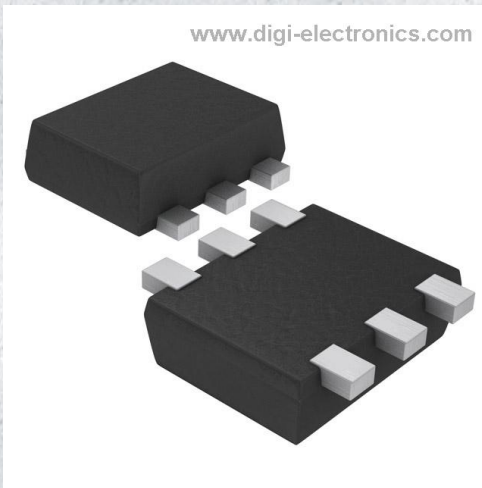


# MCH6662-TL-W Datasheet



DiGi Electronics Part Number	MCH6662-TL-W-DG
Manufacturer	<a href="#">onsemi</a>
Manufacturer Product Number	MCH6662-TL-W
Description	MOSFET 2N-CH 20V 2A SC88FL
Detailed Description	Mosfet Array 20V 2A 800mW Surface Mount SC-88FL/MCPH6



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

**Manufacturer Product Number:**

MCH6662-TL-W

**Series:**

-

**Technology:**

MOSFET (Metal Oxide)

**FET Feature:**

Logic Level Gate, 1.8V Drive

**Current - Continuous Drain (Id) @ 25°C:**

2A

**Vgs(th) (Max) @ Id:**

1.3V @ 1mA

**Input Capacitance (Ciss) (Max) @ Vds:**

128pF @ 10V

**Operating Temperature:**

150°C (TJ)

**Package / Case:**

6-TSSOP, SC-88, SOT-363

**Base Product Number:**

MCH6662

**Manufacturer:**

onsemi

**Product Status:**

Obsolete

**Configuration:**

2 N-Channel (Dual)

**Drain to Source Voltage (Vdss):**

20V

**Rds On (Max) @ Id, Vgs:**

160mOhm @ 1A, 4.5V

**Gate Charge (Qg) (Max) @ Vgs:**

1.8nC @ 4.5V

**Power - Max:**

800mW

**Mounting Type:**

Surface Mount

**Supplier Device Package:**

SC-88FL/MCPH6

## Environmental & Export classification

**RoHS Status:**

ROHS3 Compliant

**REACH Status:**

REACH Unaffected

**HTSUS:**

8541.21.0095

**Moisture Sensitivity Level (MSL):**

1 (Unlimited)

**ECCN:**

EAR99



# MCH6662

## Power MOSFET 20V, 160mΩ, 2A, Dual N-Channel

ON Semiconductor®

www.onsemi.com

### Features

- ON-Resistance  $N_{ch}$  :  $R_{DS(on)1}=120m\Omega$  (typ)
- 1.8V Drive
- ESD Diode - Protected Gate
- Pb-Free, Halogen Free and RoHS Compliance

### Specifications

#### Absolute Maximum Ratings at $T_a=25^\circ C$

Parameter	Symbol	Conditions	Value	Unit
Drain-to-Source Voltage	$V_{DSS}$		20	V
Gate-to-Source Voltage	$V_{GSS}$		$\pm 10$	V
Drain Current (DC)	$I_D$		2.0	A
Drain Current (Pulse)	$I_{DP}$	$PW \leq 10\mu s$ , duty cycle $\leq 1\%$	8.0	A
Power Dissipation	$P_D$	When mounted on ceramic substrate (900mm <sup>2</sup> ×0.8mm) 1unit	0.8	W
Junction Temperature	$T_j$		150	°C
Storage Temperature	$T_{stg}$		-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.

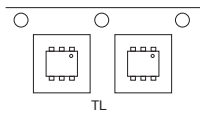
#### Thermal Resistance Ratings

Parameter	Symbol	Value	Unit
Junction to Ambient When mounted on ceramic substrate (900mm <sup>2</sup> ×0.8mm) 1unit	$R_{\theta JA}$	156.25	°C/W

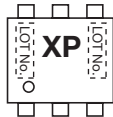
#### Product & Package Information

- Package : MCPH6
- JEITA, JEDEC : SC-88, SC-70-6, SOT-363
- Minimum Packing Quantity : 3,000 pcs./reel

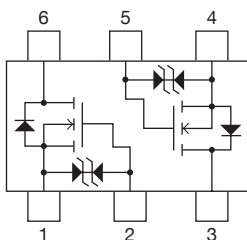
#### Packing Type : TL



#### Marking



#### Electrical Connection



#### ORDERING INFORMATION

See detailed ordering and shipping information on page 6 of this data sheet.

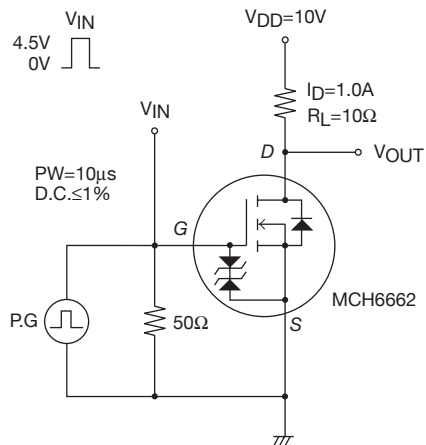
## MCH6662

### Electrical Characteristics at $T_a=25^\circ\text{C}$

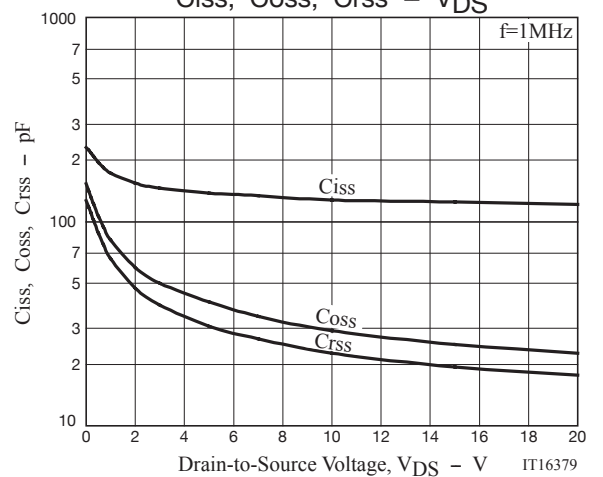
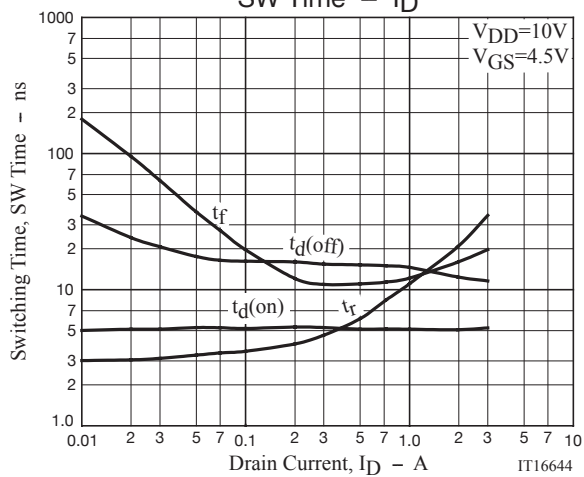
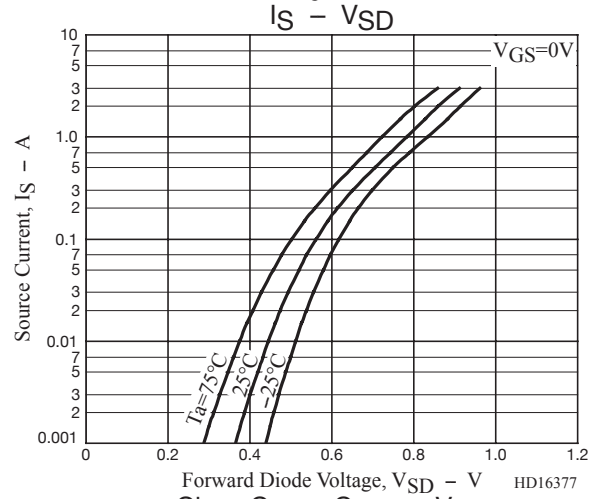
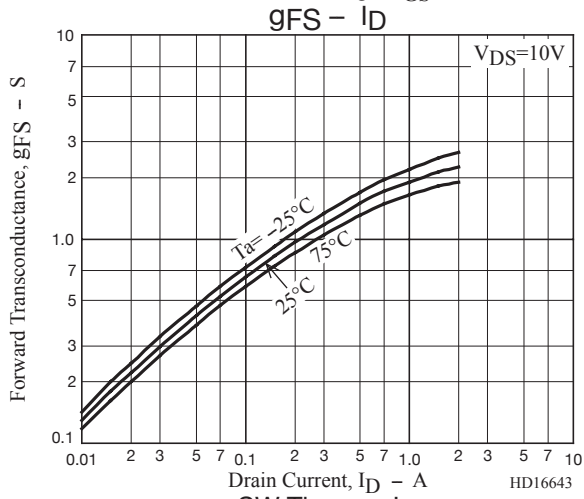
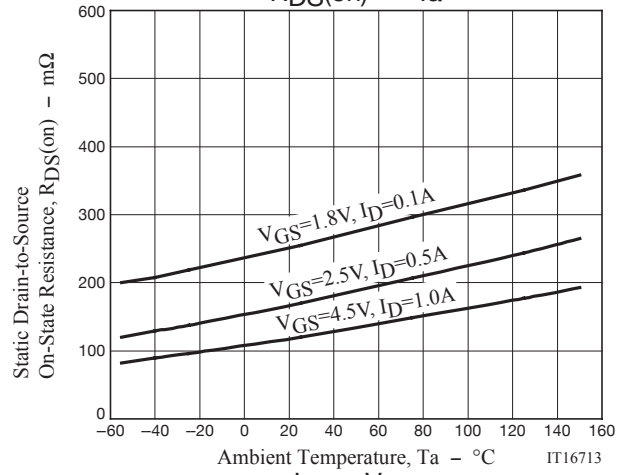
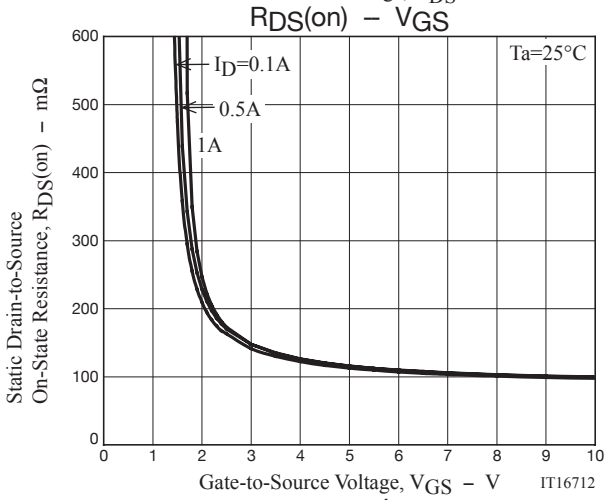
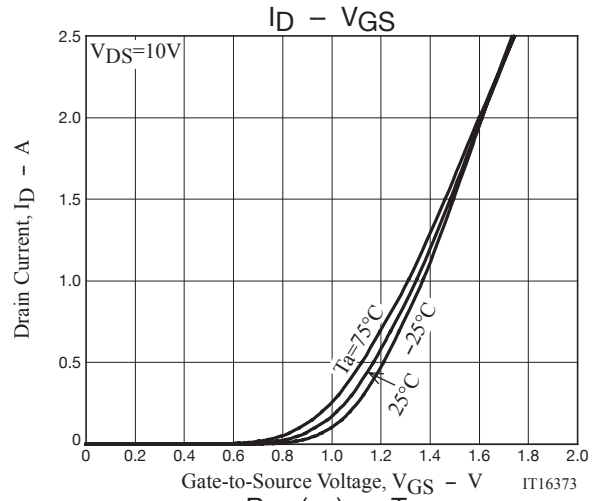
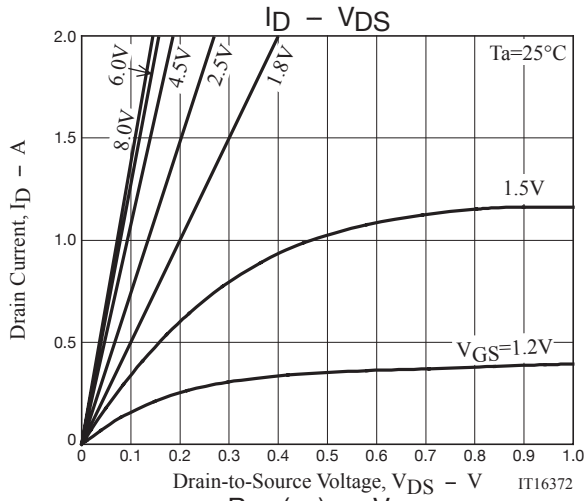
Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1\text{mA}$ , $V_{GS}=0\text{V}$	20			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=20\text{V}$ , $V_{GS}=0\text{V}$			1	$\mu\text{A}$
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 8\text{V}$ , $V_{DS}=0\text{V}$			$\pm 10$	$\mu\text{A}$
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=10\text{V}$ , $I_D=1\text{mA}$	0.4		1.3	V
Forward Transconductance	$g_{FS}$	$V_{DS}=10\text{V}$ , $I_D=1\text{A}$		1.9		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=1.0\text{A}$ , $V_{GS}=4.5\text{V}$		120	160	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D=0.5\text{A}$ , $V_{GS}=2.5\text{V}$		170	240	$\text{m}\Omega$
	$R_{DS(on)3}$	$I_D=0.1\text{A}$ , $V_{GS}=1.8\text{V}$		255	380	$\text{m}\Omega$
Input Capacitance	$C_{iss}$	$V_{DS}=10\text{V}$ , $f=1\text{MHz}$		128		$\text{pF}$
Output Capacitance	$C_{oss}$			28		$\text{pF}$
Reverse Transfer Capacitance	$C_{rss}$			21		$\text{pF}$
Turn-ON Delay Time	$t_{d(on)}$		See specified Test Circuit.		5.1	
Rise Time	$t_r$			11		ns
Turn-OFF Delay Time	$t_{d(off)}$			14.5		ns
Fall Time	$t_f$			12		ns
Total Gate Charge	$Q_g$	$V_{DS}=10\text{V}$ , $V_{GS}=4.5\text{V}$ , $I_D=2\text{A}$			1.8	
Gate-to-Source Charge	$Q_{gs}$			0.3		nC
Gate-to-Drain "Miller" Charge	$Q_{gd}$			0.55		nC
Forward Diode Voltage	$V_{SD}$	$I_S=2\text{A}$ , $V_{GS}=0\text{V}$		0.85	1.2	V

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.

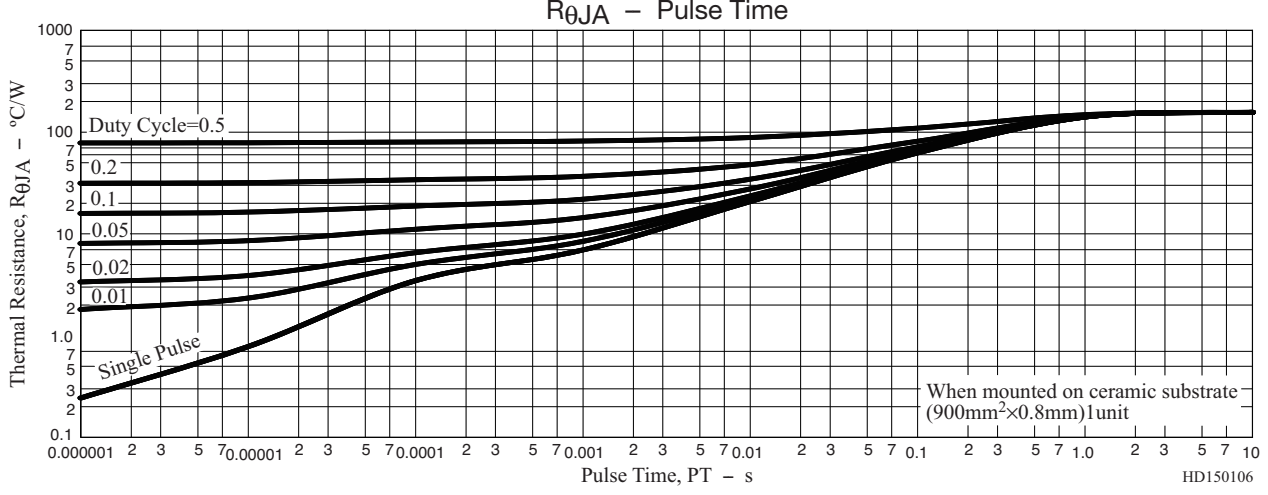
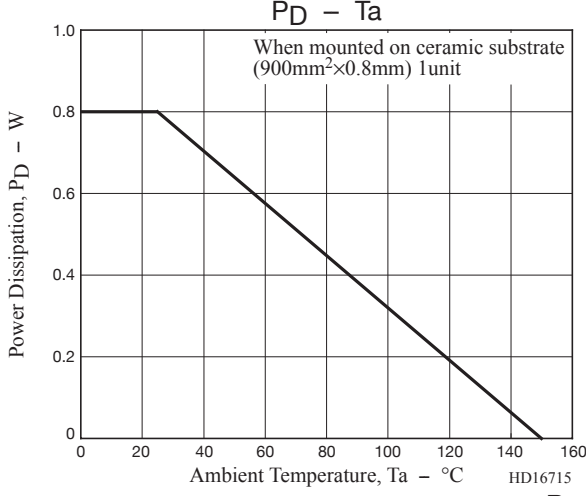
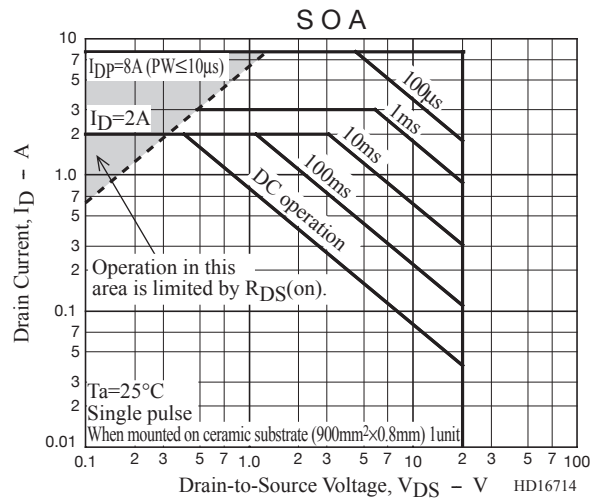
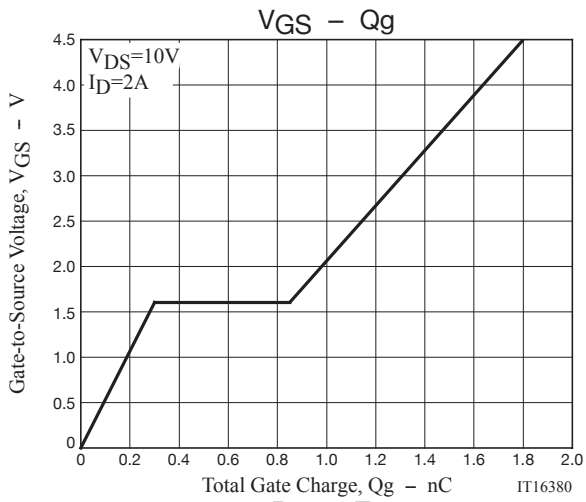
### Switching Time Test Circuit



MCH6662



# MCH6662



# MCH6662

## Package Dimensions

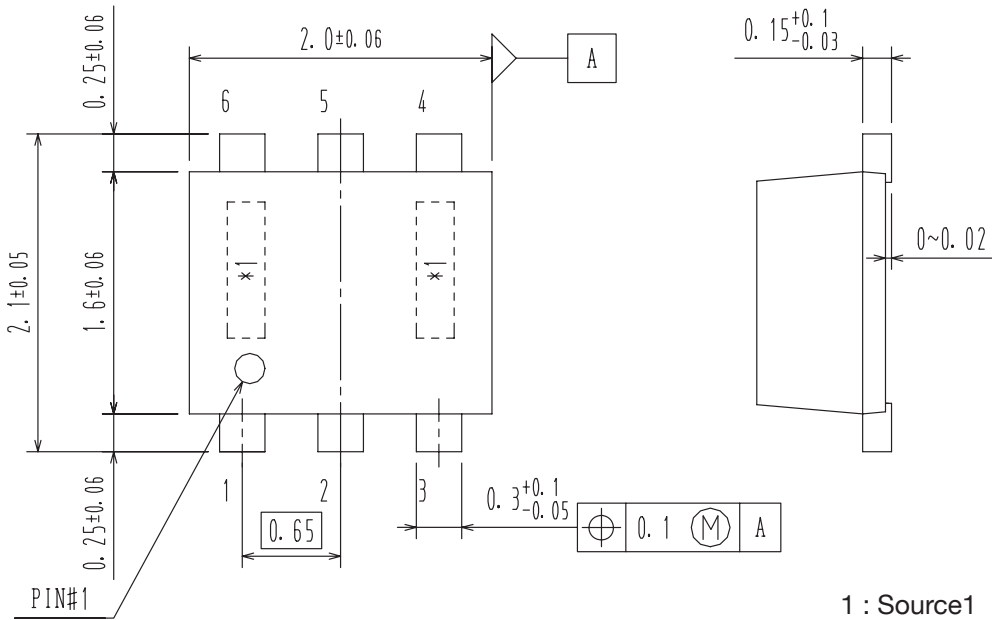
unit : mm

MCH6662-TL-H, MCH6662-TL-W

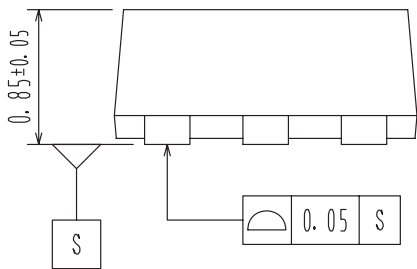
### SC-88FL / MCPH6

CASE 419AS

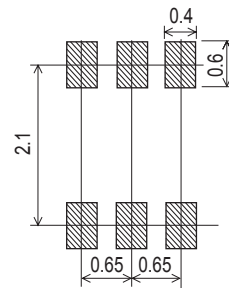
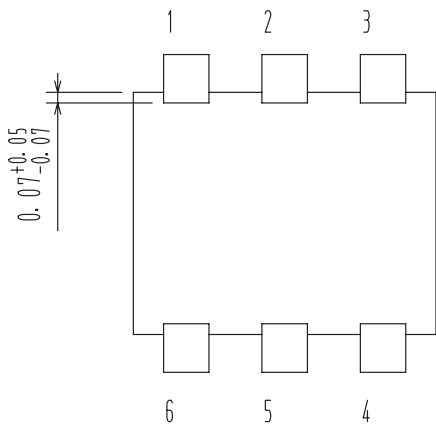
ISSUE O



- 1 : Source1
- 2 : Gate1
- 3 : Drain2
- 4 : Source2
- 5 : Gate2
- 6 : Drain1



### Recommended Soldering Footprint



\*1: Lot indication

**MCH6662****ORDERING INFORMATION**

Device	Package	Shipping	memo
MCH6662-TL-H	MCPH6	3,000pcs./reel	Pb-Free and Halogen Free
MCH6662-TL-W			

Note on usage : Since the MCH6662 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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