

N-Channel JFET

15 V, 16 to 50 mA, 29 mS, MCPH3

MCH3914

Features

- | yfs | is Large
- Ciss is Small
- Small Package
- FBET Process
- Pb-Free, Halogen Free/BFR Free and RoHS Compliant

Specifications

ABSOLUTE MAXIMUM RATINGS at $T_A = 25$ °C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSX}		15	٧
Gate-to-Drain Voltage	V_{GDS}		-15	V
Gate Current	IG		5	mA
Drain Current	I _D		50	mA
Allowable Power Dissipation	P _D	When mounted on ceramic substrate (600 mm ² x 0.8 mm)	300	mW
Junction Temperature	TJ		150	°C
Storage Temperature	Tstg		-55 to +150	°C

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.

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



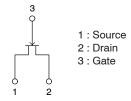
MCPH3 CASE 419AQ

MARKING DIAGRAM



J = Specific Device Code

ELECTRICAL CONNECTION



ORDERING INFORMATION

Device	Package	Shipping [†]
MCH3914-7-TL-H	MCPH3 (Pb-Free,	3000 / Tape & Reel
MCH3914-8-TL-H	Halogen Free)	ιαρο απισοι

[†]For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

^{*} Machine Model

MCH3914

ELECTRICAL CHARACTERISTICS at $T_A = 25^{\circ}C$

			Ratings			
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Gate-to-Drain Breakdown Voltage	V _{(BR)GDS}	$I_G = -10 \mu A, V_{DS} = 0 V$	-15	_	-	V
Gate-to-Source Leakage Current	I _{GSS}	$V_{GS} = -10 \text{ V}, V_{DS} = 0 \text{ V}$	-	-	-1.0	nA
Cutoff Voltage	V _{GS} (off)	$V_{DS} = 5 \text{ V}, I_D = 10 \mu\text{A}$	-0.6	-1.4	-3.0	V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} = 5 V, V _{GS} = 0 V	16.0*	-	50.0*	mA
Forward Transfer Admittance	yfs 1	$V_{DS} = 5 \text{ V}, I_D = 10 \text{ mA}, f = 1 \text{ kHz}$	14	21	-	mS
	yfs 2	V _{DS} = 5 V, V _{GS} = 0 V, f = 1 kHz	14	29	-	mS
Input Capacitance	Ciss	$V_{DS} = 5 \text{ V}, V_{GS} = 0 \text{ V}, f = 1 \text{ MHz}$	-	4.9	-	pF
Reverse Transfer Capacitance	Crss		_	1.4	-	pF

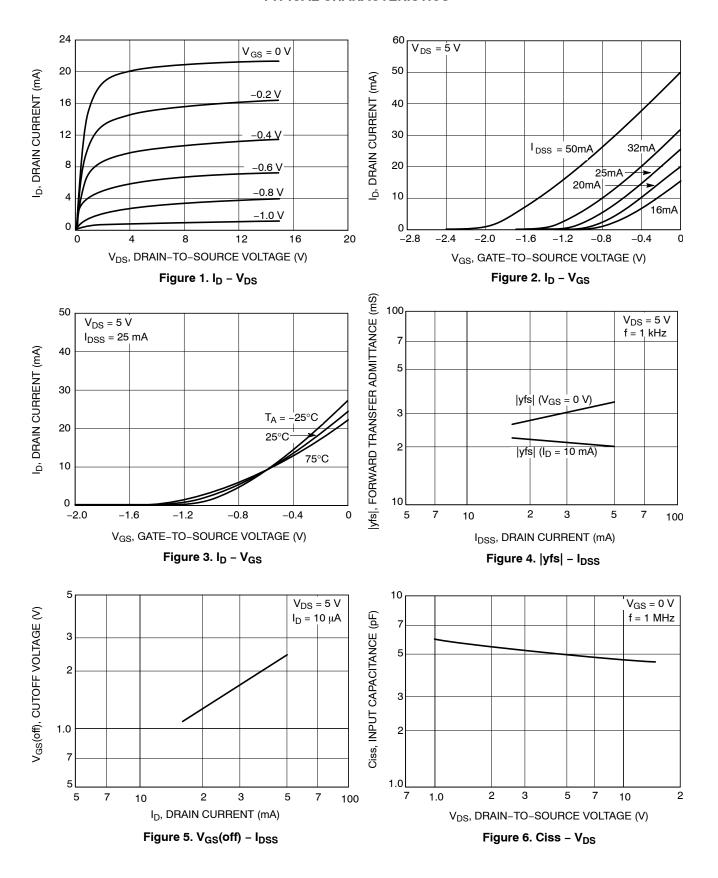
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

^{*} The MCH3914 is classified by I_{DSS} as follows:

Rank	7	8	Unit
I _{DSS}	16.0 to 32.0	25.0 to 50.0	mA

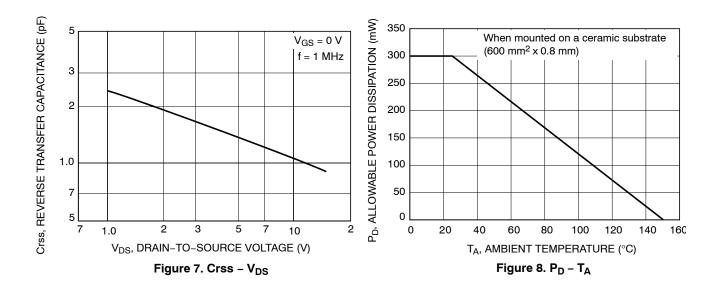
MCH3914

TYPICAL CHARACTERISTICS



MCH3914

TYPICAL CHARACTERISTICS (CONTINUED)



LAND PATTERN EXAMPLE

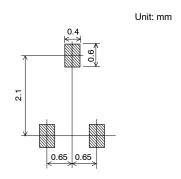
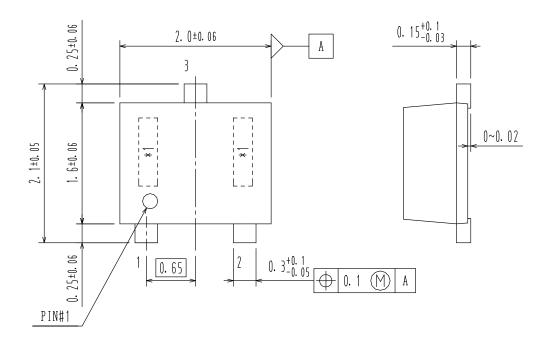


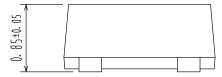
Figure 9. Land Pattern Example

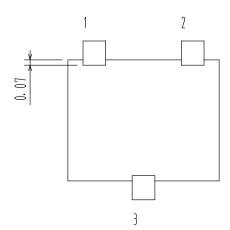


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