# MCH3914

# ON Semiconductor®

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## N-Channel JFET 15V, 16 to 50mA, 29mS, MCPH3

### **Features**

- · | yfs | is large
- · Ciss is small
- · Small package
- · FBET process
- · Halogen free compliance

### **Specifications**

### Absolute Maximum Ratings at Ta=25°C

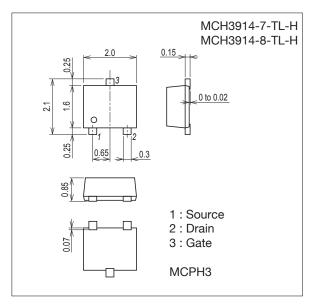
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSX</sub>		15	V
Gate-to-Drain Voltage	VGDS		-15	V
Gate Current	IG		5	mA
Drain Current	ID		50	mA
Allowable Power Dissipation	PD	When mounted on ceramic substrate (600mm <sup>2</sup> ×0.8mm)	300	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

This product is designed to "ESD immunity < 200V\*", so please take care when handling.

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

### **Package Dimensions**

unit : mm (typ) 7019A-006

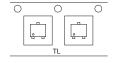


### **Product & Package Information**

• Package : MCPH3

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

### Packing Type: TL



### Marking



### **Electrical Connection**



### ORDERING INFORMATION

See detailed ordering and shipping information on page 2 of this data sheet.

<sup>\*</sup> Machine Model

### **Electrical Characteristics** at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
		Conditions	min	typ	max	Offic
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	IGSS	VGS=-10V, VDS=0V			-1.0	nA
Cutoff Voltage	V <sub>GS</sub> (off)	V <sub>DS</sub> =5V, I <sub>D</sub> =10μA	-0.6	-1.4	-3.0	V
Zero-Gate Voltage Drain Current	IDSS	V <sub>DS</sub> =5V, V <sub>GS</sub> =0V	16.0*		50.0*	mA
Forward Transfer Admittance	yfs  1	V <sub>DS</sub> =5V, I <sub>D</sub> =10mA, f=1kHz	14	21		mS
	yfs  2	V <sub>DS</sub> =5V, V <sub>GS</sub> =0V, f=1kHz	14	29		mS
Input Capacitance	Ciss	Vp 2-5\/ \/2 2-0\/ f-1MHz		4.9		pF
Reverse Transfer Capacitance	Crss	VDS=5V, VGS=0V, f=1MHz		1.4		pF

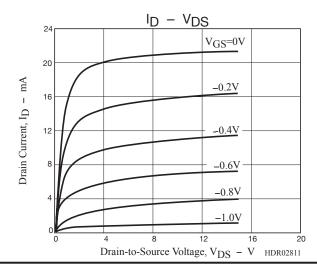
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

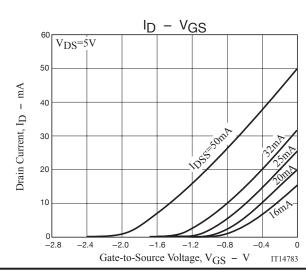
### \*: The MCH3914 is classified by IDSS as follows: (unit: mA)

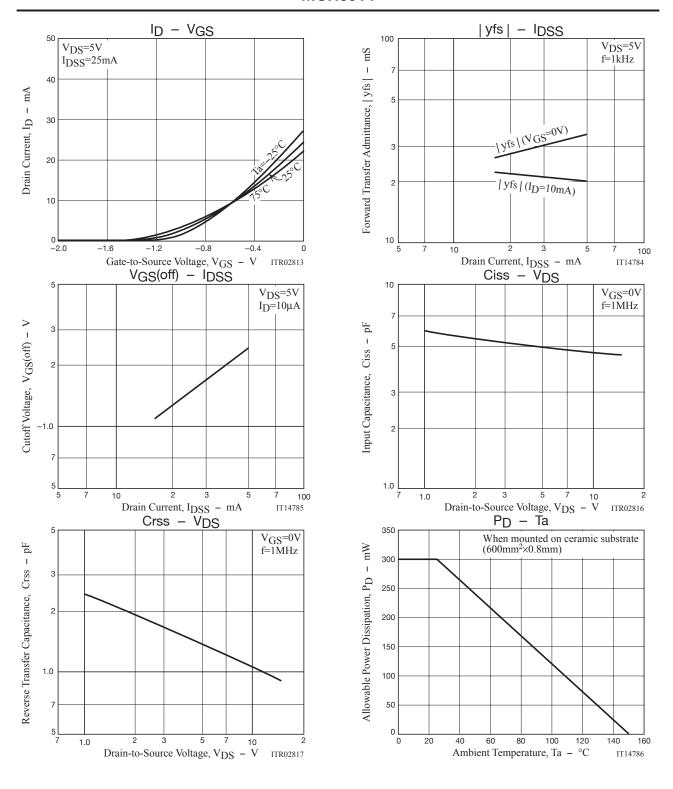
Rank	7	8
IDSS	16.0 to 32.0	25.0 to 50.0

### **Ordering Information**

Device	Package	Shipping	memo	
MCH3914-7-TL-H	CH3914-7-TL-H MCPH3 3,000pcs./reel		Pb Free and Halogen Free	
MCH3914-8-TL-H	МСРН3	3,000pcs./reel	Fb Free and Halogen Free	







### **Outline Drawing**

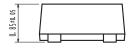
PIN#1

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

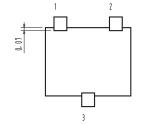
# Mass (g) Unit 0.007 \*For reference mm 2.020.06 3 0.15<sup>40.1</sup> 0-0.02

0. 3<sup>+0. 1</sup>

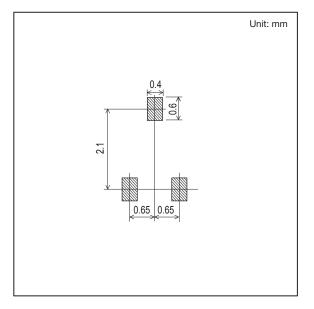
\*1:Lot indication



0.65



**Land Pattern Example** 



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