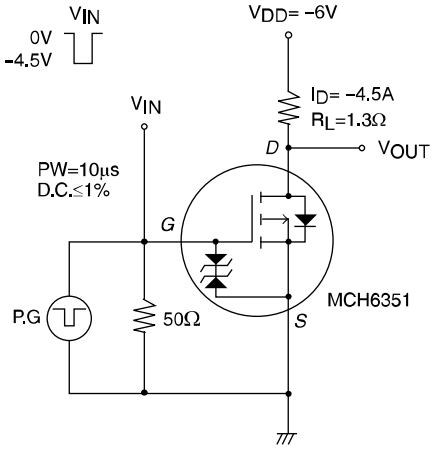
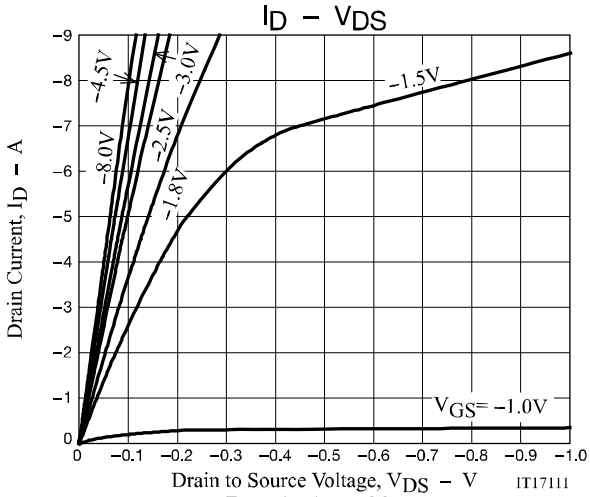
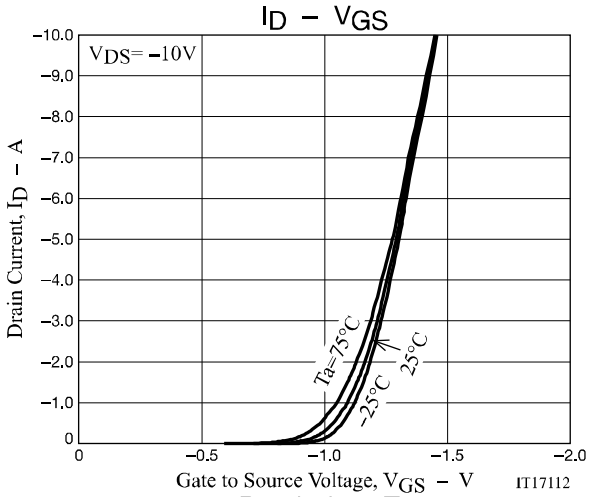
Electrical Characteristics at Ta = 25°C

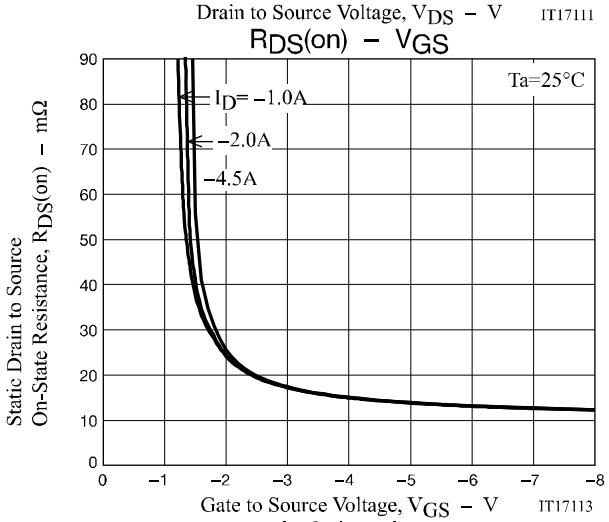
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=-1mA, V_{GS}=0V	-12			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=-12V, V_{GS}=0V			-1	μA
Gate to Source Leakage Current	I_{GSS}	V_{GS}=±8V, V_{DS}=0V			±10	μA
Cutoff Voltage	$V_{GS}(off)$	V_{DS}=-6V, I_D=-1mA	-0.4		-1.3	V
Forward Transfer Admittance	| yfs |	V_{DS}=-6V, I_D=-4.5A		16.5		S
Static Drain to Source On-State Resistance	$R_{DS}(on)1$	I_D=-4.5A, V_{GS}=-4.5V		14	16.9	mΩ
	$R_{DS}(on)2$	I_D=-2.0A, V_{GS}=-2.5V		19	24	mΩ
	$R_{DS}(on)3$	I_D=-1.0A, V_{GS}=-1.8V		28	40	mΩ
	$R_{DS}(on)4$	I_D=-1.0A, V_{GS}=-1.5V		37	74	mΩ
Input Capacitance	Ciss	V_{DS}=-6V, f=1MHz		2200		pF
Output Capacitance	Coss			350		pF
Reverse Transfer Capacitance	Crss			320		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		12.3		ns
Rise Time	t_r			89		ns
Turn-OFF Delay Time	$t_d(off)$			260		ns
Fall Time	t_f			122		ns
Total Gate Charge	Qg	V_{DS}=-6V, V_{GS}=-4.5V, I_D=-9A		20.5		nC
Gate to Source Charge	Qgs			4.2		nC
Gate to Drain “Miller” Charge	Qgd			3.2		nC
Diode Forward Voltage	V_{SD}	I_S=-9A, V_{GS}=0V		-0.83	-1.2	V

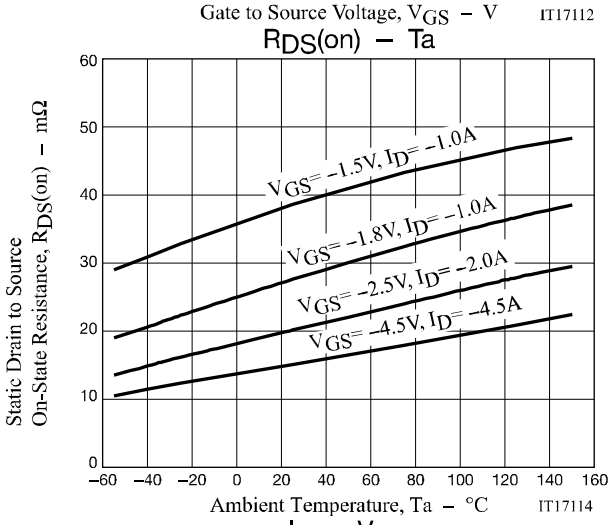
Switching Time Test Circuit

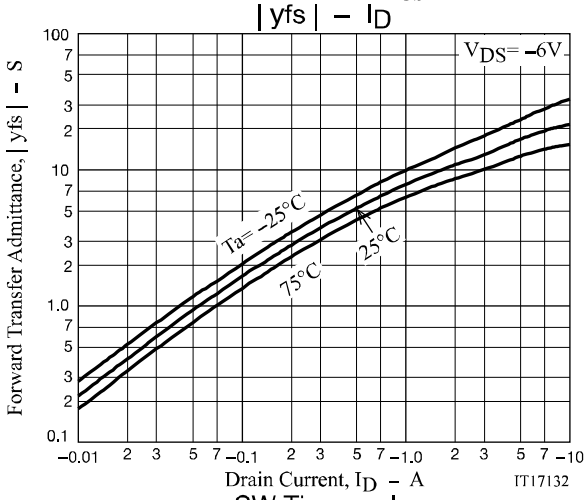


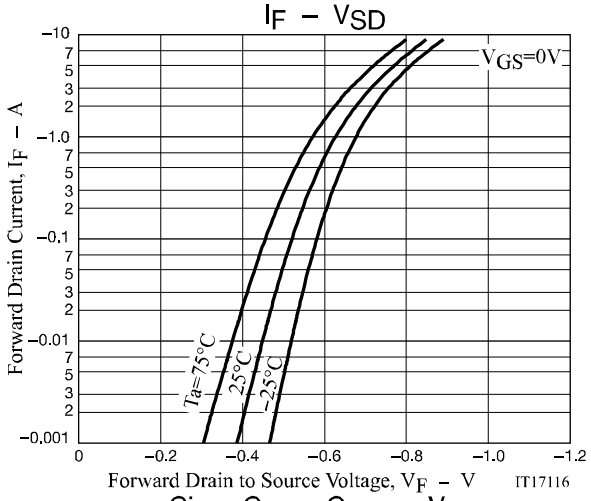


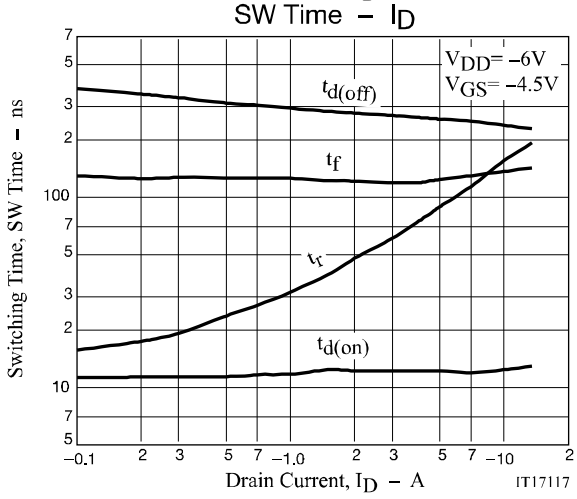


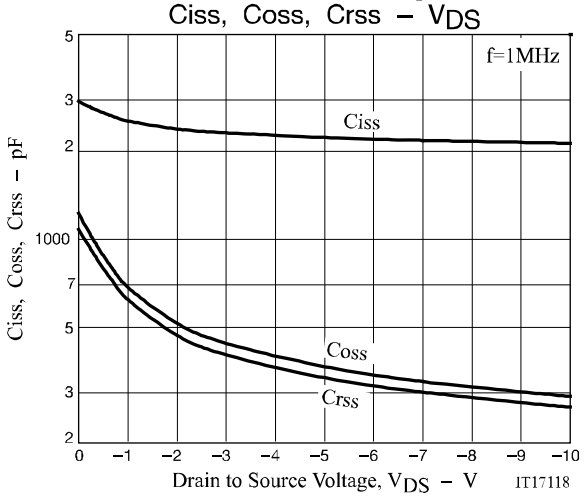


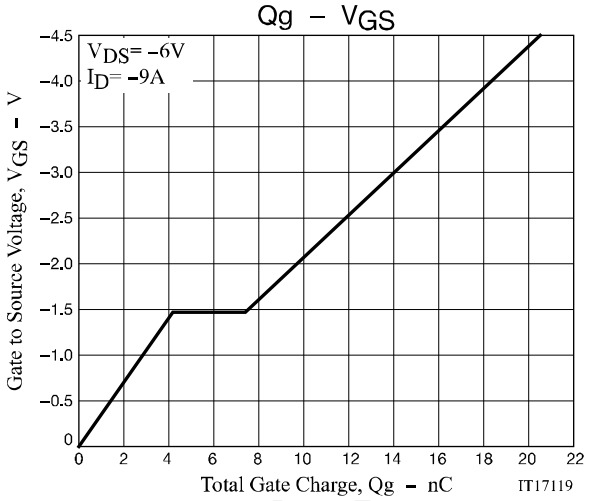


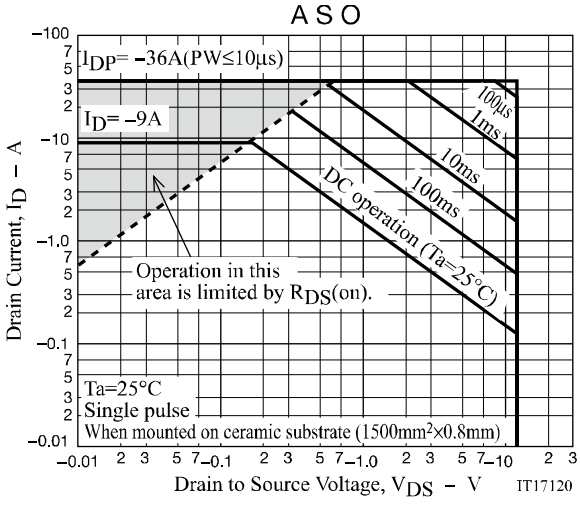


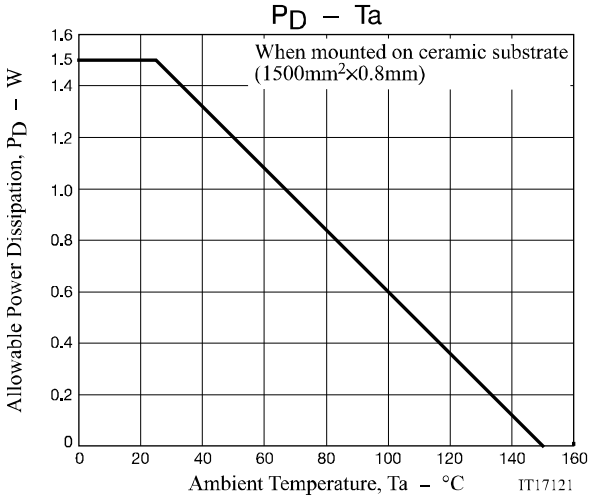






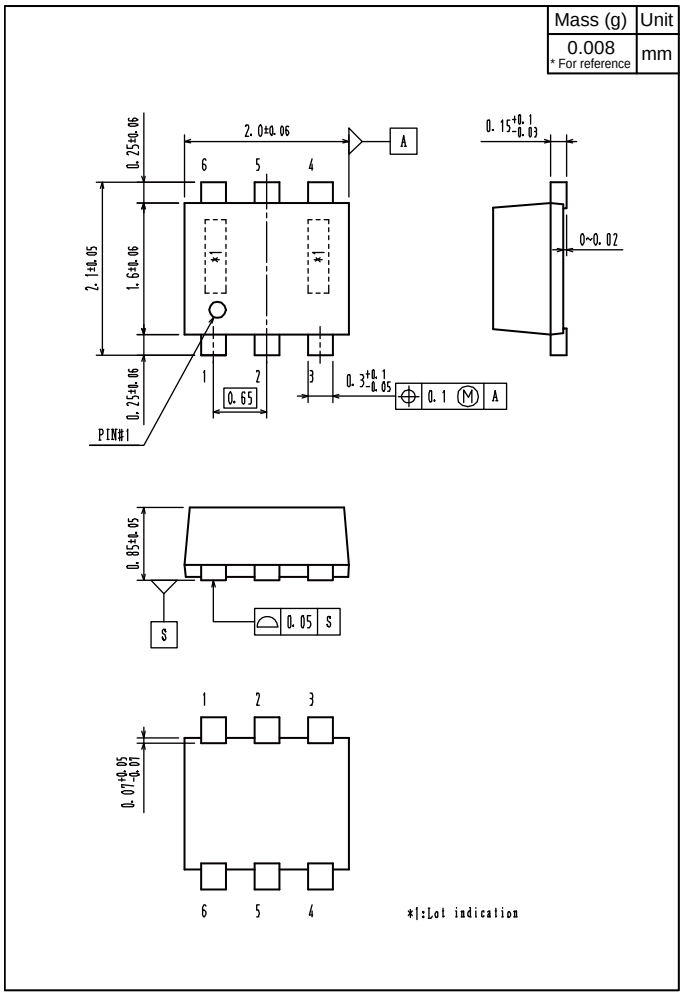




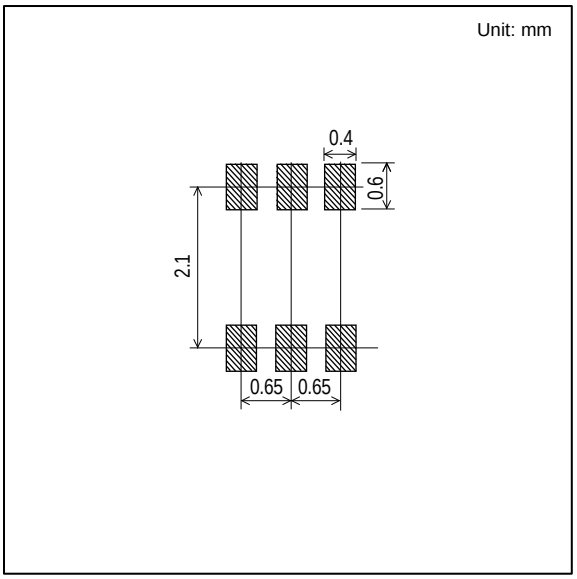


Outline Drawing

MCH6351-TL-W



Land Pattern Example



Note on usage : Since the MCH6351 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.