

N-Channel JFET

15 V, 10 to 32 mA, 35 mS,

Dual MCPH5

MCH5908

Features

- Composite Type with 2 J-FET Contained in a MCPH5 Package Currently in Use, Improving the Mounting Efficiency Greatly
- The MCH5908 is Formed with Two Chips, Being Equivalent to the 2SK3557, Placed in One Package
- This is a Pb-Free Device

Specifications

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

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		10	mA
Drain Current	I_D		50	mA
Allowable Power Dissipation	P_D	1 unit	200	mW
Total Power Dissipation	P_T		300	mW
Junction Temperature	T_j		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

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.

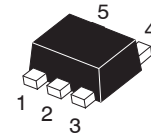
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	Ratings			Unit
			Min	Typ	Max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G = -10 \mu\text{A}$, $V_{DS} = 0 \text{ V}$	-15	-	-	V
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = -10 \text{ V}$, $V_{DS} = 0 \text{ V}$	-	-	-1.0	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 5 \text{ V}$, $I_D = 100 \mu\text{A}$	-0.3	-0.7	-1.5	V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 5 \text{ V}$, $V_{GS} = 0 \text{ V}$	10.0*	-	32.0*	mA
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 5 \text{ V}$, $V_{GS} = 0 \text{ V}$, $f = 1 \text{ kHz}$	24	35	-	mS
Input Capacitance	C_{iss}	$V_{DS} = 5 \text{ V}$, $V_{GS} = 0 \text{ V}$, $f = 1 \text{ MHz}$	-	10.5	-	pF
Reverse Transfer Capacitance	C_{rss}		-	3.5	-	pF
Noise Figure	NF	$V_{DS} = 5 \text{ V}$, $R_g = 1 \text{ k}\Omega$, $I_D = 1 \text{ mA}$, $f = 1 \text{ kHz}$	-	1.0	-	dB

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 MCH5908 is classified by I_{DSS} as follows (unit: mA).

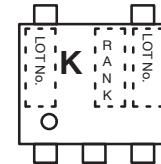
Rank	G	H
I_{DSS}	10 to 20	16 to 32



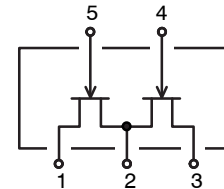
- 1: Drain 1
- 2: Source 1 / Source 2
- 3: Drain 2
- 4: Gate 2
- 5: Gate 1

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CASE 419AP

MARKING DIAGRAM



ELECTRICAL CONNECTION



ORDERING INFORMATION

Device	Package	Shipping†
MCH5908H-TL-E	SC-88AFL/ MCPH5 (Pb-Free)	3000 / Tape & Reel

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

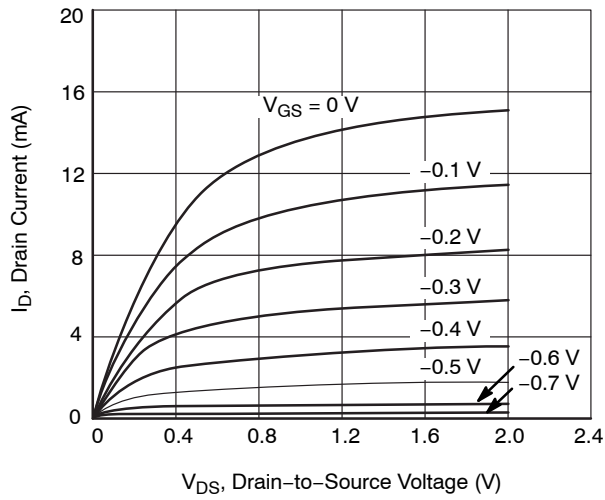


Figure 1. $I_D - V_{DS}$

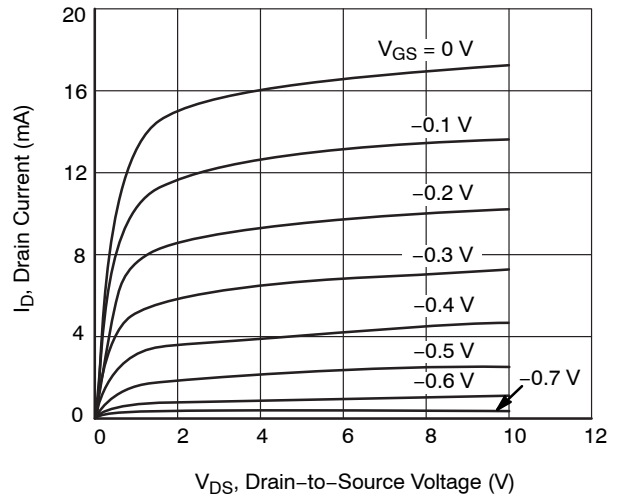


Figure 2. $I_D - V_{DS}$

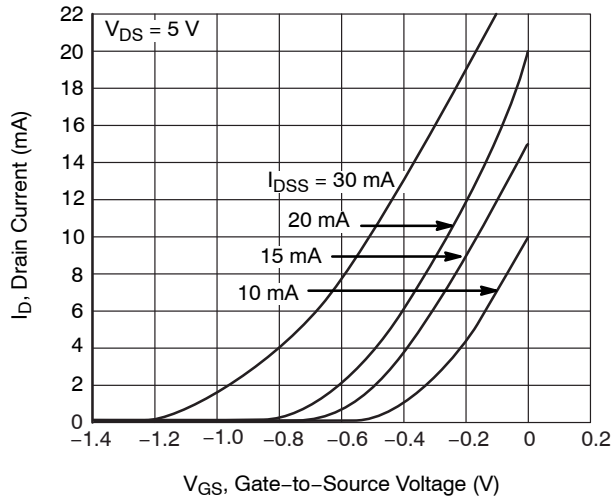


Figure 3. $I_D - V_{GS}$

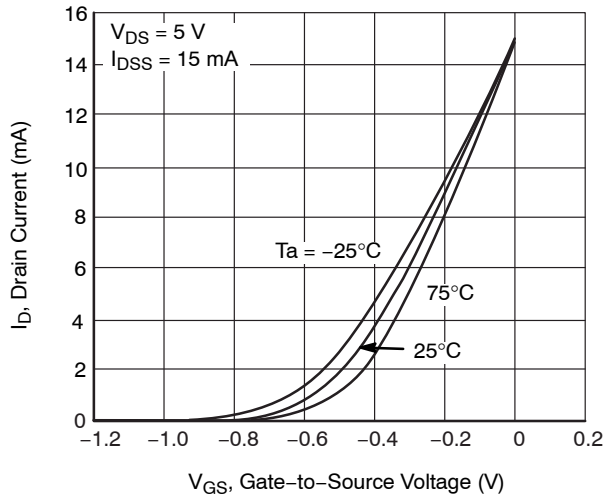


Figure 4. $I_D - V_{GS}$

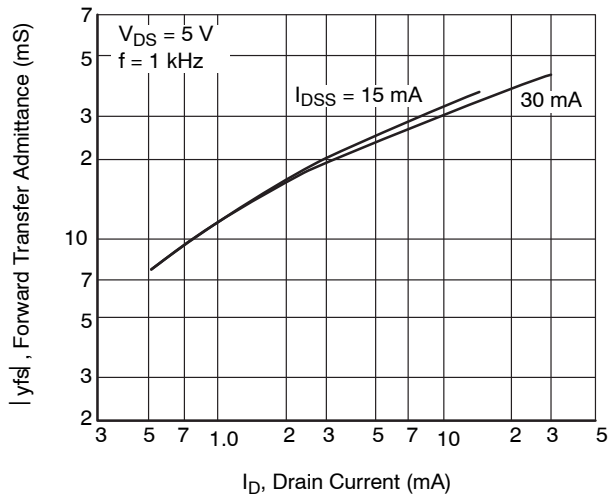


Figure 5. $|y_{fs}| - I_D$

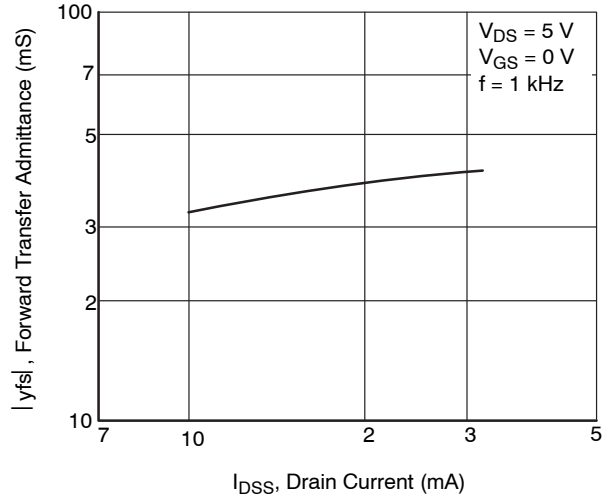


Figure 6. $|y_{fs}| - I_{DSS}$

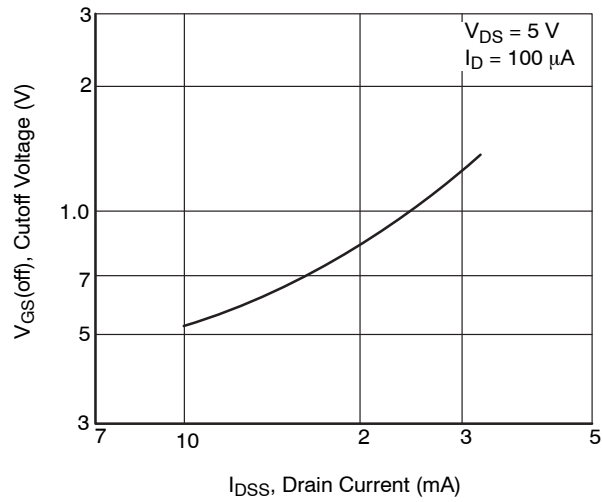


Figure 7. $V_{GS(off)}$ – I_{DSS}

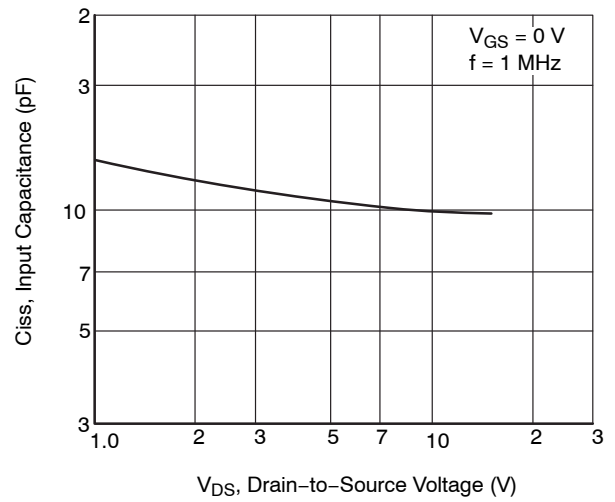


Figure 8. C_{iss} – V_{DS}

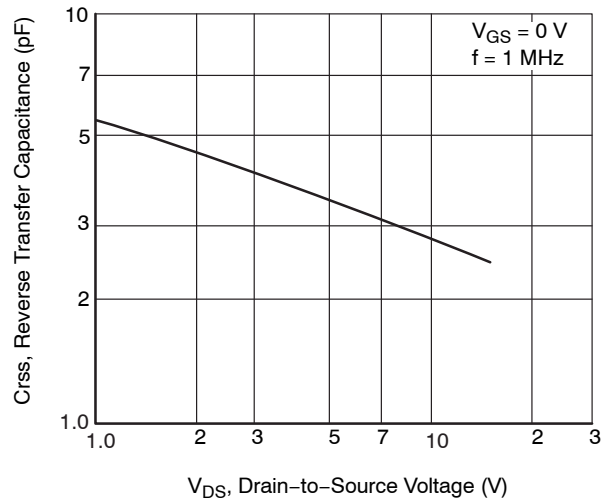


Figure 9. C_{rss} – V_{DS}

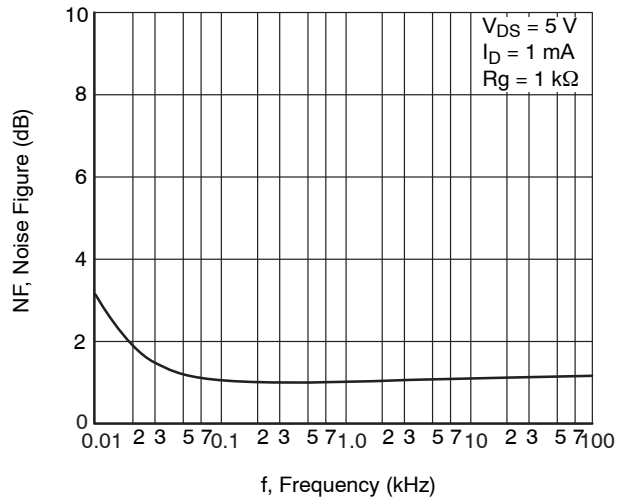


Figure 10. NF – f

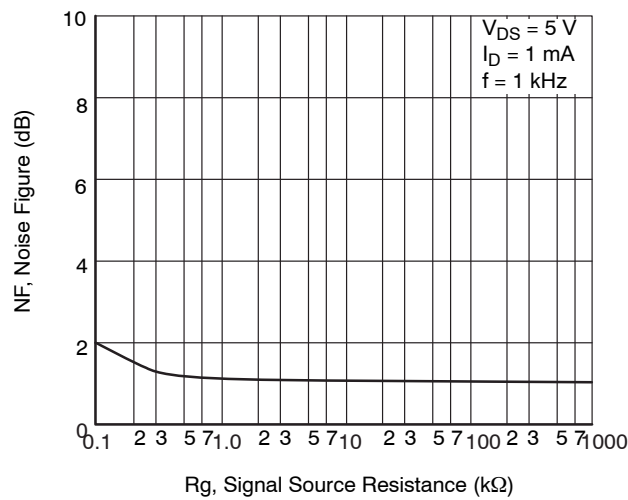


Figure 11. NF – R_g

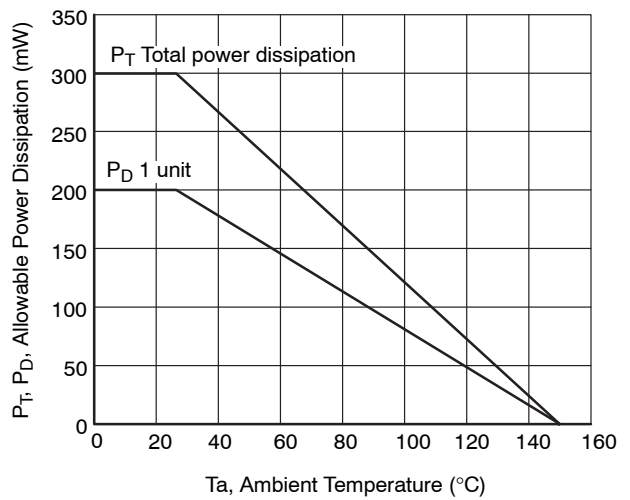
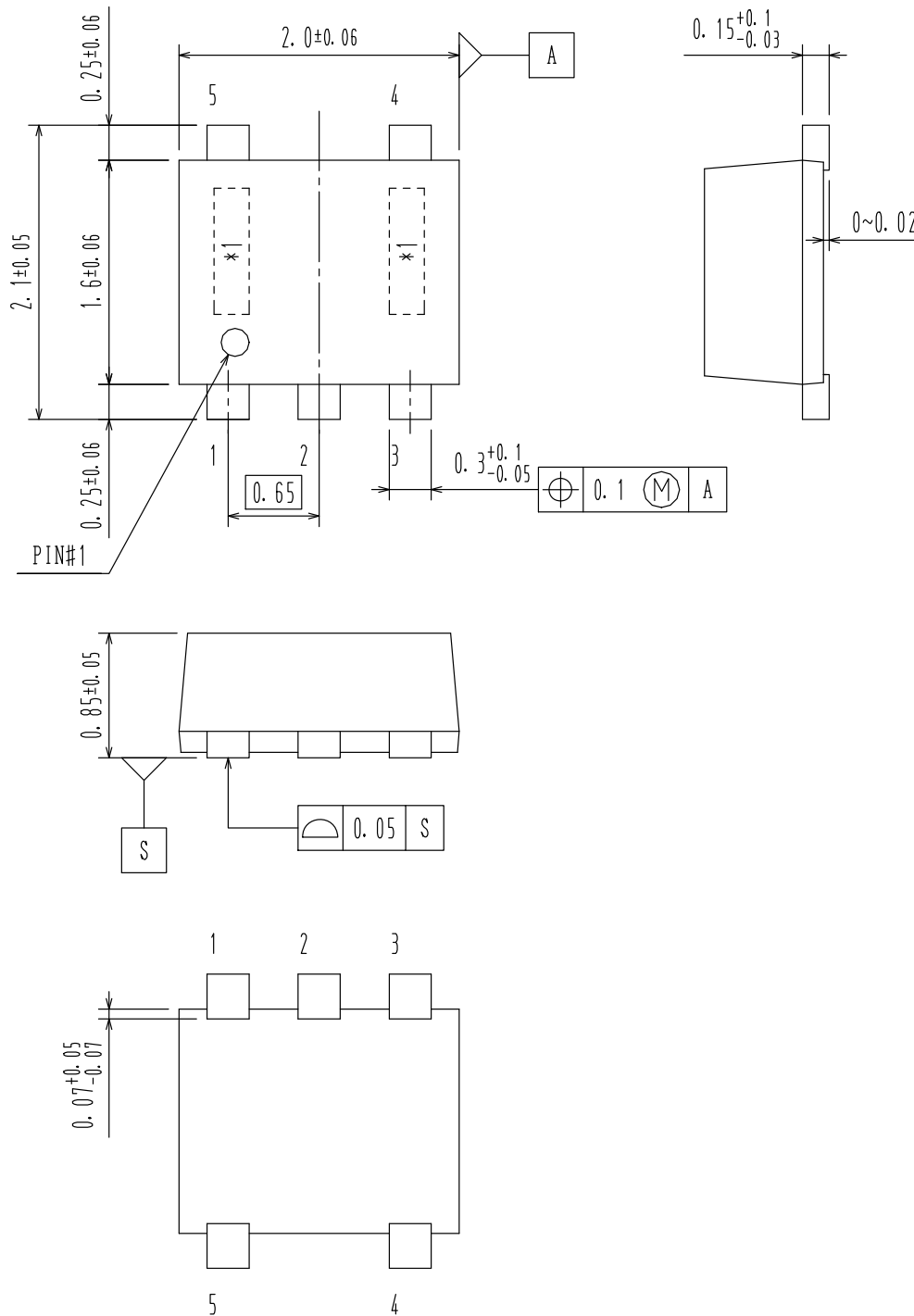


Figure 12. P_T , P_D – T_a

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