Ordering number : ENA1218A

MCH5908

N-Channel JFET
15V, 10 to 32mA, 35mS, Dual MCPH5

ON Semiconductor®
http://onsemi.com

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

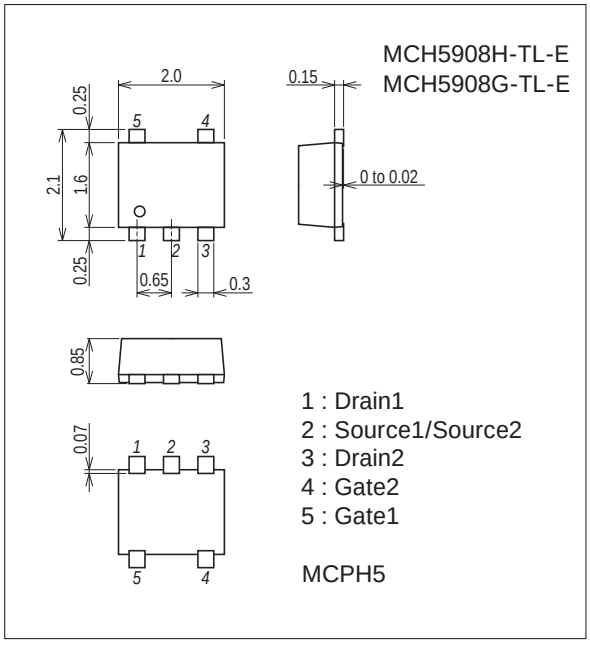
Absolute Maximum Ratings at Ta=25°C

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

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Package Dimensions

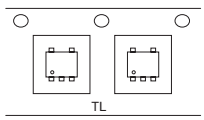
unit : mm (typ)
7021A-009



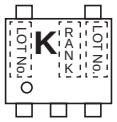
Product & Package Information

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

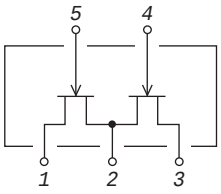
Packing Type : TL



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

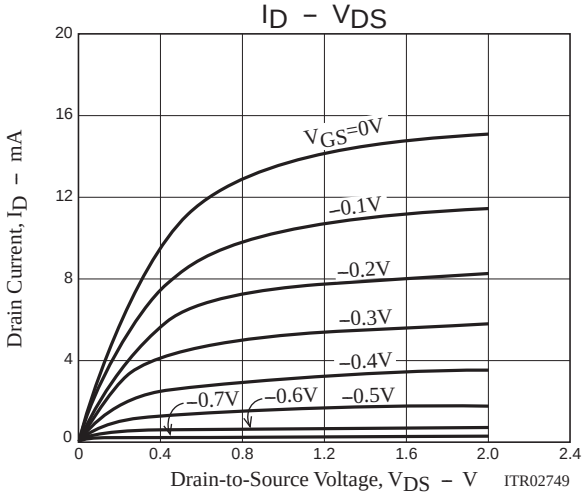
The specifications shown above are for each individual J-FET.

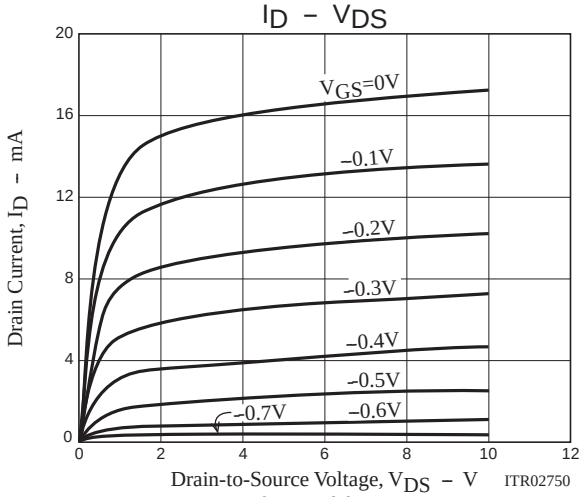
* : The MCH5908 is classified by I_{DSS} as follows (unit : mA).

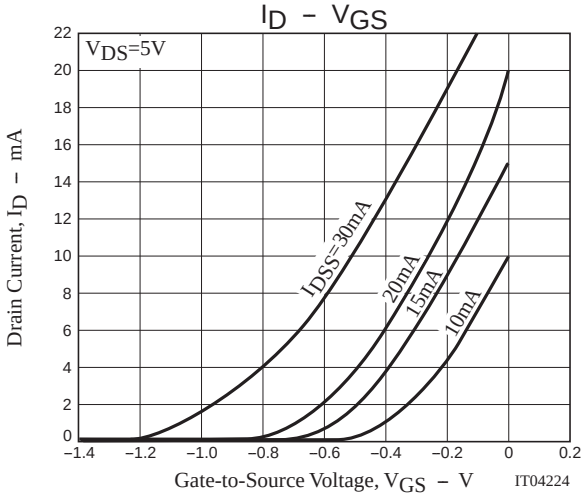
Rank	G	H
I_{DSS}	10 to 20	16 to 32

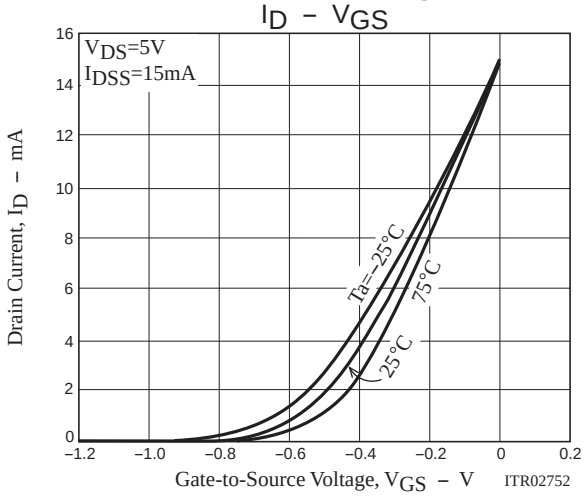
Ordering Information

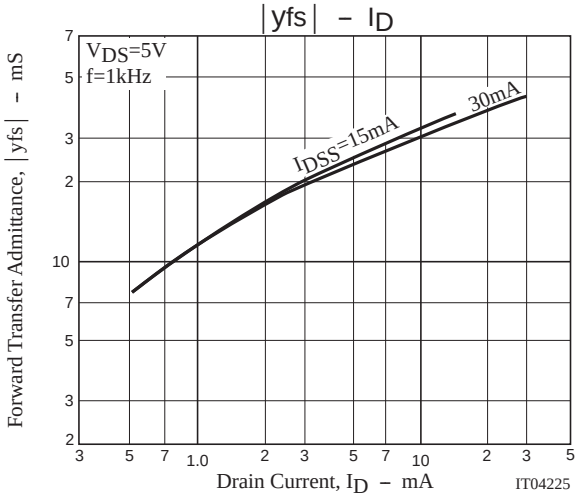
Device	Package	Shipping	memo
MCH5908H-TL-E	MCPH5	3,000pcs./reel	Pb Free
MCH5908G-TL-E	MCPH5	3,000pcs./reel	

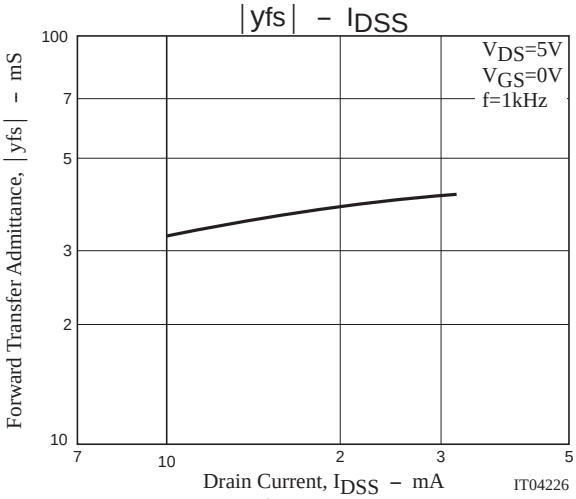


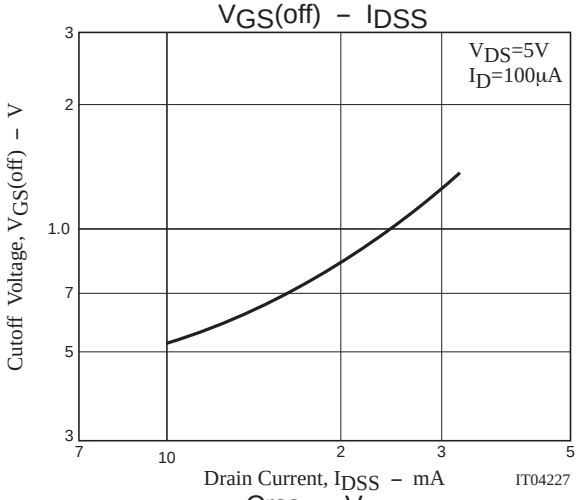


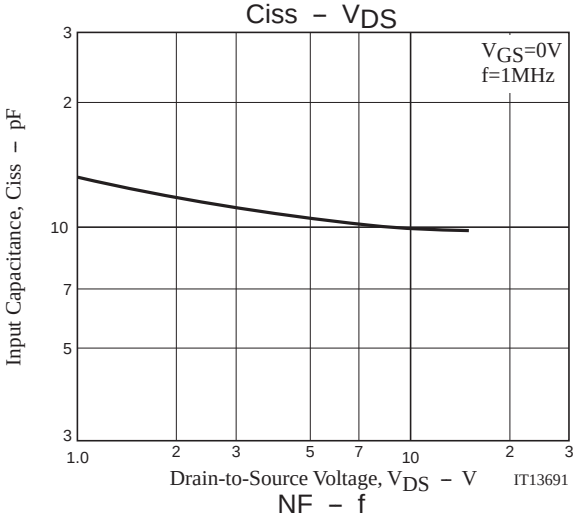


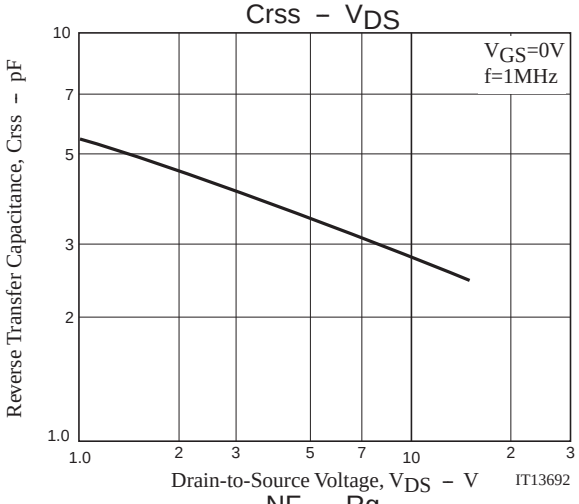


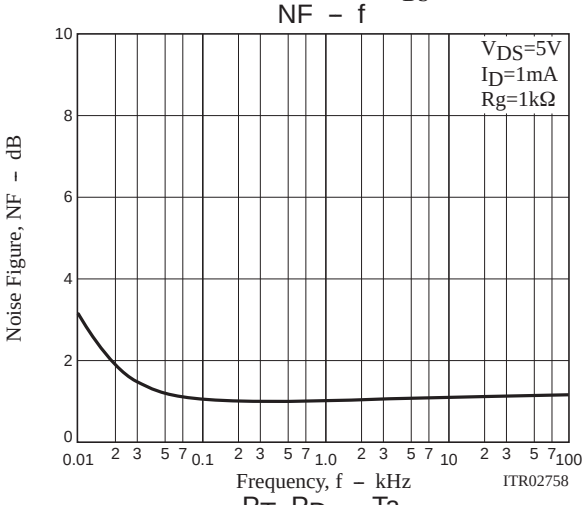

|yfs| – ID
VDS=5V
f=1kHz
IDSS=15mA
30mA
Forward Transfer Admittance, |yfs| – mS
Drain Current, ID – mA
IT04225

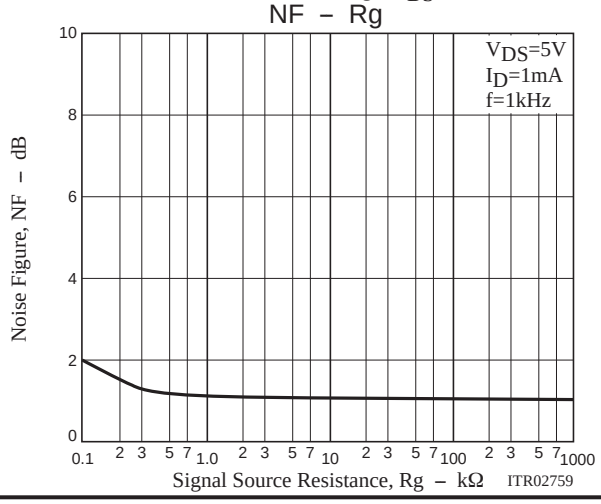

|yfs| – IDSS
VDS=5V
VGS=0V
f=1kHz
Forward Transfer Admittance, |yfs| – mS
Drain Current, IDSS – mA
IT04226

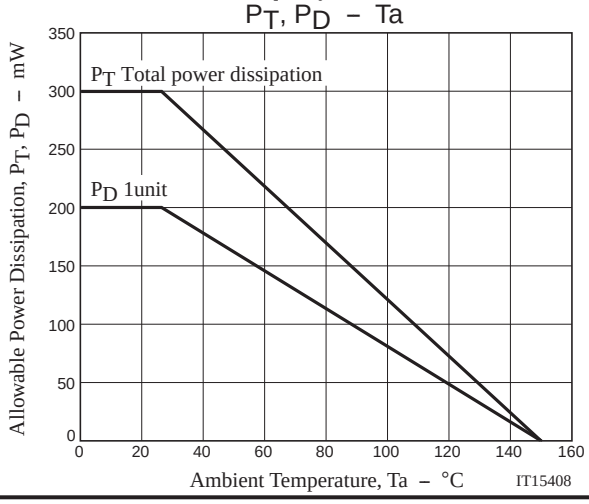

VGS(off) – IDSS
VDS=5V
ID=100μA
Cutoff Voltage, VGS(off) – V
Drain Current, IDSS – mA
IT04227


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

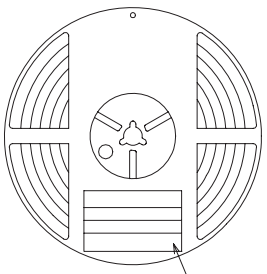
Taping Specification

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

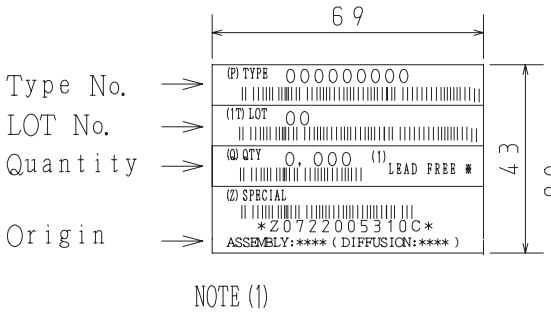
Packing method



Reel label

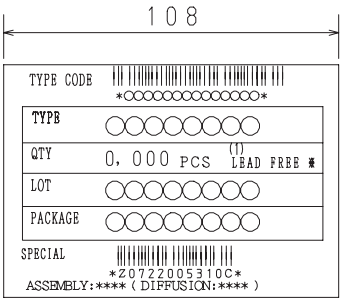
Reel label, Inner box label

(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.



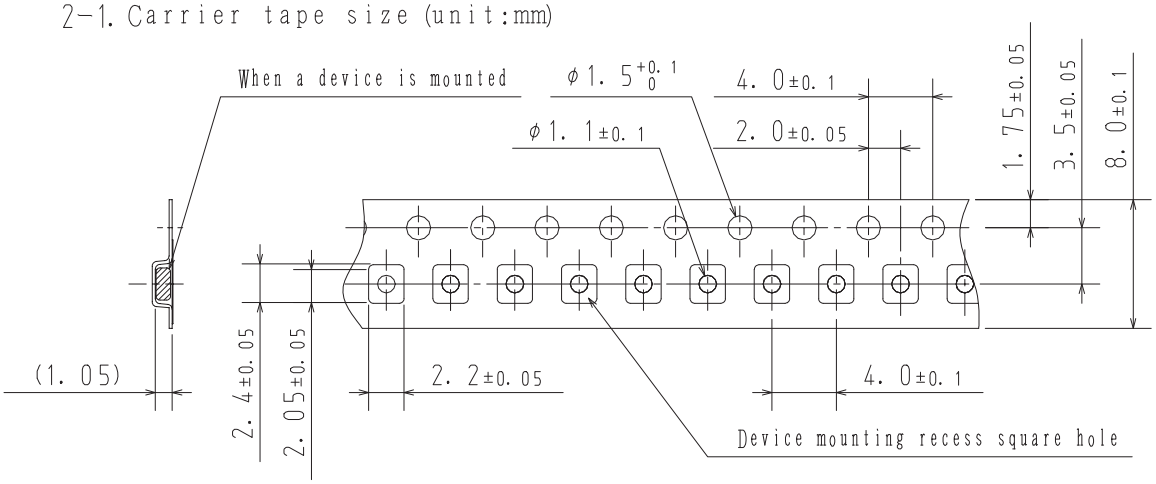
NOTE (1)

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

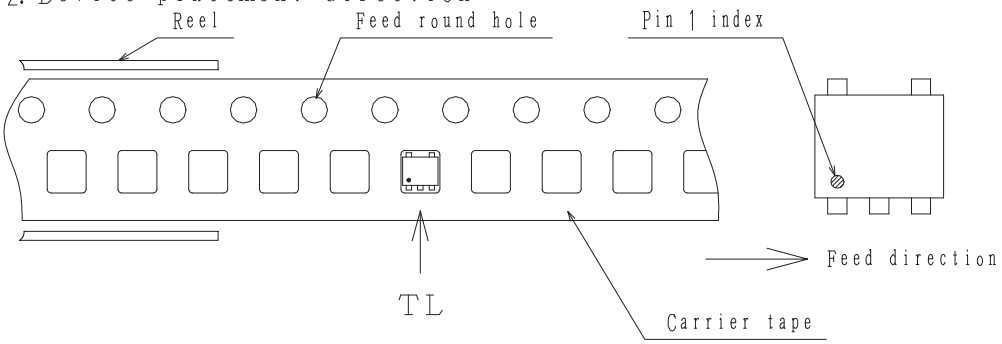
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



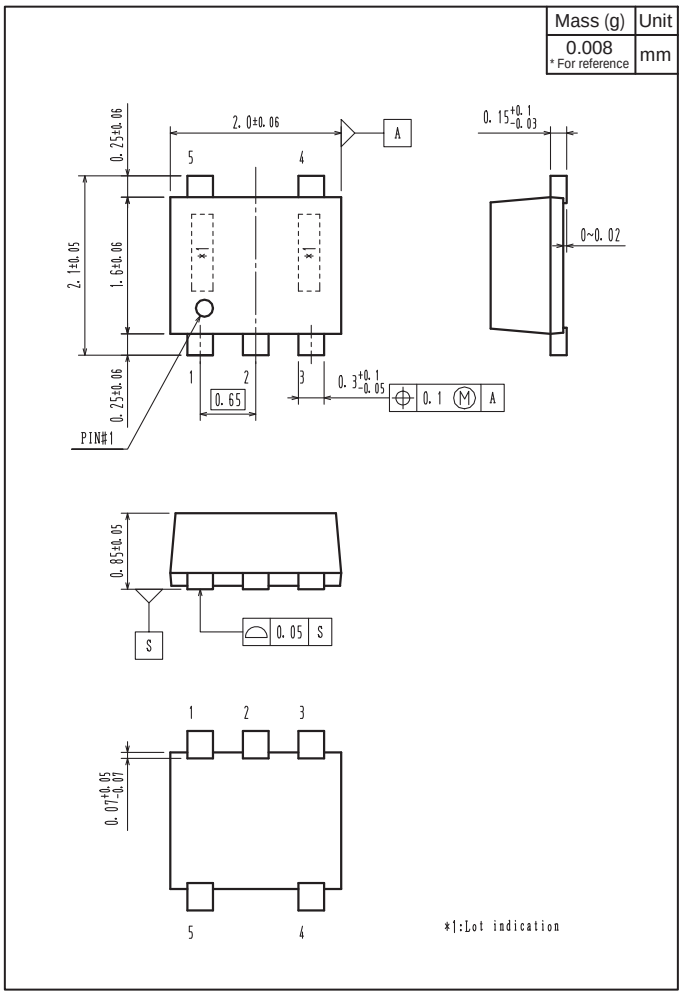
2-2. Device placement direction



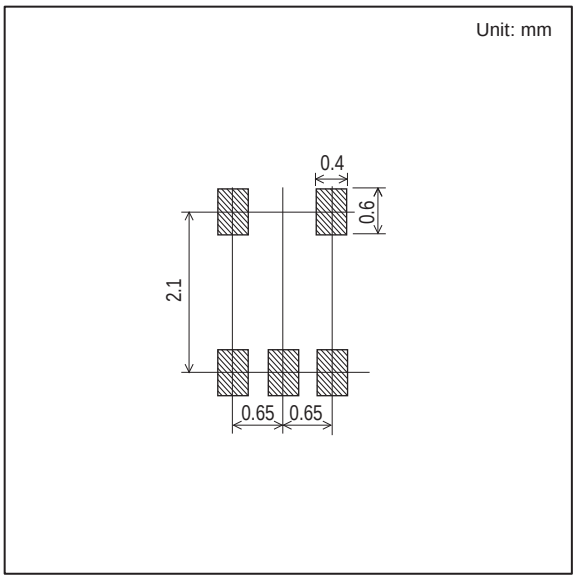
Those with two electrode terminal on the feed hole side·····TL

Outline Drawing

MCH5908H-TL-E, MCH5908G-TL-E



Land Pattern Example



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