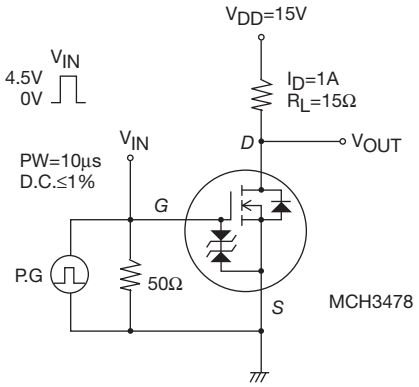
Electrical Characteristics at Ta=25°C

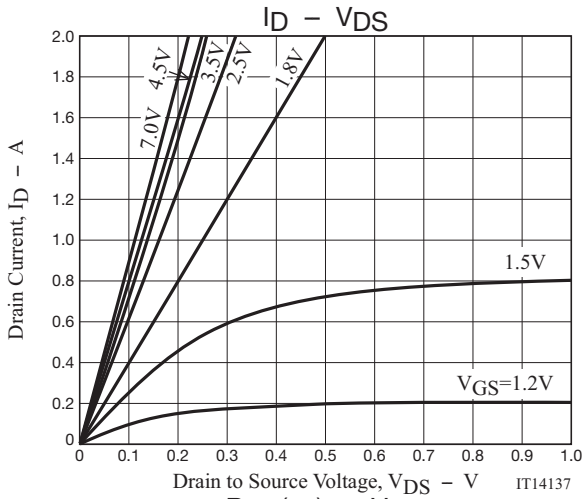
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=1mA, V_{GS}=0V	30			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V, V_{GS}=0V			1	μA
Gate to Source Leakage Current	I_{GSS}	V_{GS}=±8V, V_{DS}=0V			±10	μA
Cutoff Voltage	V_{GS}(off)	V_{DS}=10V, I_D=1mA	0.4		1.3	V
Forward Transfer Admittance	| yfs |	V_{DS}=10V, I_D=1A	1.2	2.0		S
Static Drain to Source On-State Resistance	R_{DS}(on)1	I_D=1A, V_{GS}=4.5V		125	165	mΩ
	R_{DS}(on)2	I_D=0.5A, V_{GS}=2.5V		165	235	mΩ
	R_{DS}(on)3	I_D=0.3A, V_{GS}=1.8V		250	375	mΩ
Input Capacitance	Ciss	V_{DS}=10V, f=1MHz		130		pF
Output Capacitance	Coss			21		pF
Reverse Transfer Capacitance	Crss			14		pF
Turn-ON Delay Time	t_d(on)	See specified Test Circuit.		4.4		ns
Rise Time	t_r			8.7		ns
Turn-OFF Delay Time	t_d(off)			16		ns
Fall Time	t_f			12		ns
Total Gate Charge	Qg	V_{DS}=10V, V_{GS}=4.5V, I_D=2A		1.7		nC
Gate to Source Charge	Qgs			0.25		nC
Gate to Drain “Miller” Charge	Qgd			0.38		nC
Diode Forward Voltage	V_{SD}	I_S=2A, V_{GS}=0V		0.85	1.2	V

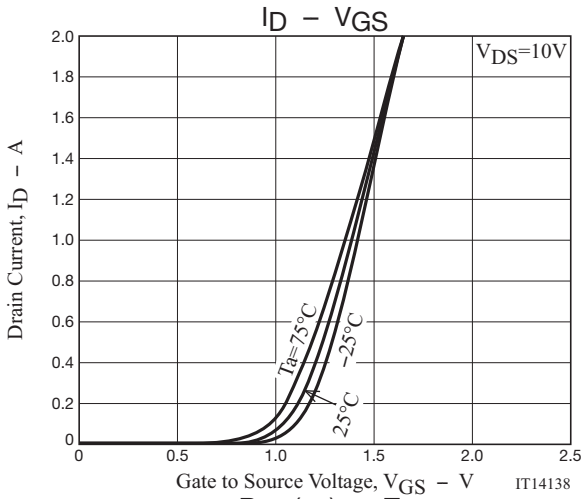
Switching Time Test Circuit

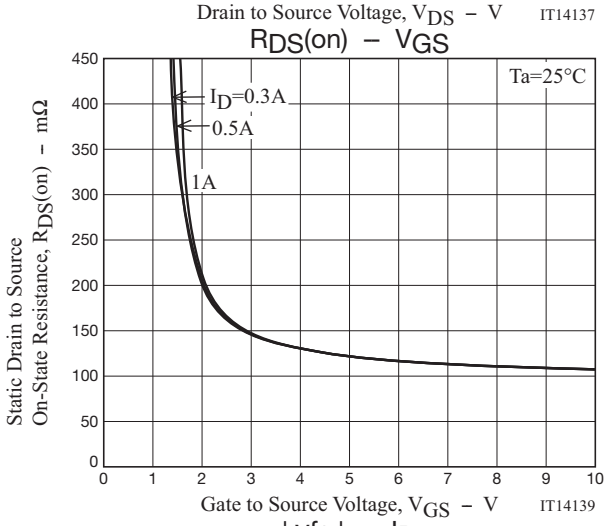


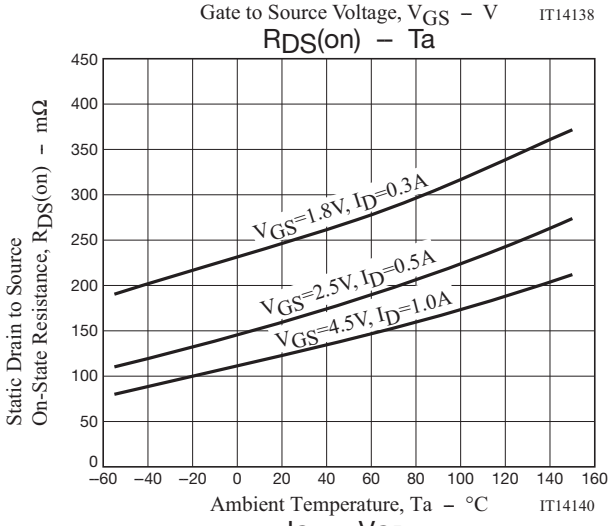
Ordering Information

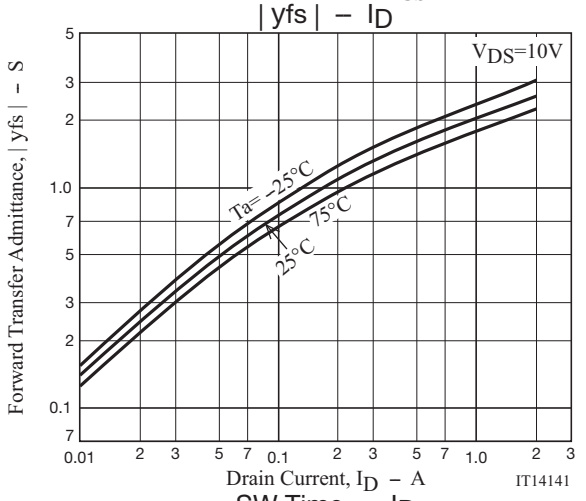
Device	Package	Shipping	memo
MCH3478-TL-H	MCPH3	3,000pcs./reel	Pb Free and Halogen Free
MCH3478-TL-W			

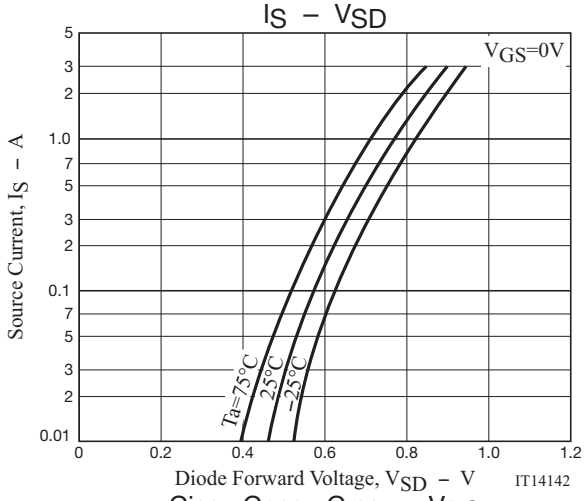


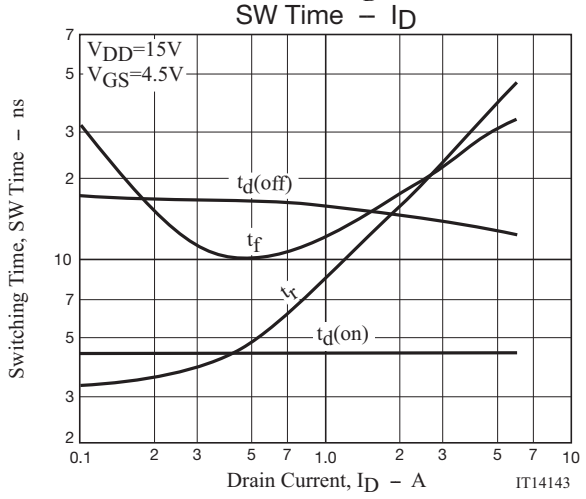


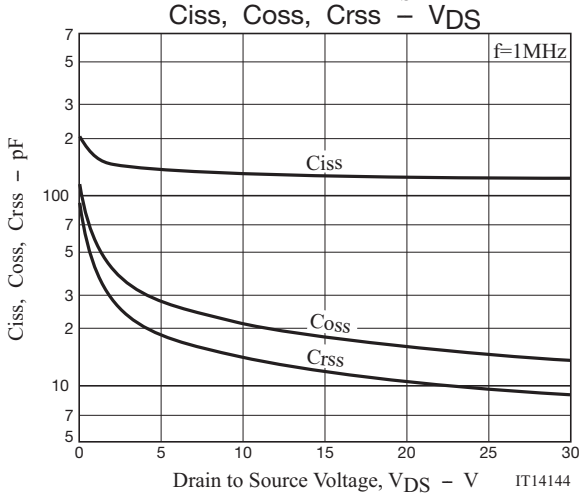


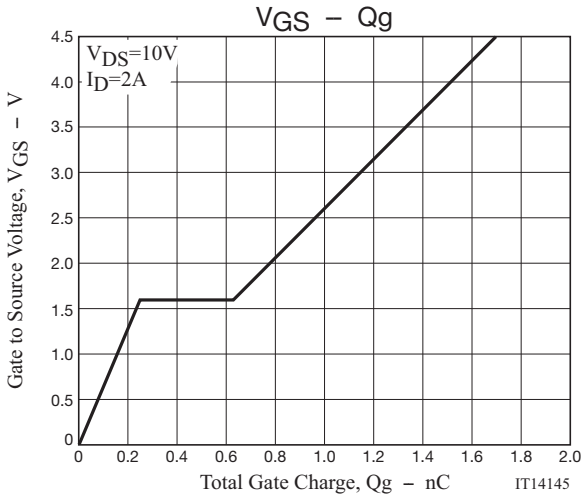


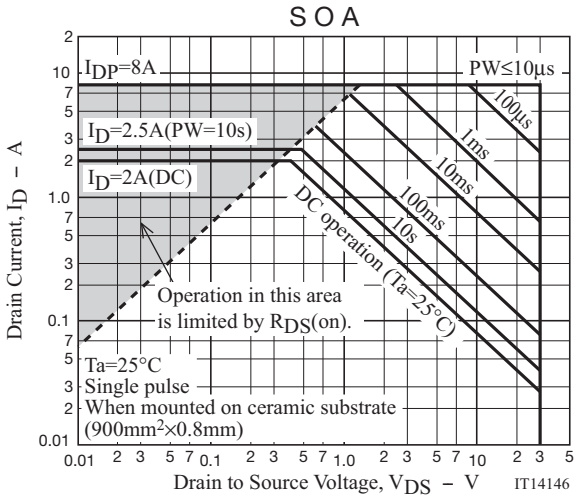


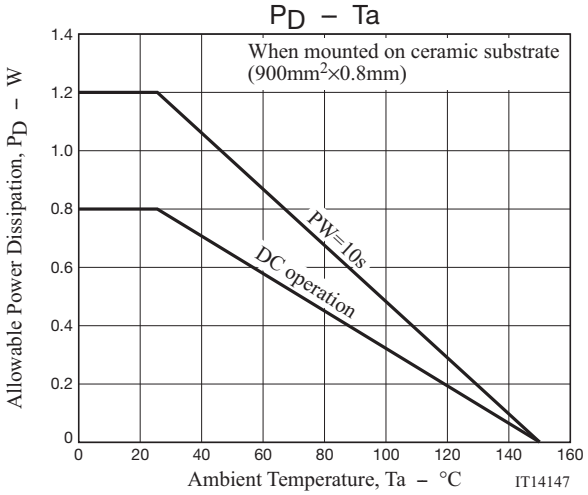






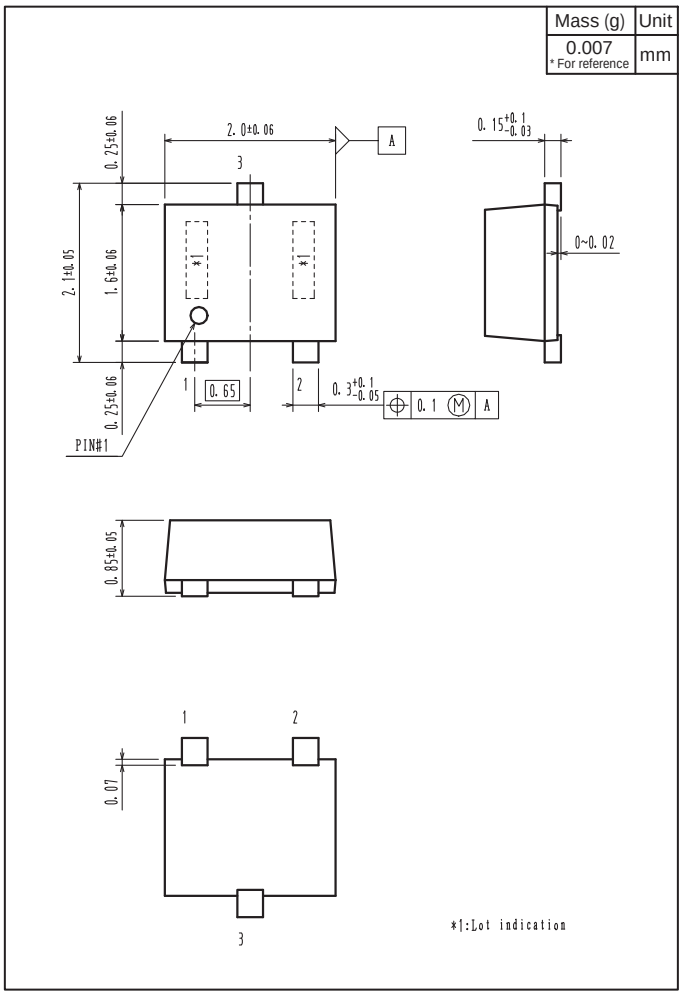




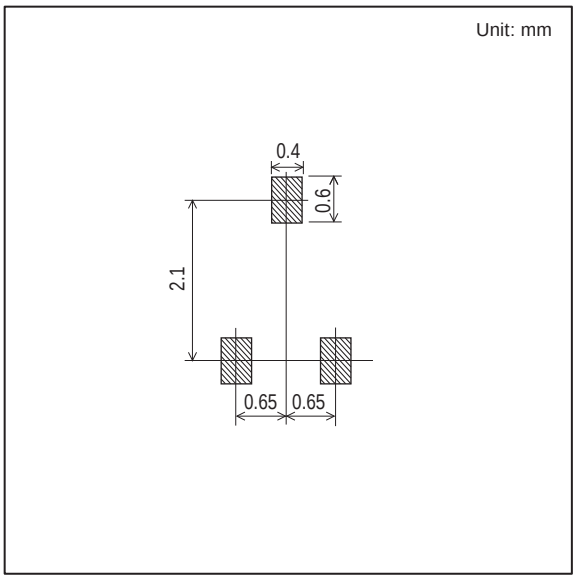


Outline Drawing

MCH3478-TL-H, MCH3478-TL-W



Land Pattern Example



Note on usage : Since the MCH3478 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.