

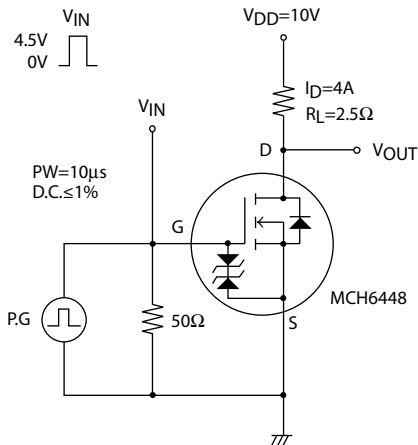
MCH6448

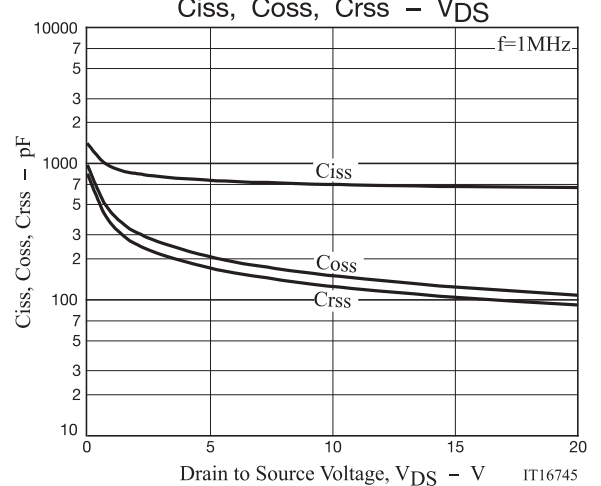
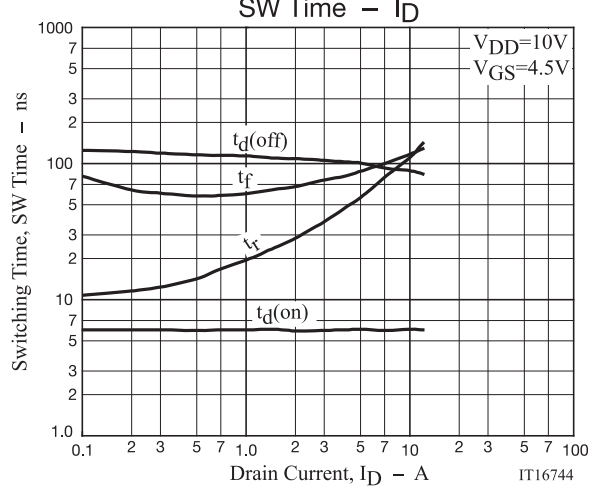
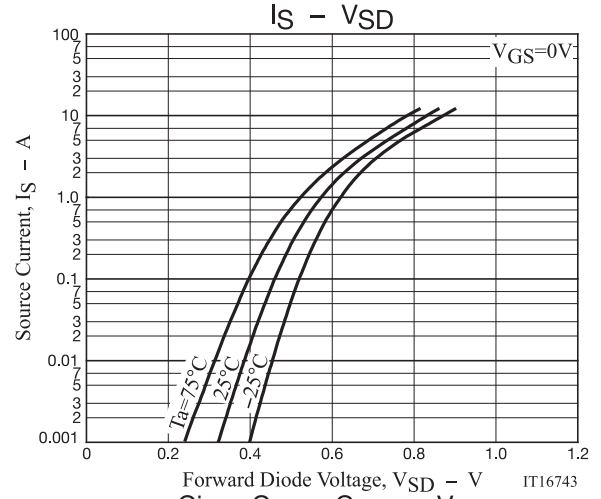
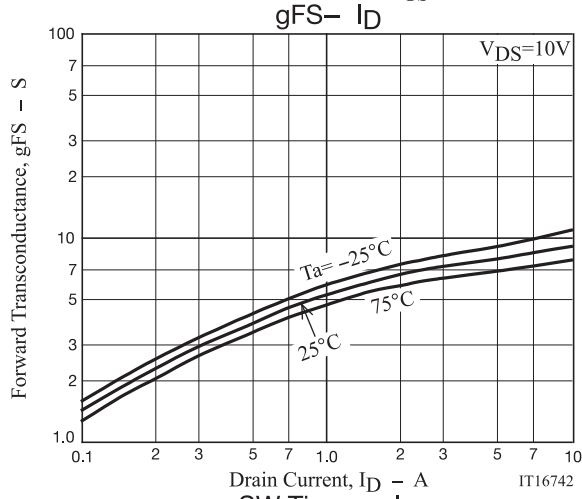
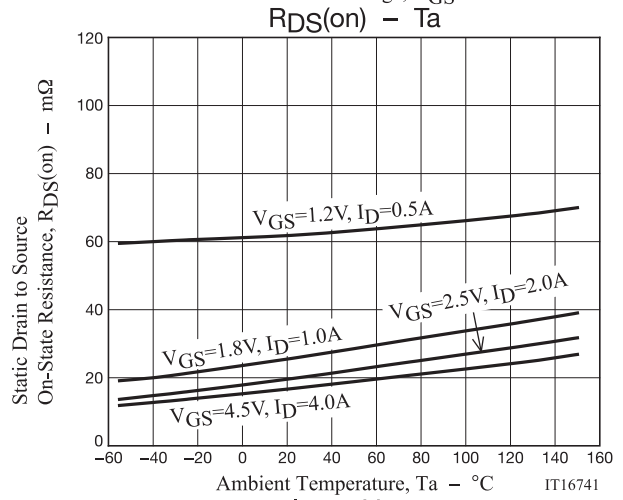
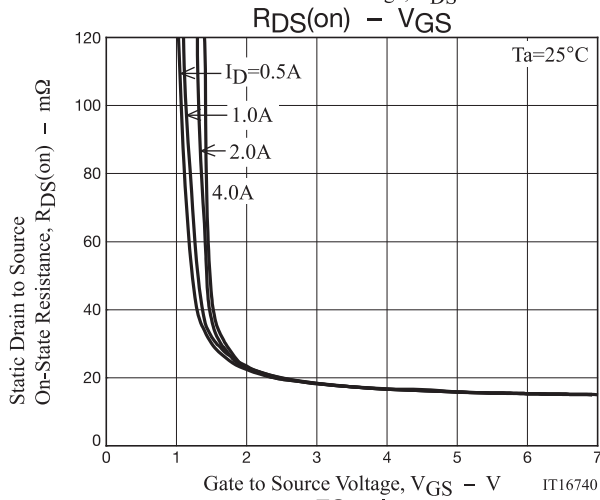
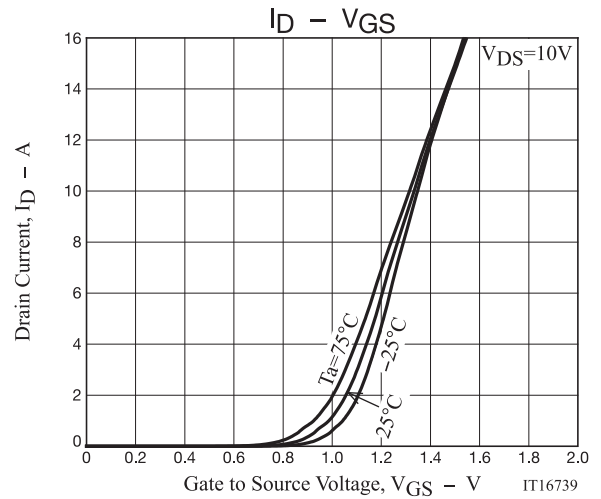
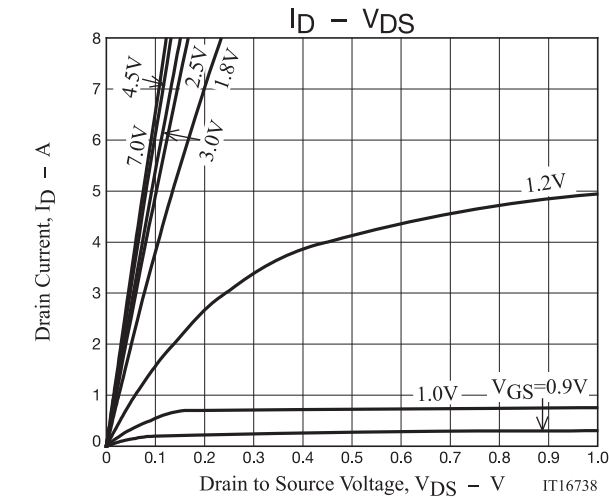
Electrical Characteristics at $T_a = 25^\circ\text{C}$

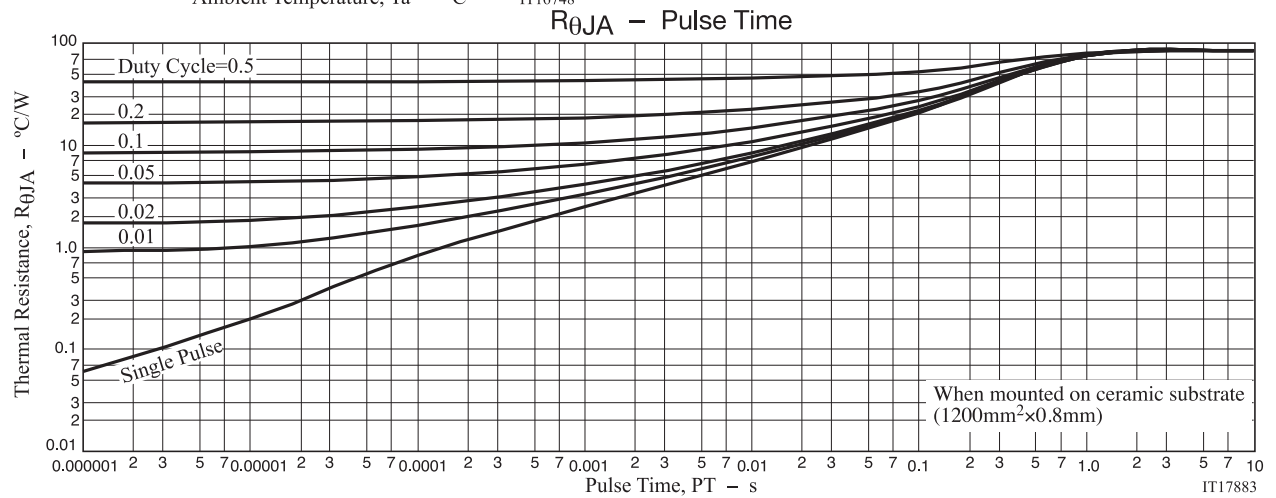
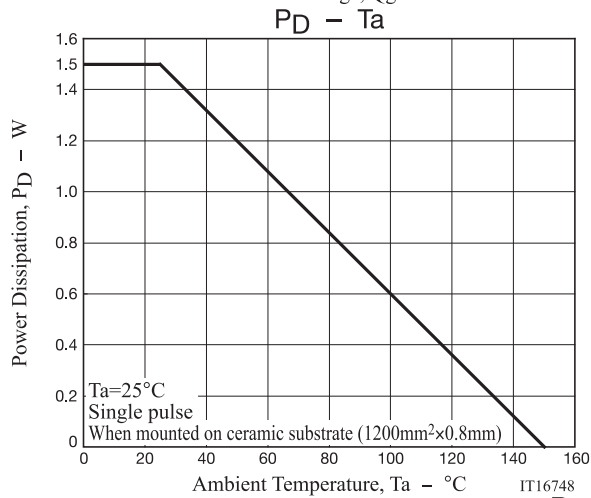
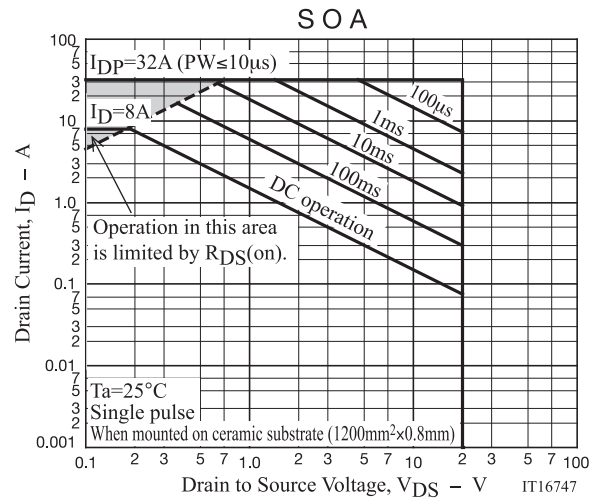
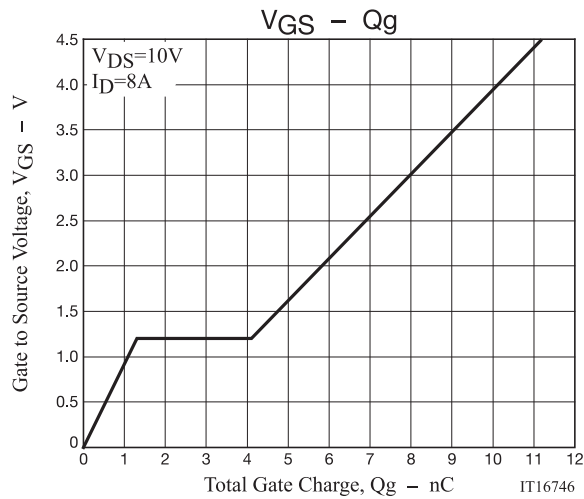
Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1\text{mA}$, $V_{GS}=0\text{V}$	20			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=20\text{V}$, $V_{GS}=0\text{V}$			1	μA
Gate to Source Leakage Current	I_{GSS}	$V_{GS}=\pm 7.2\text{V}$, $V_{DS}=0\text{V}$			± 10	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=10\text{V}$, $I_D=1\text{mA}$	0.3		1.0	V
Forward Transconductance	g_{FS}	$V_{DS}=10\text{V}$, $I_D=4\text{A}$		7.7		S
Static Drain to Source On-State Resistance	$R_{DS(on)1}$	$I_D=4\text{A}$, $V_{GS}=4.5\text{V}$		17	22	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D=2\text{A}$, $V_{GS}=2.5\text{V}$		20	28	$\text{m}\Omega$
	$R_{DS(on)3}$	$I_D=1\text{A}$, $V_{GS}=1.8\text{V}$		26	39	$\text{m}\Omega$
	$R_{DS(on)4}$	$I_D=0.5\text{A}$, $V_{GS}=1.2\text{V}$		62	124	$\text{m}\Omega$
Input Capacitance	C_{iss}	$V_{DS}=10\text{V}$, $f=1\text{MHz}$		705		pF
Output Capacitance	C_{oss}			150		pF
Reverse Transfer Capacitance	C_{rss}			125		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		6		ns
Rise Time	t_r			47		ns
Turn-OFF Delay Time	$t_{d(off)}$			103		ns
Fall Time	t_f			81		ns
Total Gate Charge	Q_g	$V_{DS}=10\text{V}$, $V_{GS}=4.5\text{V}$, $I_D=8\text{A}$		11.2		nC
Gate to Source Charge	Q_{gs}			1.3		nC
Gate to Drain "Miller" Charge	Q_{gd}			2.8		nC
Forward Diode Voltage	V_{SD}	$I_S=8\text{A}$, $V_{GS}=0\text{V}$		0.8	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







MCH6448

Package Dimensions

MCH6448-TL-H / MCH6448-TL-W

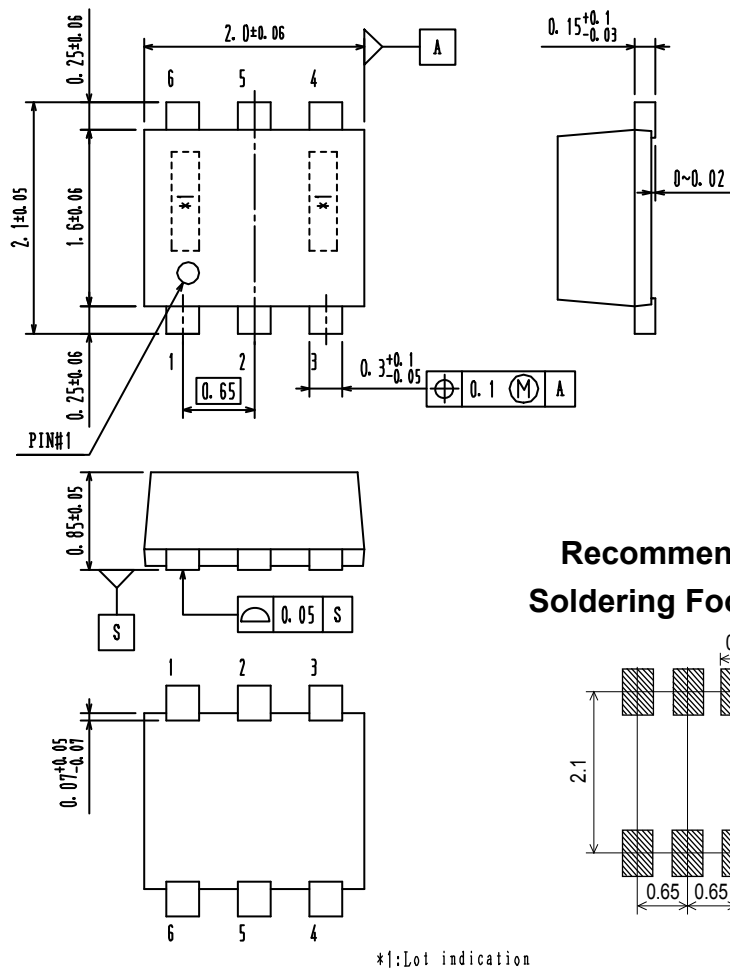
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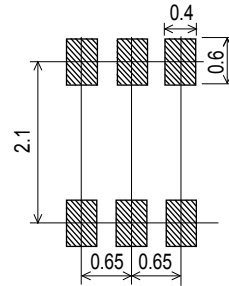
ISSUE O

unit : mm

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



Recommended Soldering Footprint



ORDERING INFORMATION

Device	Package	Shipping	Note
MCH6448-TL-H	MCPH6 SC-88FL, SC-70-6, SOT-363	3,000 pcs. / Tape & Reel	Pb-Free and Halogen Free
MCH6448-TL-W			

† 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. http://www.onsemi.com/pub_link/Collateral/BRD8011-D.PDF

Note on usage : Since the MCH6448 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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