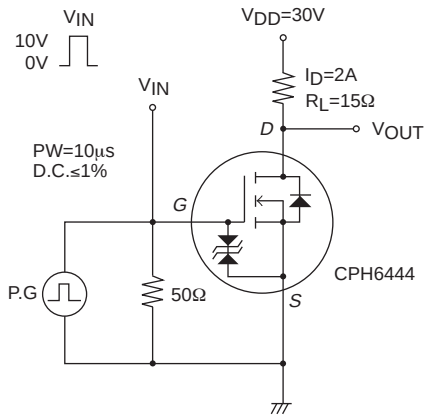
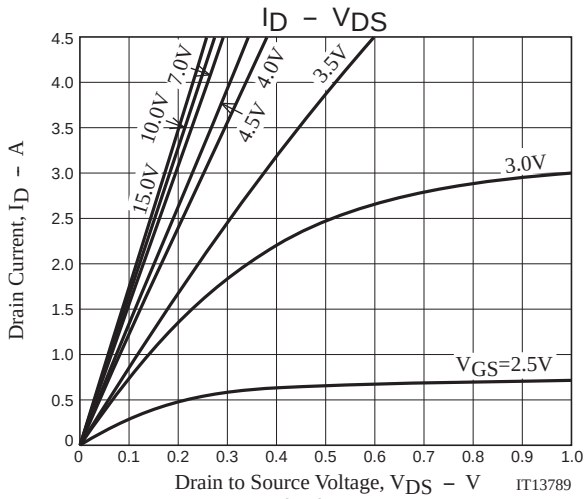
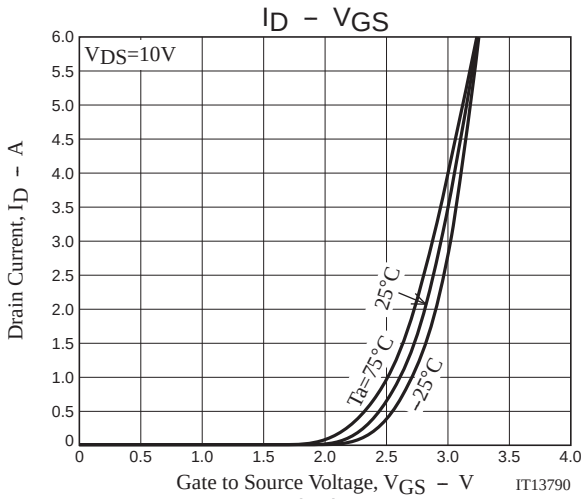
Electrical Characteristics at Ta=25°C

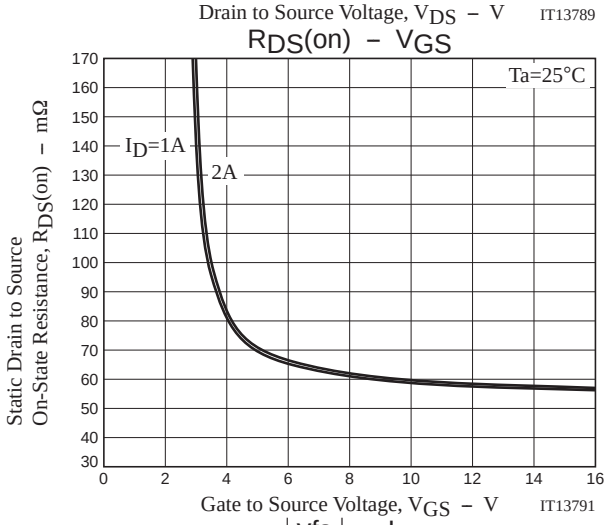
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=1mA, V_{GS}=0V	60			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=60V, V_{GS}=0V			1	μA
Gate to Source Leakage Current	I_{GSS}	V_{GS}=±16V, V_{DS}=0V			±10	μA
Cutoff Voltage	V_{GS}(off)	V_{DS}=10V, I_D=1mA	1.2		2.6	V
Forward Transfer Admittance	| yfs |	V_{DS}=10V, I_D=2A	1.8	3		S
Static Drain to Source On-State Resistance	R_{DS}(on)1	I_D=2A, V_{GS}=10V		60	78	mΩ
	R_{DS}(on)2	I_D=1A, V_{GS}=4.5V		74	104	mΩ
	R_{DS}(on)3	I_D=1A, V_{GS}=4V		81	114	mΩ
Input Capacitance	Ciss	V_{DS}=20V, f=1MHz		505		pF
Output Capacitance	Coss			57		pF
Reverse Transfer Capacitance	Crss			37		pF
Turn-ON Delay Time	t_d(on)	See specified Test Circuit.		7.3		ns
Rise Time	t_r			9.8		ns
Turn-OFF Delay Time	t_d(off)			40		ns
Fall Time	t_f			24		ns
Total Gate Charge	Qg	V_{DS}=30V, V_{GS}=10V, I_D=4.5A		10		nC
Gate to Source Charge	Qgs			1.6		nC
Gate to Drain “Miller” Charge	Qgd			2.1		nC
Diode Forward Voltage	V_{SD}	I_S=4.5A, V_{GS}=0V		0.83	1.2	V

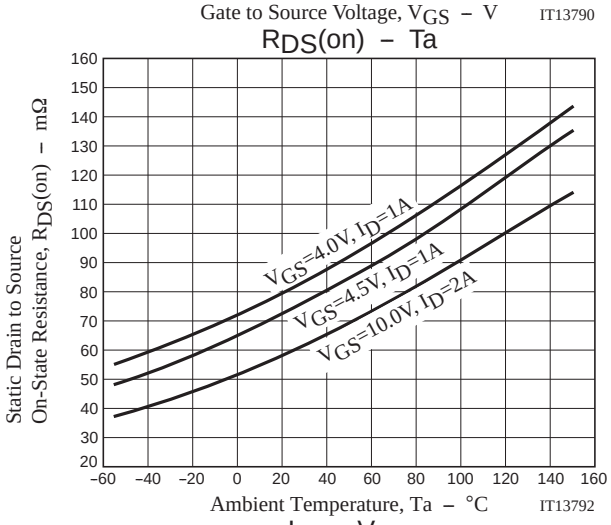
Switching Time Test Circuit

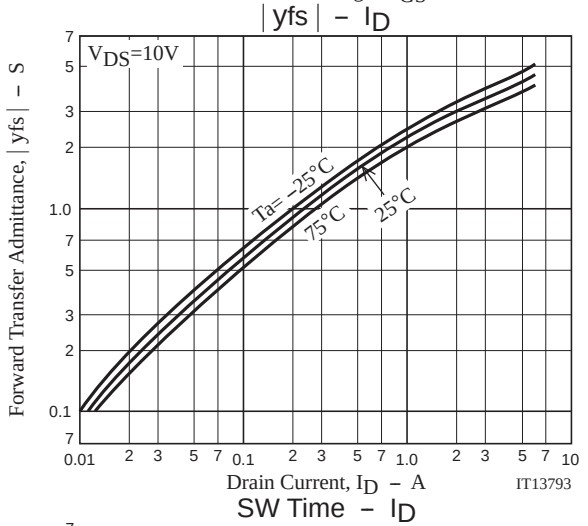


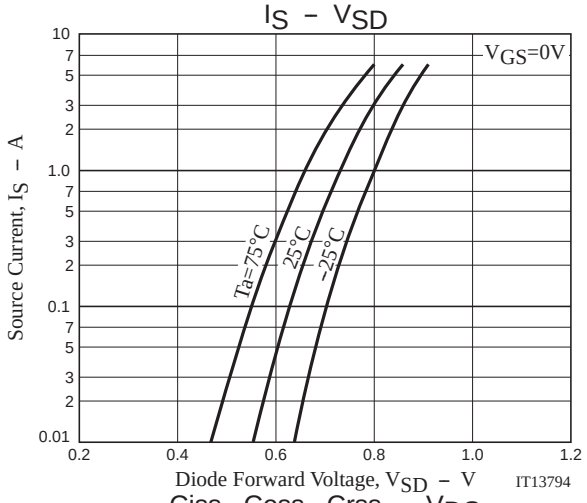


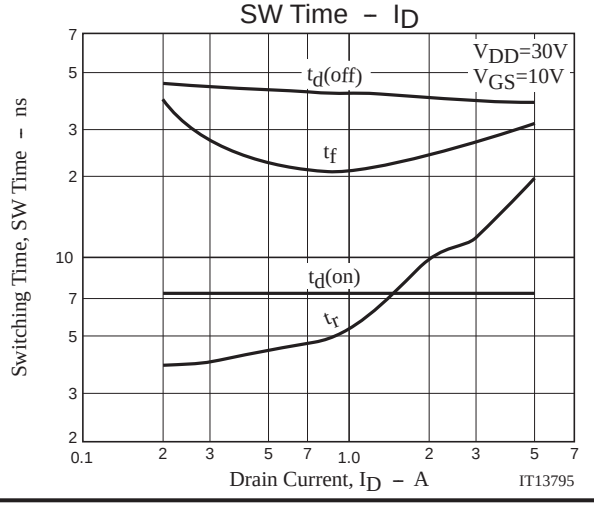


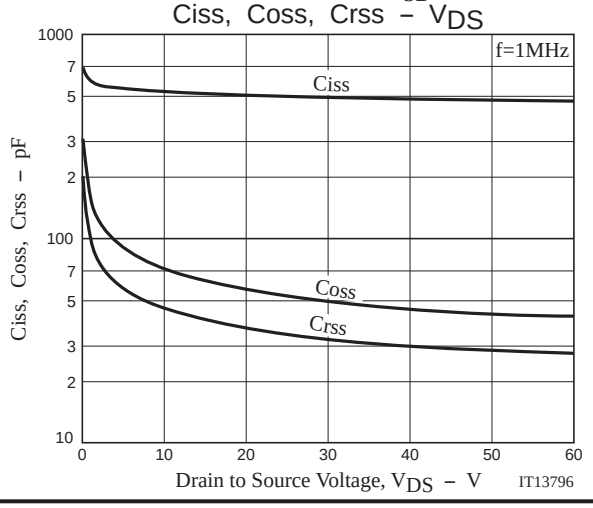


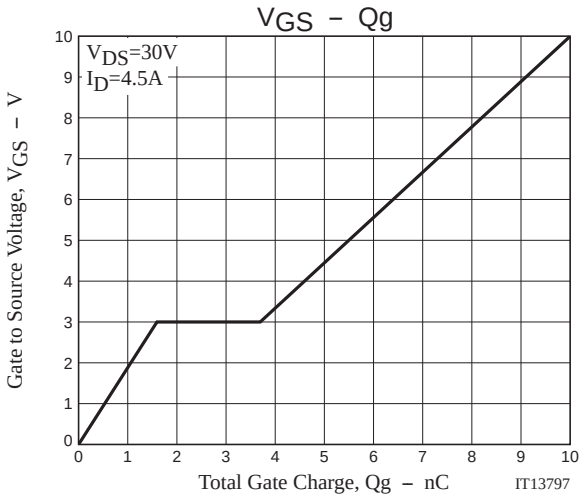


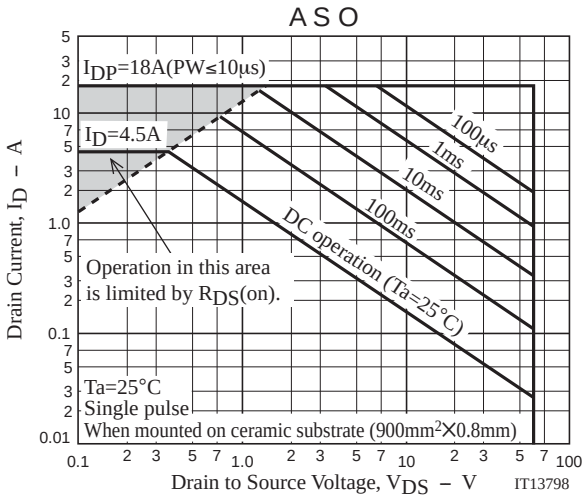


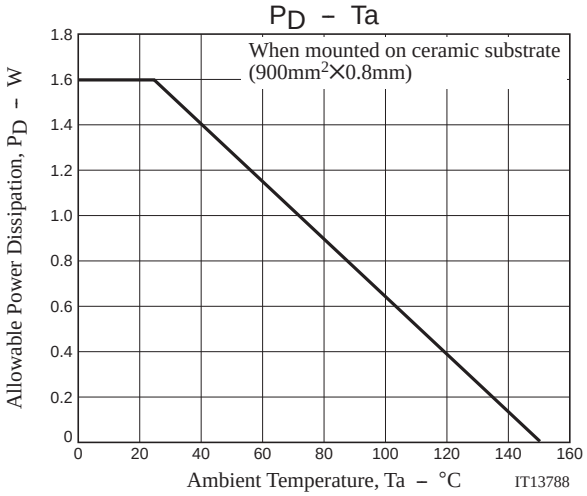






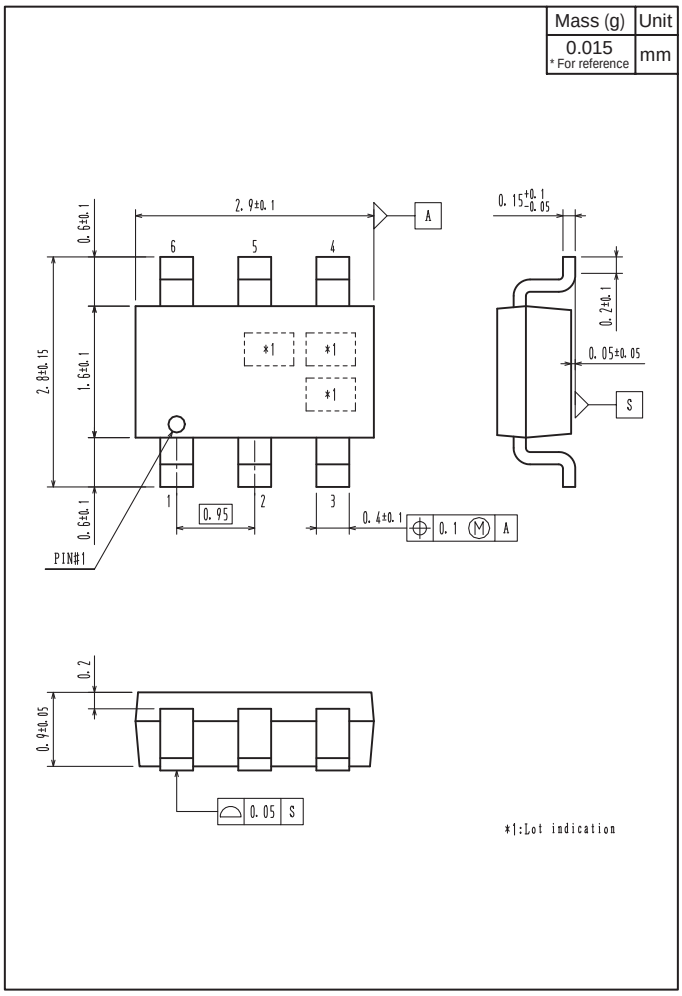




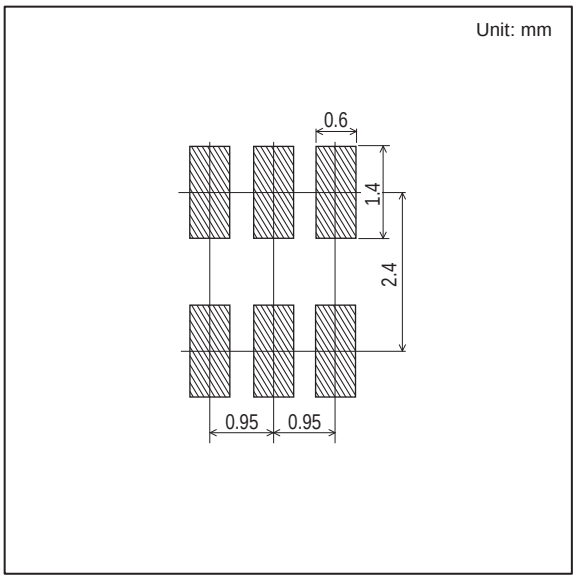


Outline Drawing

CPH6444-TL-W



Land Pattern Example



Note on usage : Since the CPH6444 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.