



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

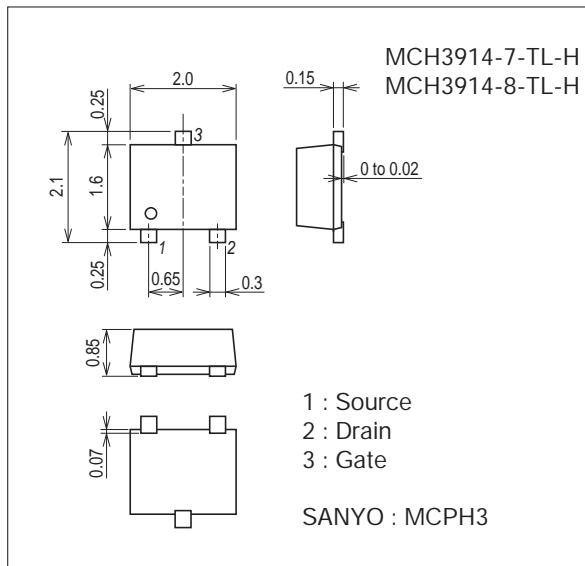
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

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 ² x0.8mm)	300	mW
Junction Temperature	T_J		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

Package Dimensions

unit : mm (typ)

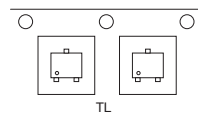
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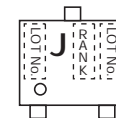
Product & Package Information

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

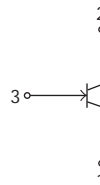
Packing Type : TL



Marking



Electrical Connection



MCH3914

Electrical Characteristics at Ta=25°C

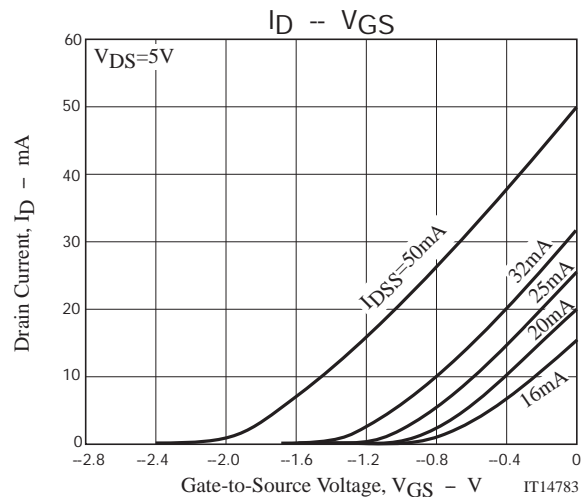
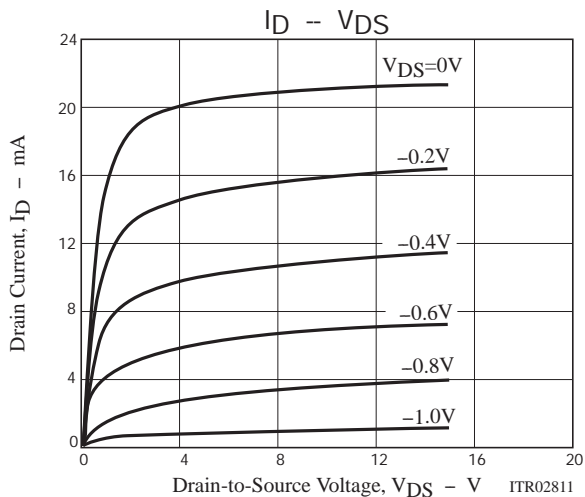
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	V(BR)GDS	I _G =-10μA, V _{DS} =0V	-15			V
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =-10V, V _{DS} =0V			-1.0	nA
Cutoff Voltage	V _{GS(off)}	V _{DS} =5V, I _D =10μA	-0.6	-1.4	-3.0	V
Zero-Gate Voltage Drain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

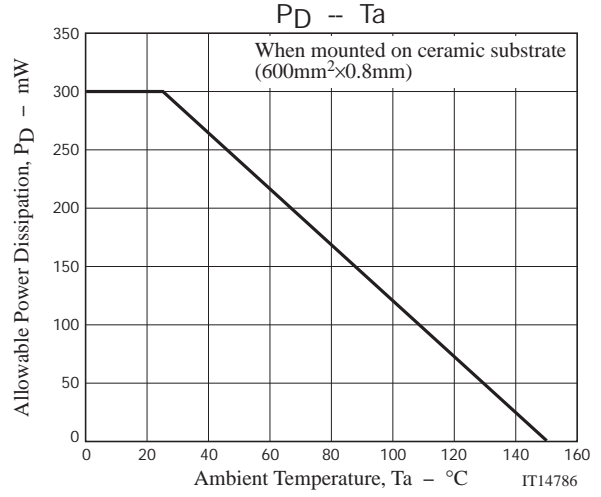
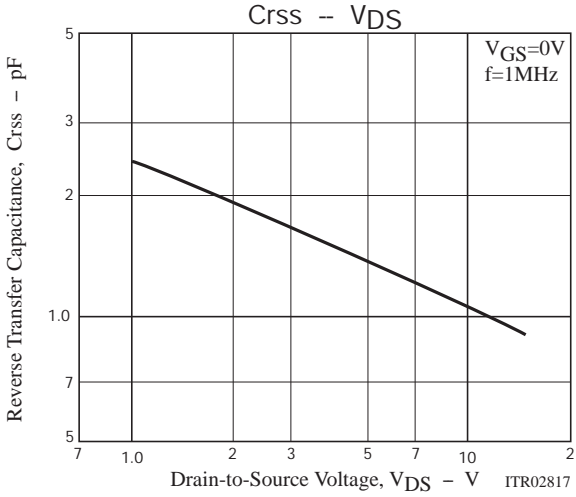
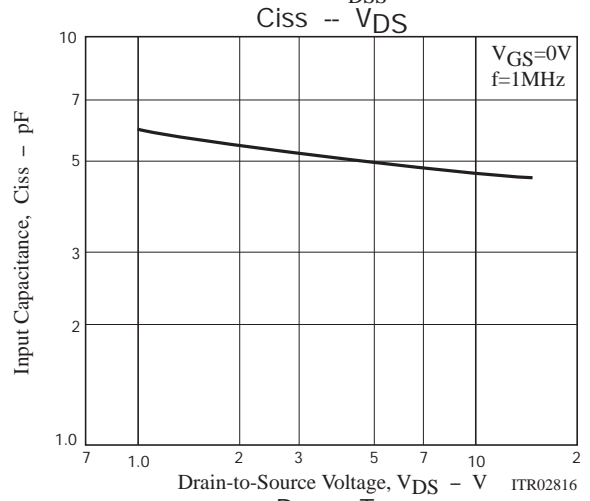
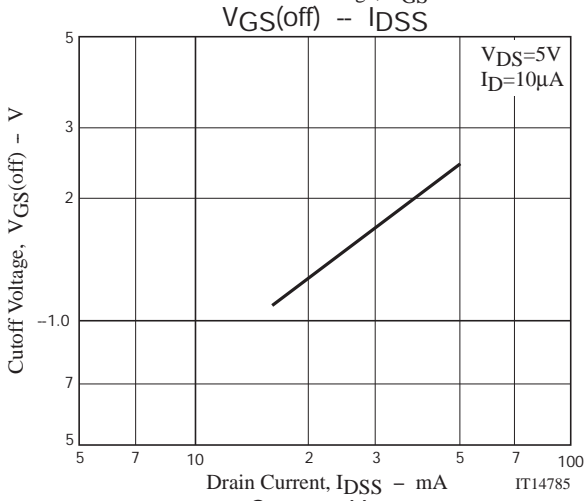
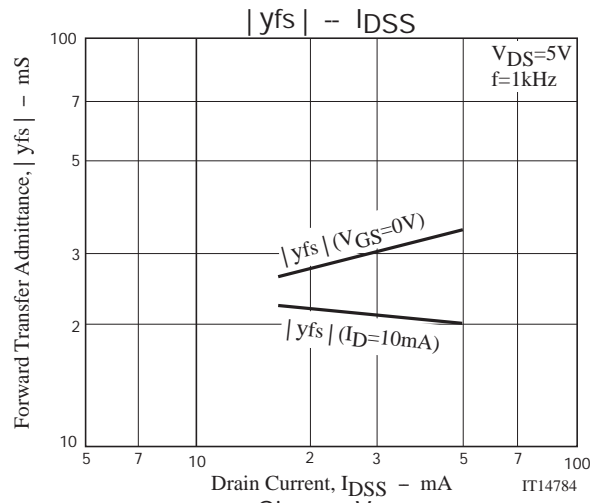
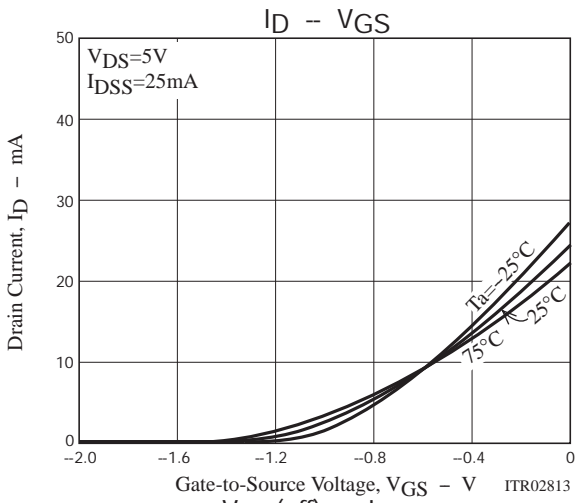
* : The MCH3914 is classified by I_{DSS} as follows : (unit : mA)

Rank	7	8
I _{DSS}	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	





Taping Specification

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

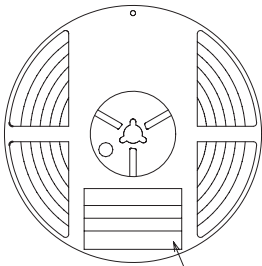
1. Packing Format

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)

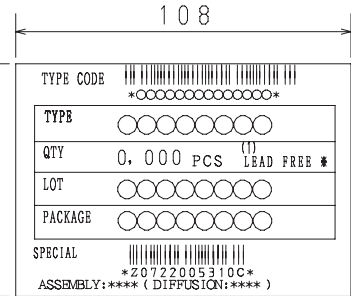
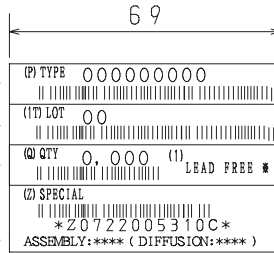
Outer box label
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.

Packing method



Type No.
LOT No.
Quantity
Origin

Reel label



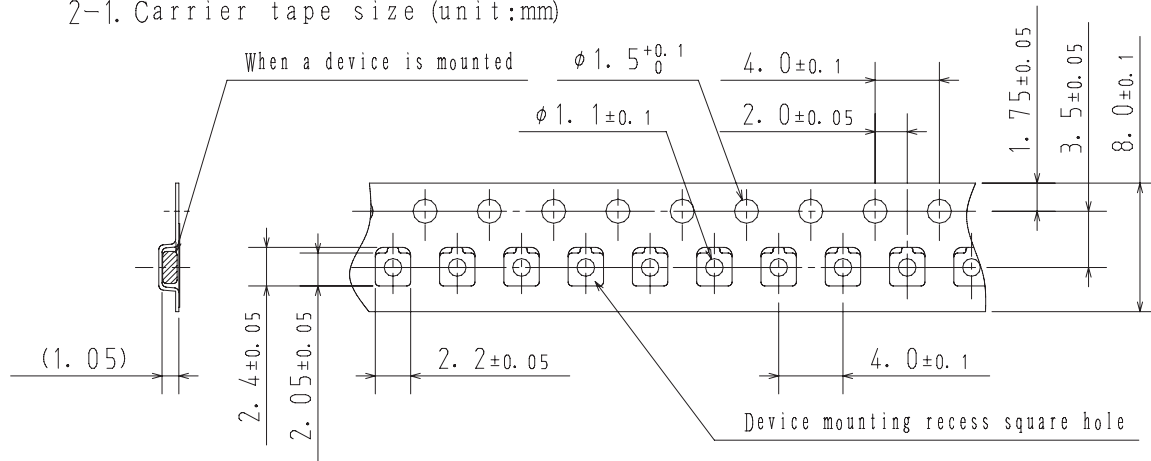
NOTE (1)

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

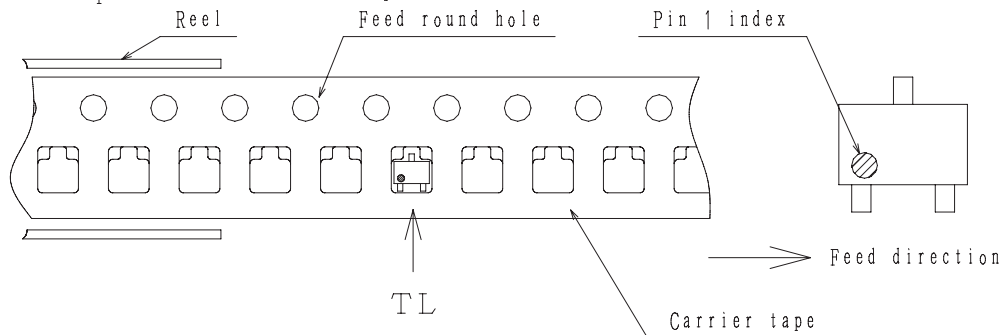
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

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

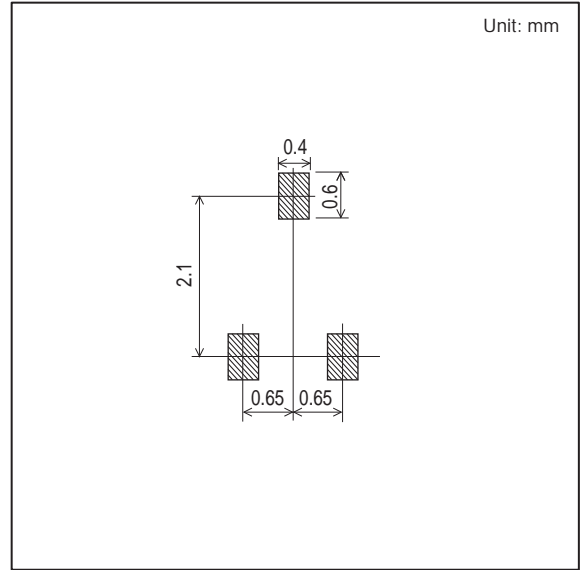
MCH3914

Outline Drawing

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



Land Pattern Example



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Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9