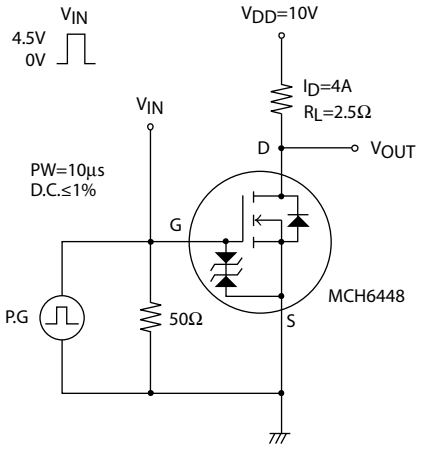
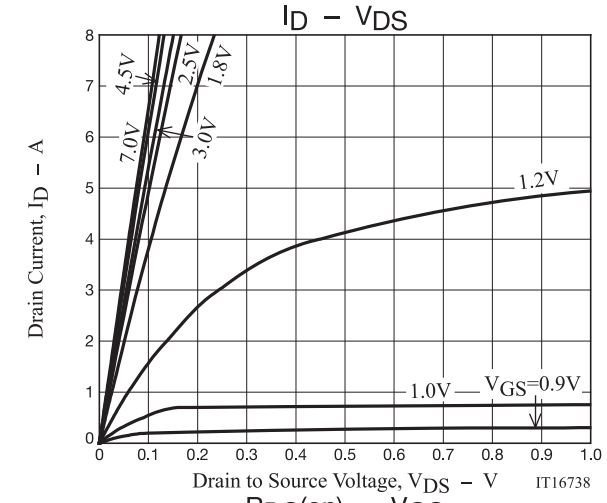
Electrical Characteristics at Ta = 25°C

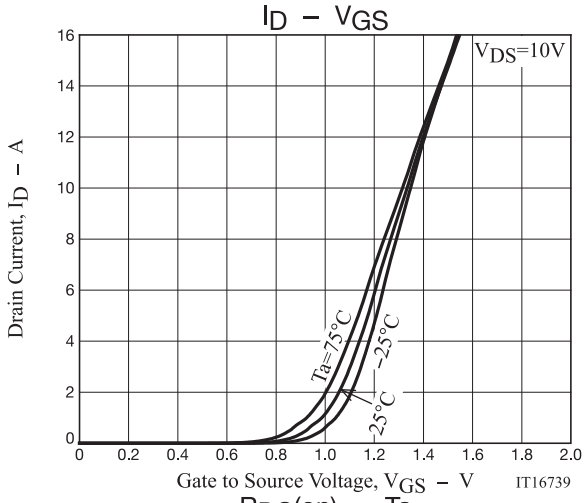
Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=1mA, V_{GS}=0V	20			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=20V, V_{GS}=0V			1	μA
Gate to Source Leakage Current	I_{GSS}	V_{GS}=±7.2V, V_{DS}=0V			±10	μA
Gate Threshold Voltage	$V_{GS}(th)$	V_{DS}=10V, I_D=1mA	0.3		1.0	V
Forward Transconductance	g_{FS}	V_{DS}=10V, I_D=4A		7.7		S
Static Drain to Source On-State Resistance	$R_{DS}(on)1$	I_D=4A, V_{GS}=4.5V		17	22	mΩ
	$R_{DS}(on)2$	I_D=2A, V_{GS}=2.5V		20	28	mΩ
	$R_{DS}(on)3$	I_D=1A, V_{GS}=1.8V		26	39	mΩ
	$R_{DS}(on)4$	I_D=0.5A, V_{GS}=1.2V		62	124	mΩ
Input Capacitance	Ciss	V_{DS}=10V, f=1MHz		705		pF
Output Capacitance	Coss			150		pF
Reverse Transfer Capacitance	Crss			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	Qg	V_{DS}=10V, V_{GS}=4.5V, I_D=8A		11.2		nC
Gate to Source Charge	Qgs			1.3		nC
Gate to Drain “Miller” Charge	Qgd			2.8		nC
Forward Diode Voltage	V_{SD}	I_S=8A, V_{GS}=0V		0.8	1.2	V

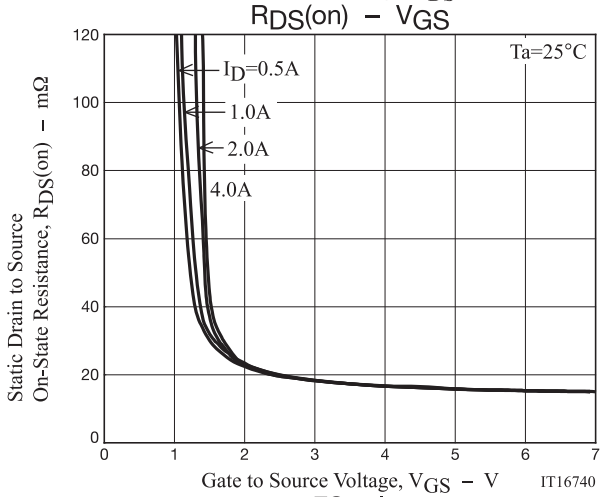
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

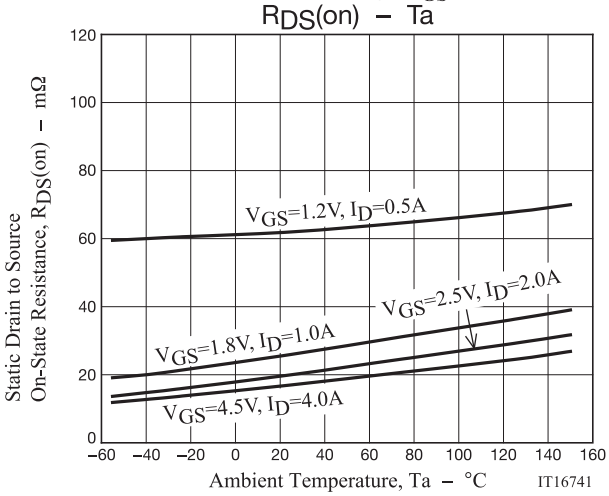
Switching Time Test Circuit

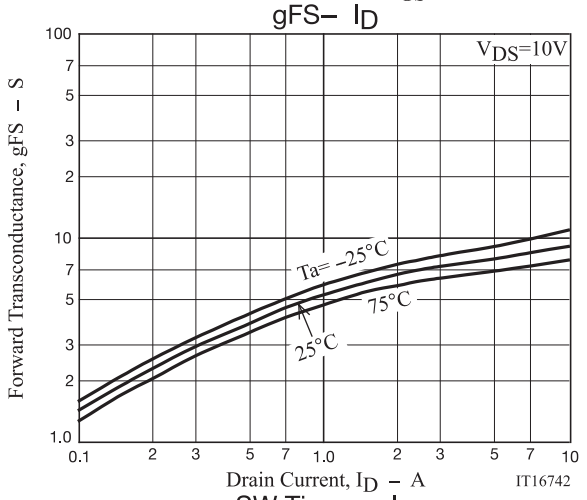


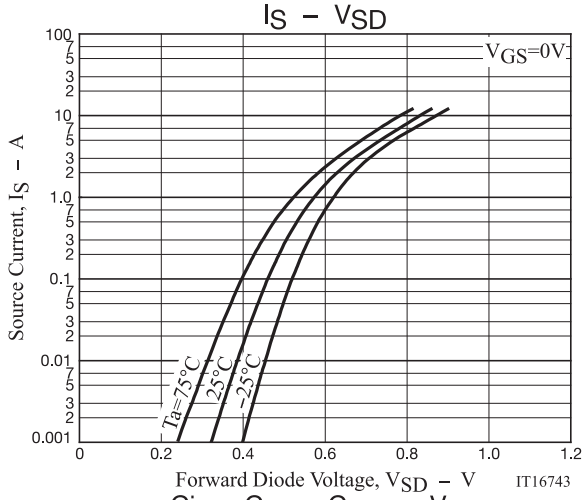


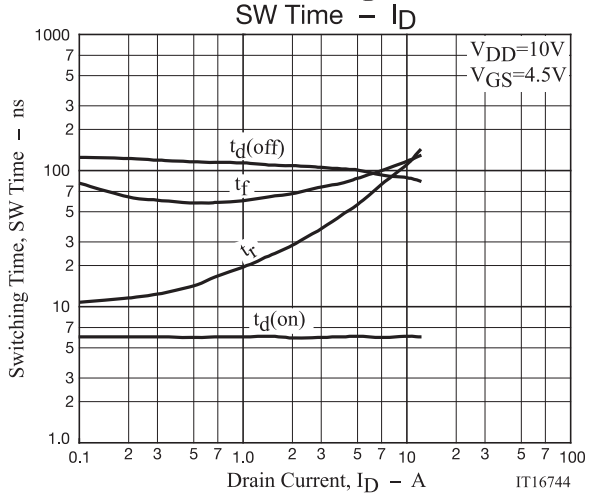


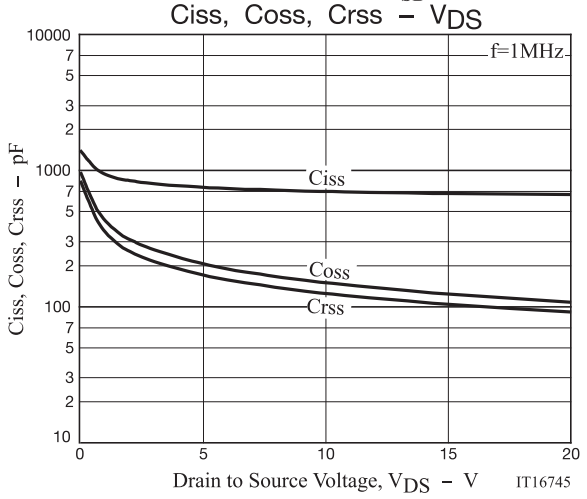


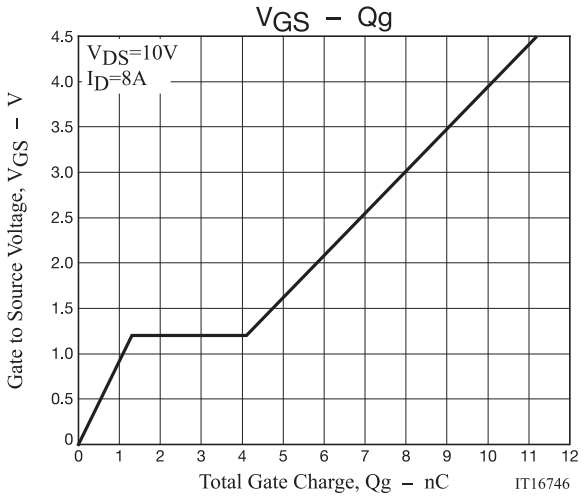


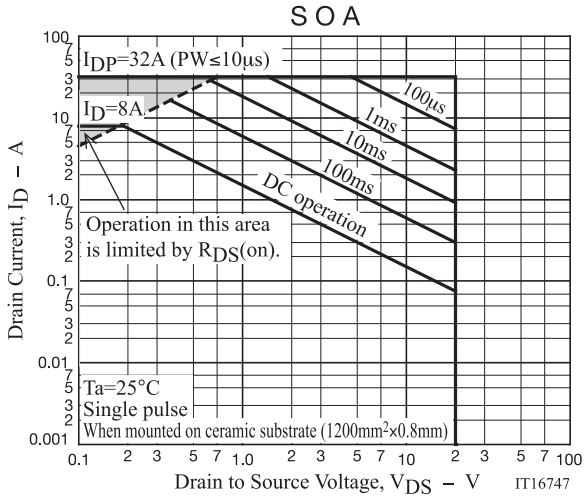


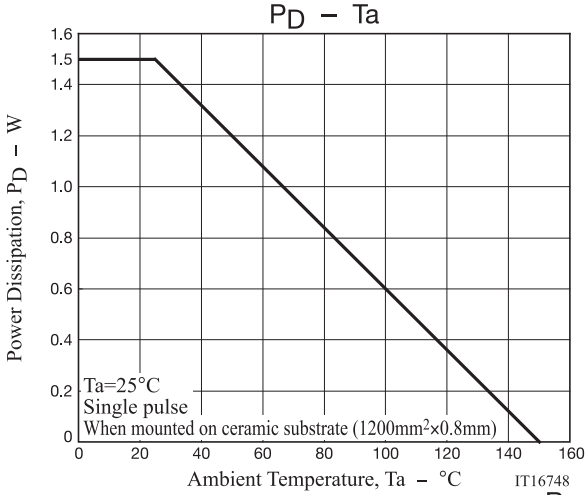


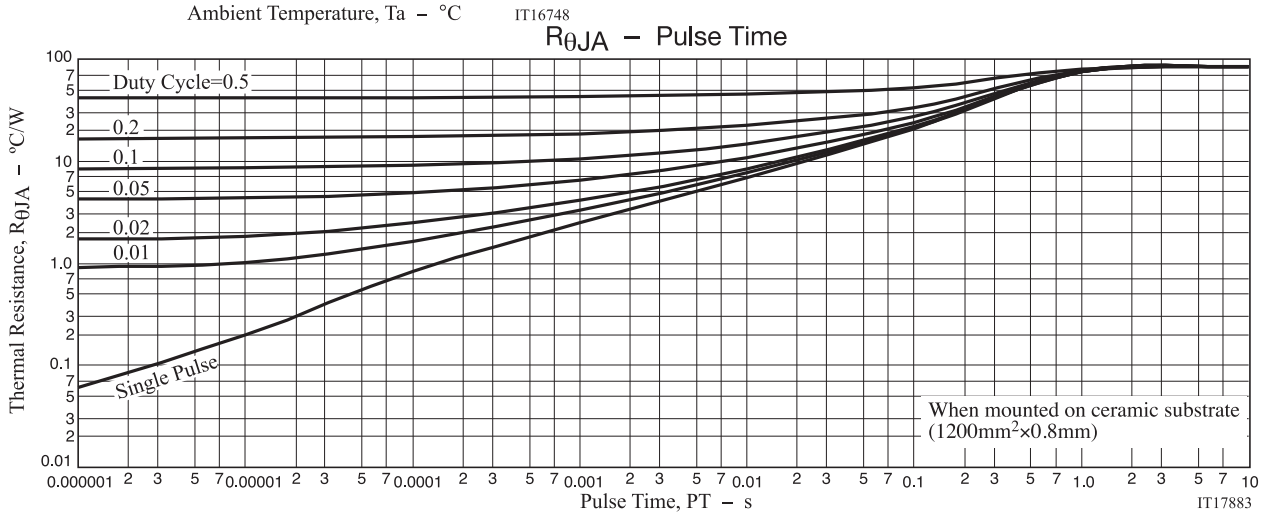












Package Dimensions

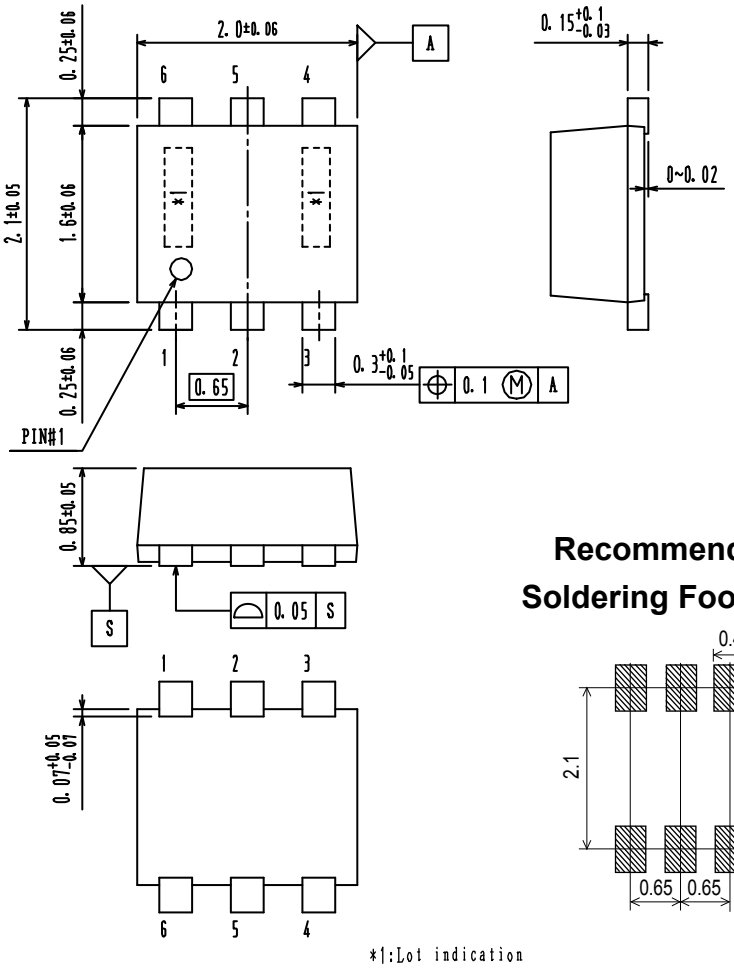
MCH6448-TL-H / MCH6448-TL-W

MCPH6

CASE 419AS
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.