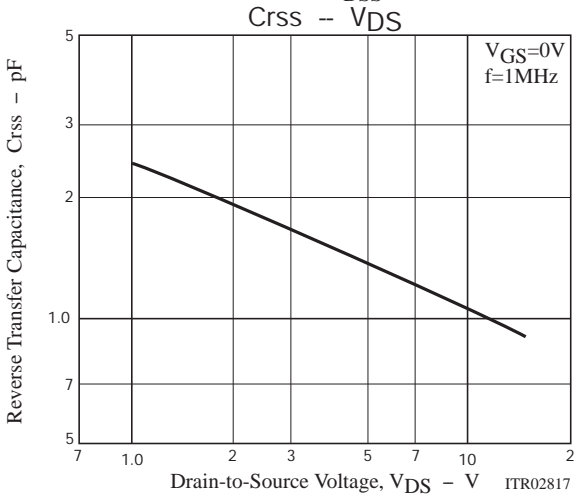
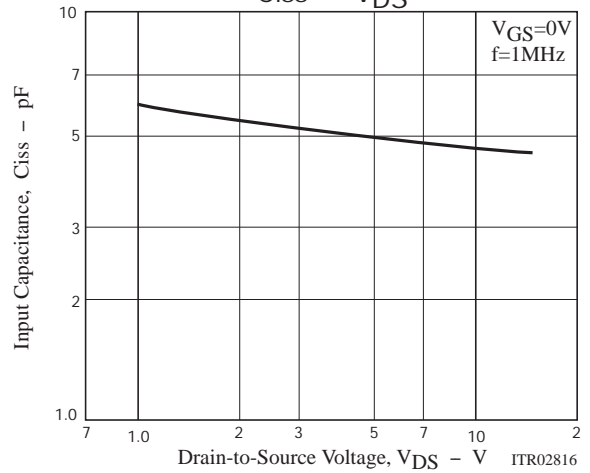
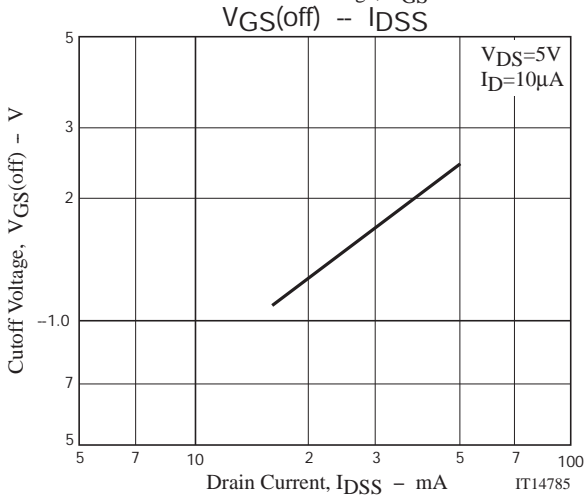
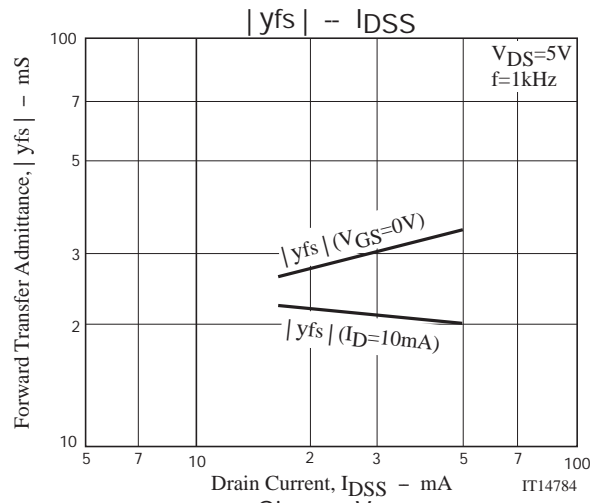
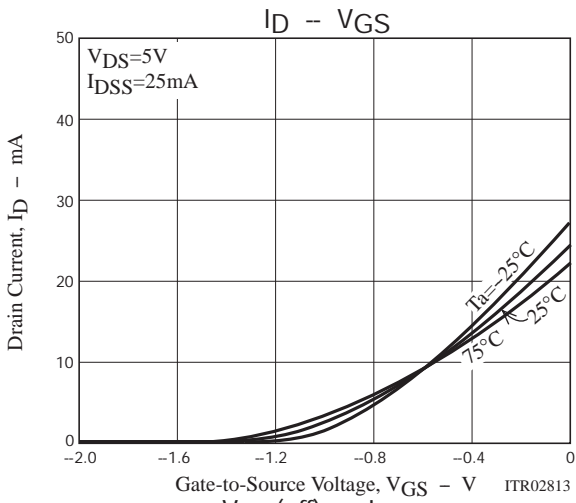
\* : The MCH3914 is classified by I<sub>DSS</sub> as follows : (unit : mA)

Rank	7	8
I <sub>DSS</sub>	16.0 to 32.0	25.0 to 50.0

## Ordering Information

Device	Package	Shipping	memo
MCH3914-7-TL-H	MCPH3	3,000pcs./reel	Pb Free and Halogen Free
MCH3914-8-TL-H	MCPH3	3,000pcs./reel	





# MCH3914

## Taping Specification

MCH3914-7-TL-H, MCH3914-8-TL-H

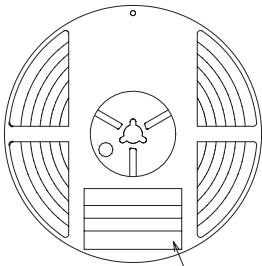
### 1. Packing Format

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)
MCPH3	MCPH3	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)

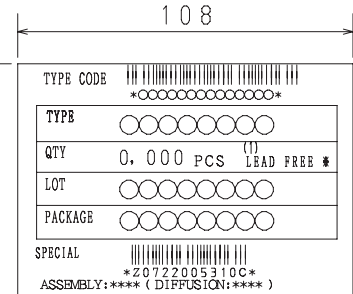
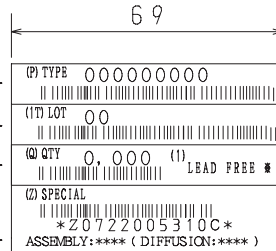
Outer box label  
It is a label at the time of factory shipments.  
The form of a label may change in physical distribution process.

#### Packing method



Type No.  
LOT No.  
Quantity  
Origin

Reel label



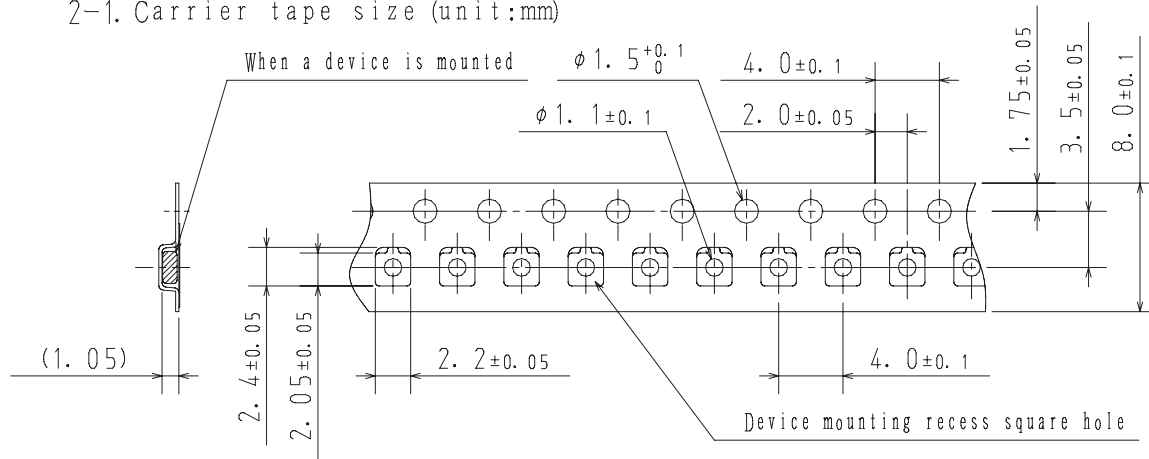
#### NOTE (1)

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 pin 1 index on the feed hole side.....TL

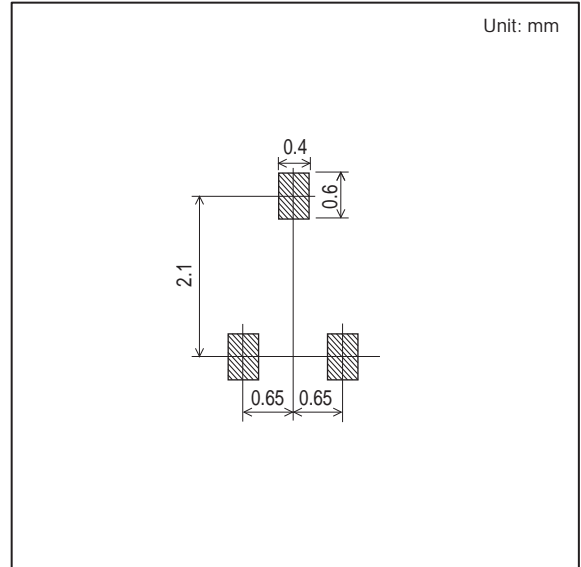
# MCH3914

## Outline Drawing

MCH3914-7-TL-H, MCH3914-8-TL-H



## Land Pattern Example



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