Ordering number : ENA1218A

SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

N-Channel Silicon Junction FET

MCH5908 — High-Frequency Amplifier, AM Amplifier, Low-Frequency Amplifier Applications

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

Specifications

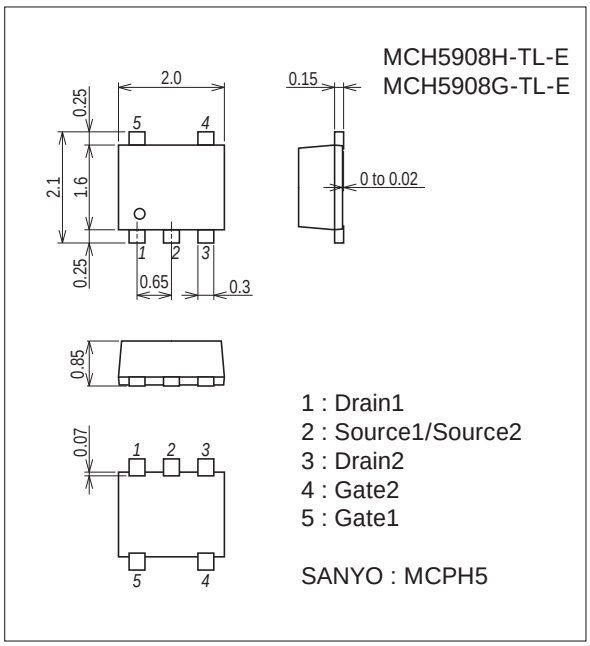
Absolute Maximum Ratings at Ta=25°C

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	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Package Dimensions

unit : mm (typ)

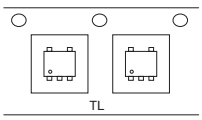
7021A-009



Product & Package Information

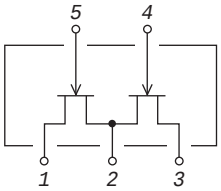
- Package : MCPH5
- JEITA, JEDEC : SC-88A, SC-70-5, SOT-353
- Minimum Packing Quantity : 3,000 pcs./reel

Packing Type : TL



Marking

Electrical Connection



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=100μA	−0.3	−0.7	−1.5	V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=5V, V_{GS}=0V	10.0*		32.0*	mA
Forward Transfer Admittance	| yfs |	V_{DS}=5V, V_{GS}=0V, f=1kHz	24	35		mS
Input Capacitance	Ciss	V_{DS}=5V, V_{GS}=0V, f=1MHz		10.5		pF
Reverse Transfer Capacitance	Crss			3.5		pF
Noise Figure	NF	V_{DS}=5V, Rg=1kΩ, I_D=1mA, f=1kHz		1.0		dB

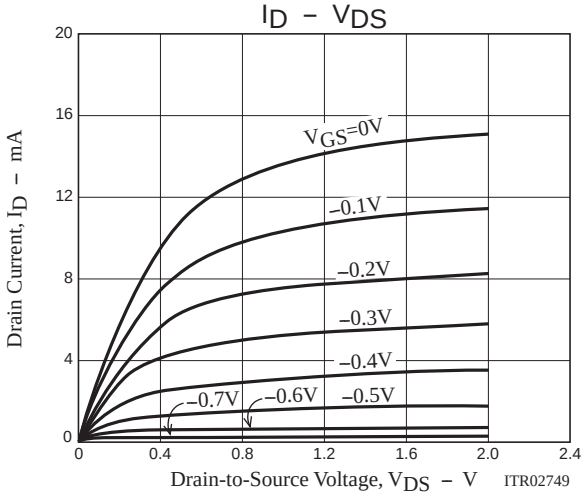
The specifications shown above are for each individual J-FET.

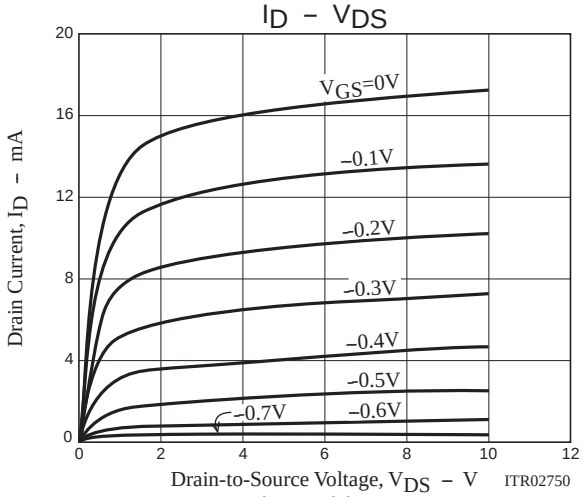
* : The MCH5908 is classified by I_{DSS} as follows (unit : mA).

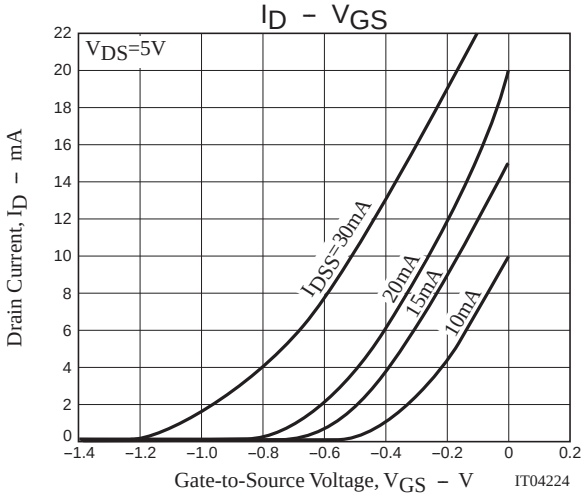
Rank	G	H
I_{DSS}	10 to 20	16 to 32

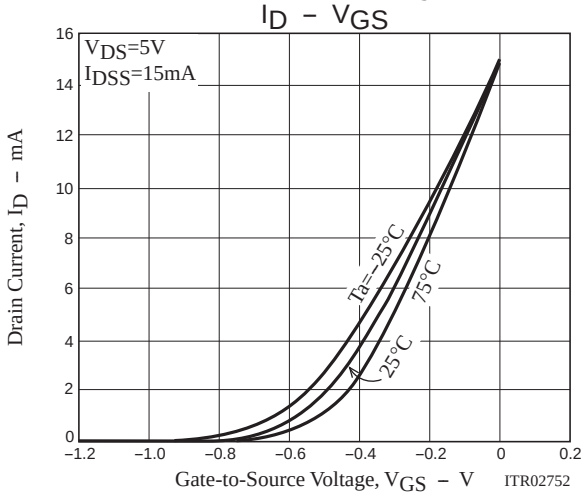
Ordering Information

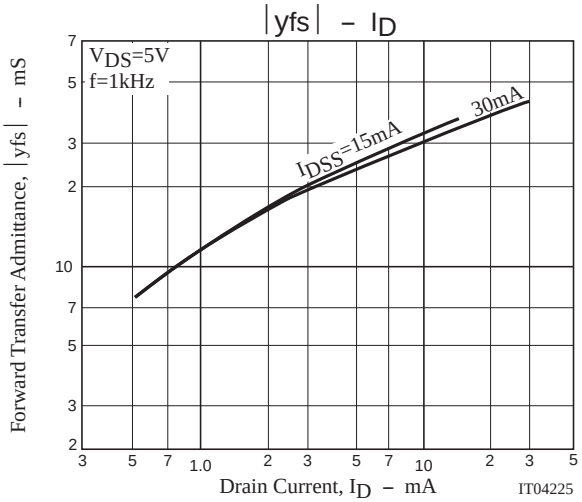
Device	Package	Shipping	memo
MCH5908H-TL-E	MCPH5	3,000pcs./reel	Pb Free
MCH5908G-TL-E	MCPH5	3,000pcs./reel	

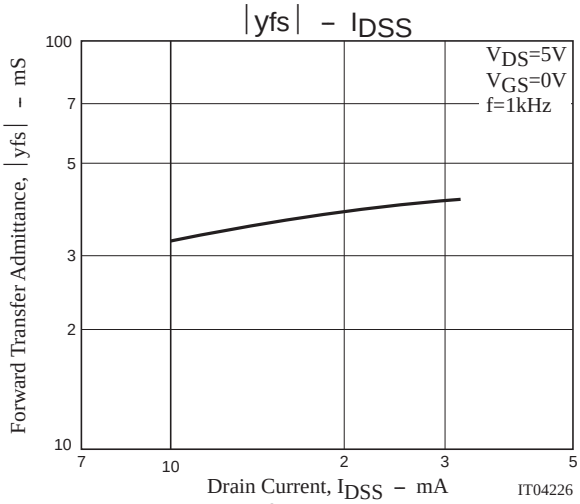


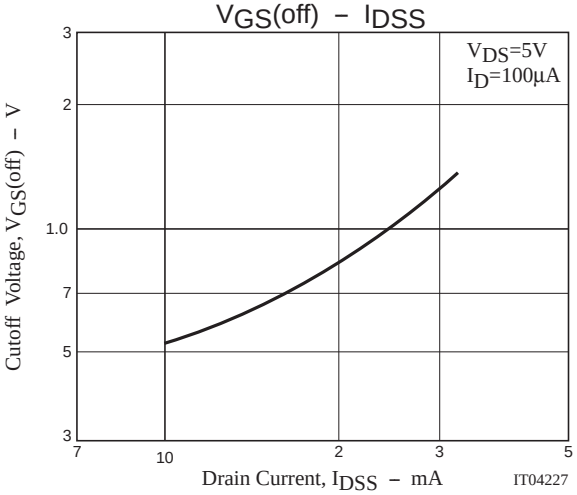


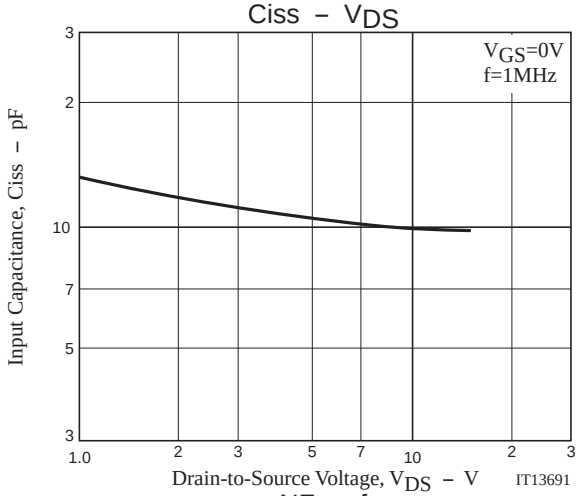


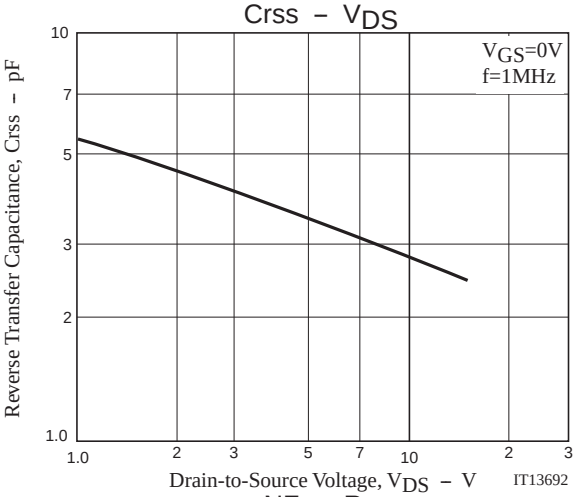


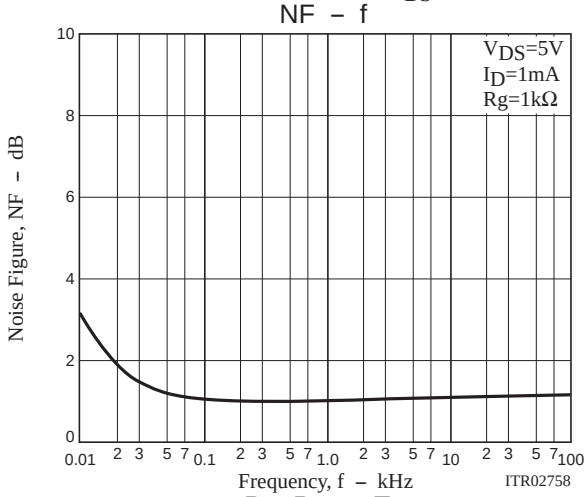

|yfs| – ID
VDS=5V
f=1kHz
IDSS=15mA
30mA
Forward Transfer Admittance, |yfs| – mS
Drain Current, ID – mA
IT04225

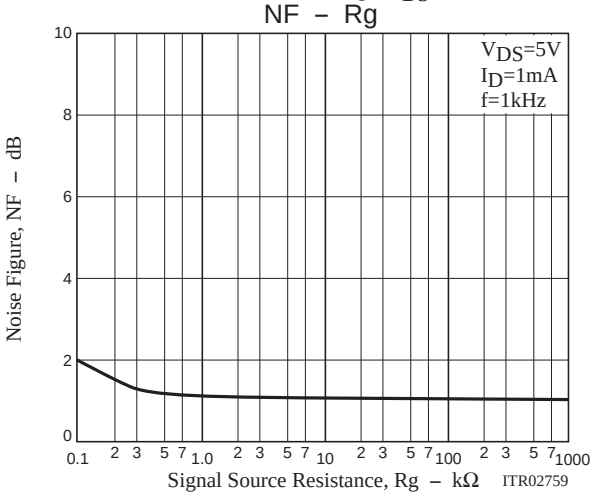

|yfs| – IDSS
VDS=5V
VGS=0V
f=1kHz
Forward Transfer Admittance, |yfs| – mS
Drain Current, IDSS – mA
IT04226

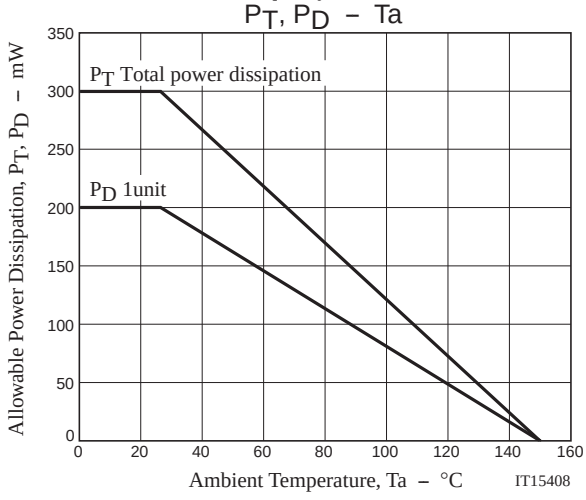

VGS(off) – IDSS
VDS=5V
ID=100µA
Cutoff Voltage, VGS(off) – V
Drain Current, IDSS – mA
IT04227


Ciss – VDS
VGS=0V
f=1MHz
Input Capacitance, Ciss – pF
Drain-to-Source Voltage, VDS – V
IT13691


Crss – VDS
VGS=0V
f=1MHz
Reverse Transfer Capacitance, Crss – pF
Drain-to-Source Voltage, VDS – V
IT13692


NF – f
VDS=5V
ID=1mA
Rg=1kΩ
Noise Figure, NF – dB
Frequency, f – kHz
ITR02758


NF – Rg
VDS=5V
ID=1mA
f=1kHz
Noise Figure, NF – dB
Signal Source Resistance, Rg – kΩ
ITR02759


PT, PD – Ta
PT Total power dissipation
PD 1unit
Allowable Power Dissipation, PT, PD – mW
Ambient Temperature, Ta – °C
IT15408

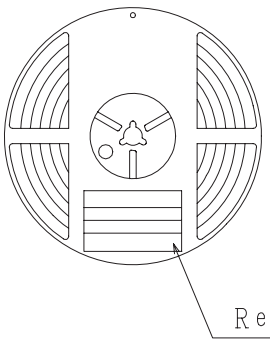
Taping Specification

MCH5908H-TL-E, MCH5908G-TL-E

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)
MCPH5	MCP4	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

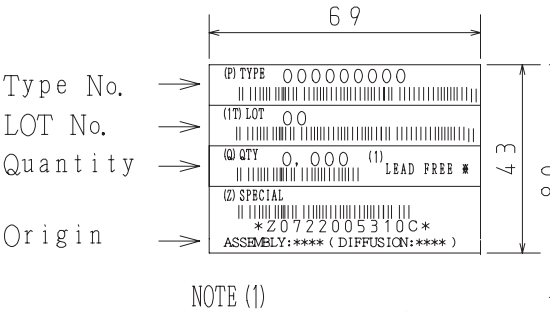
Packing method



Reel label

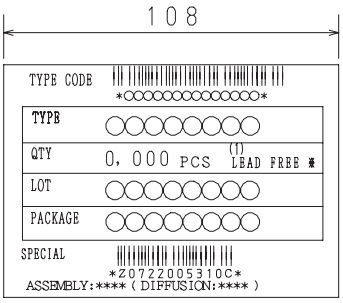
Reel label, Inner box label

(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.



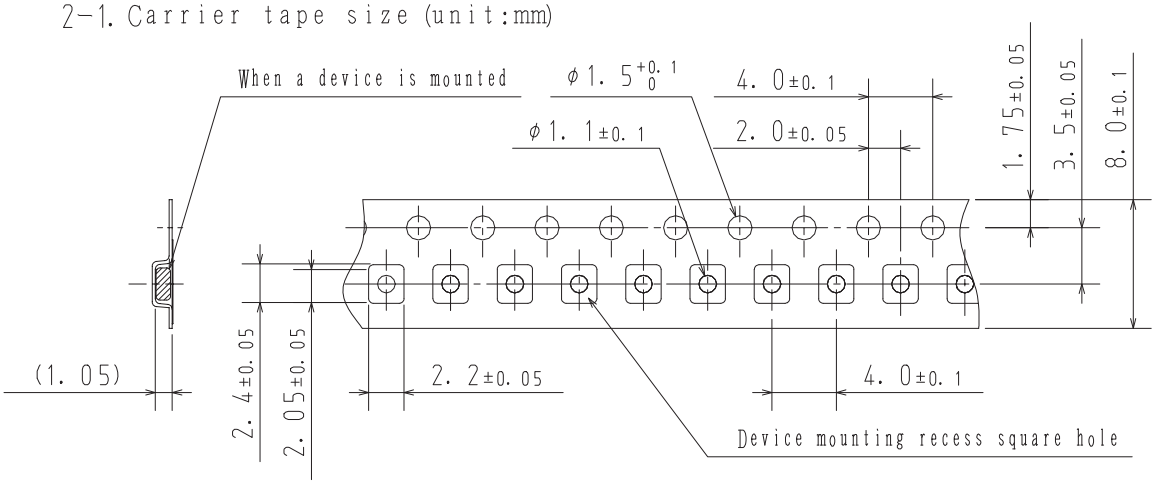
NOTE (1)

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

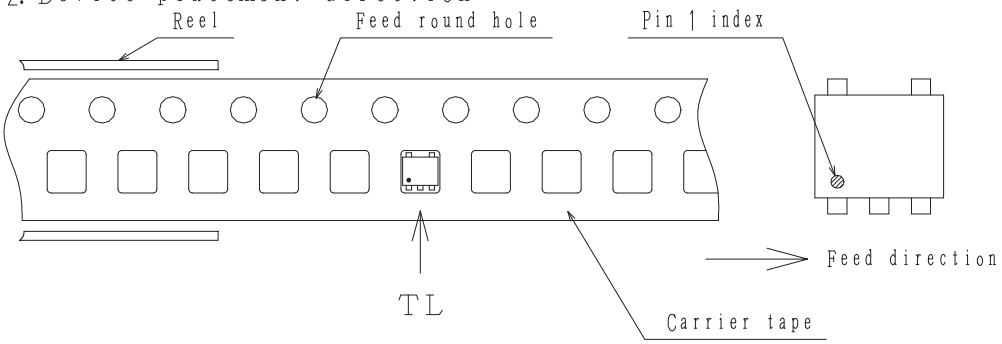
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

2-1. Carrier tape size (unit:mm)



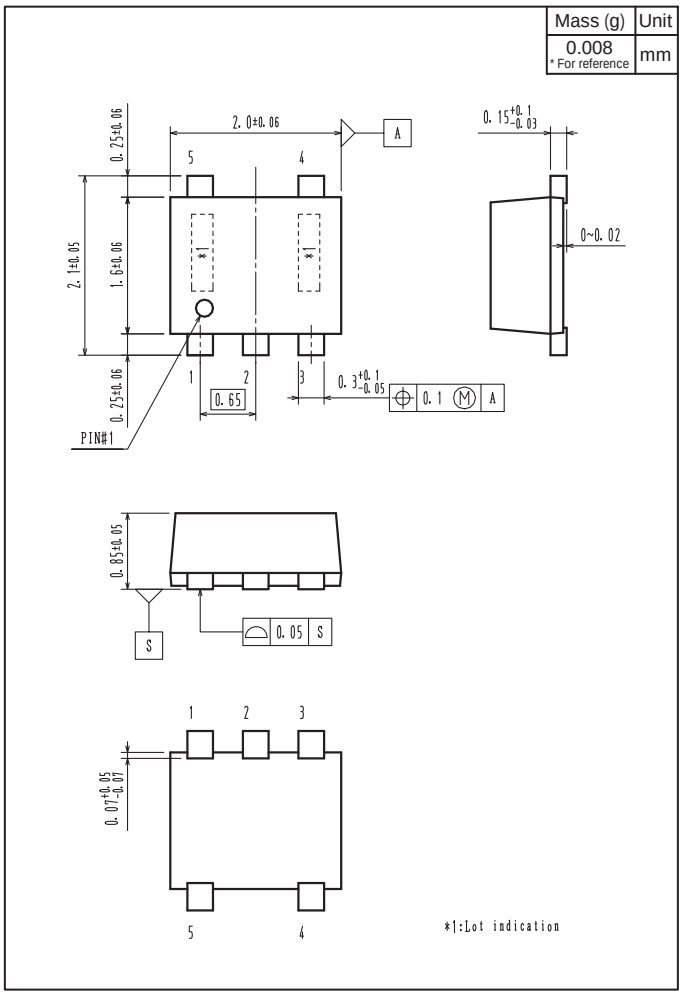
2-2. Device placement direction



Those with two electrode terminal on the feed hole side·····TL

Outline Drawing

MCH5908H-TL-E, MCH5908G-TL-E



Land Pattern Example