

ELECTRICAL CHARACTERISTICS

DC Characteristics

Ta = 25°C

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Drain Cut-Off Current	I _{dss}	V _{ds} =20V, V _{gs} =0V	-	-	10	μA
Gate-Source Leak Current	I _{gss}	V _{gs} = ± 8V, V _{ds} =0V	-	-	± 1	μA
Gate-Source Cut-Off Voltage	V _{gs(off)}	I _d =1mA, V _{ds} =10V	0.5	-	1.2	V
Drain-Source On-State Resistance *	R _{ds(on)}	I _d =4A, V _{gs} =4.5V	-	0.025	0.03	
		I _d =4A, V _{gs} =2.5V	-	0.030	0.040	
		I _d =1A, V _{gs} =1.5V	-	0.045	0.07	
Forward Transfer Admittance *	Y _{fs}	I _d =4A, V _{ds} =10V	-	22	-	S
Body Drain Diode Forward Voltage	V _f	I _f =8A, V _{gs} =0V	-	0.85	1.1	V

* Effective during pulse test.

Dynamic Characteristics

Ta = 25°C

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Input Capacitance	C _{iss}	V _{ds} =10V, V _{gs} =0V f=1MHz	-	950	-	pF
Output Capacitance	C _{oss}		-	430	-	pF
Feedback Capacitance	C _{rss}		-	180	-	pF

Switching Characteristics

Ta = 25°C

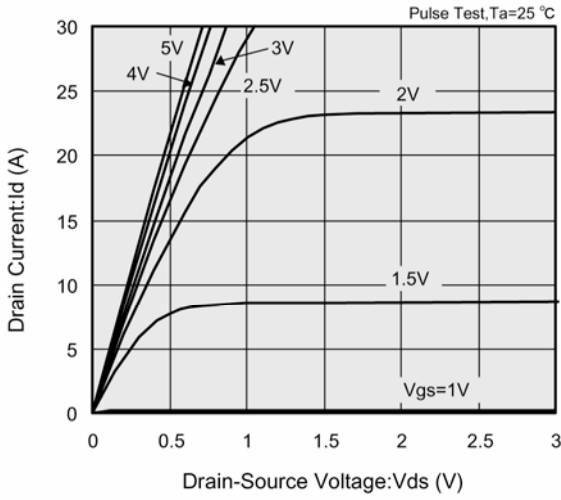
PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Turn-On Delay Time	t _{d (on)}	V _{gs} =5V, I _d =4A V _{dd} =10V	-	15	-	ns
Rise Time	t _r		-	20	-	ns
Turn-Off Delay Time	t _{d (off)}		-	80	-	ns
Fall Time	t _f		-	15	-	ns

Thermal Characteristics

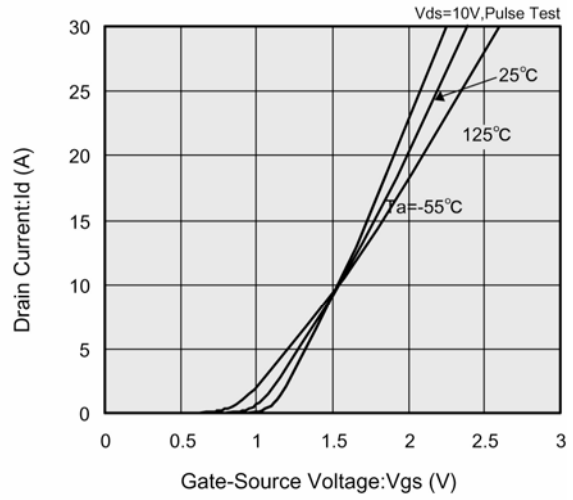
PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Thermal Resistance (Channel-Ambience)	R _{th (ch-a)}	Implement on a glass epoxy resin PCB	-	50	-	/W

TYPICAL PERFORMANCE CHARACTERISTICS

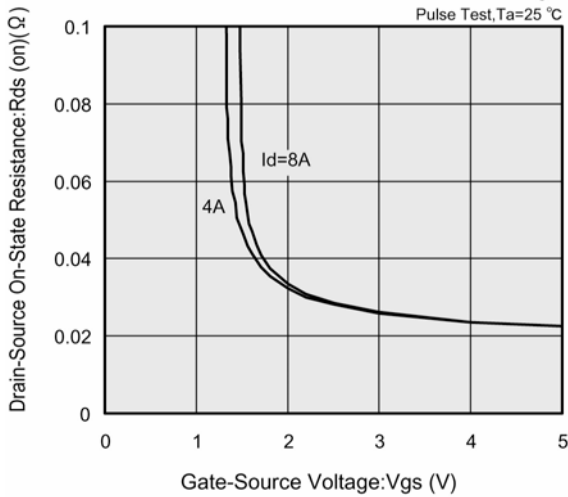
(1) Drain Current vs. Drain-Source Voltage



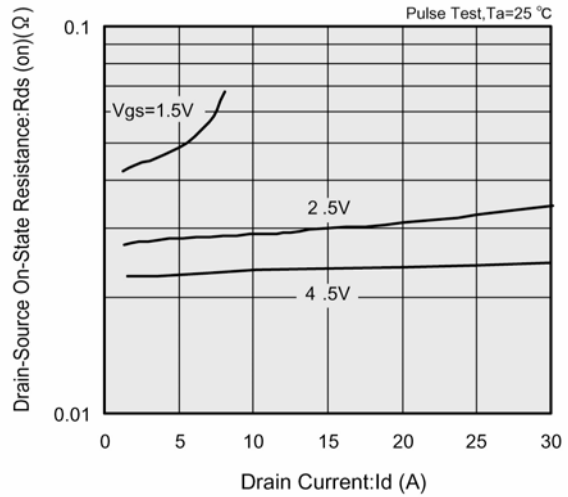
(2) Drain Current vs. Gate-Source Voltage



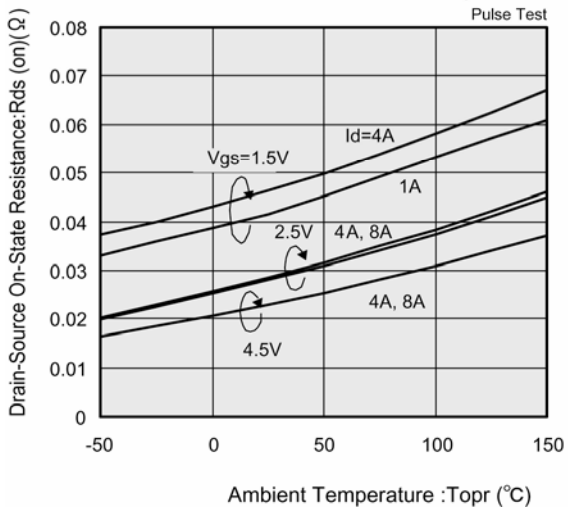
(3) Drain-Source On-State Resistance vs. Gate-Source Voltage



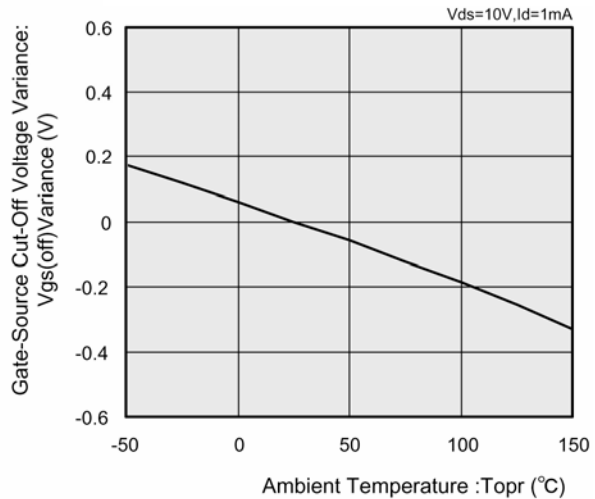
(4) Drain-Source On-State Resistance vs. Drain Current



(5) Drain-Source On-State Resistance vs. Ambient Temperature

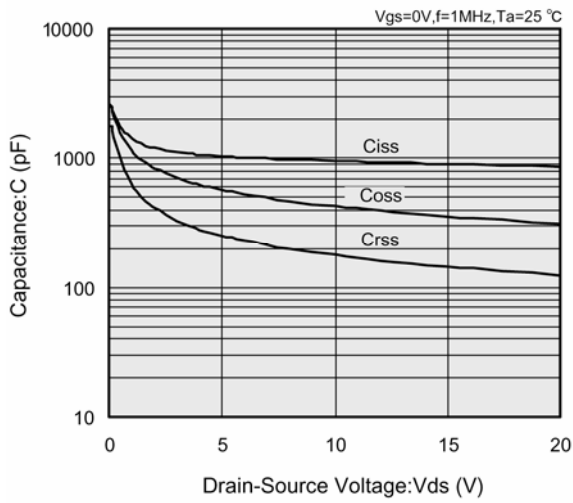


(6) Gate-Source Cut-Off Voltage Variance vs. Ambient Temperature

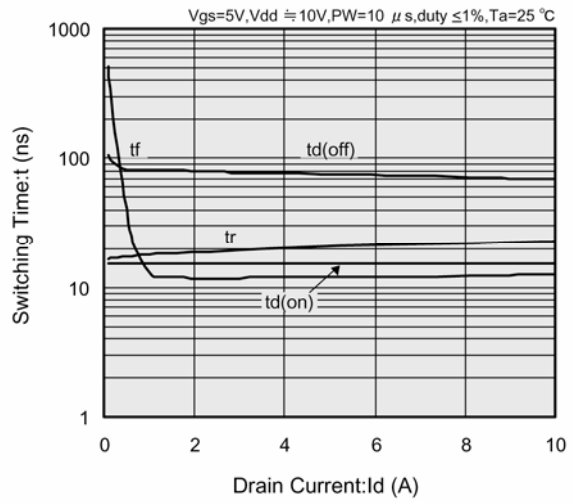


TYPICAL PERFORMANCE CHARACTERISTICS (Continued)

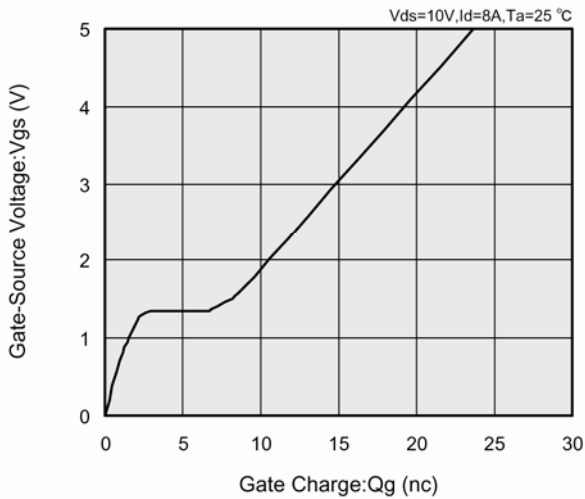
(7) Capacitance vs. Drain-Source Voltage



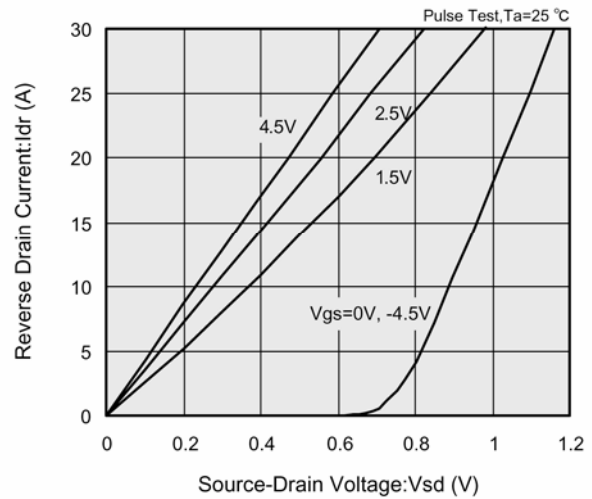
(8) Switching Time vs. Drain Current



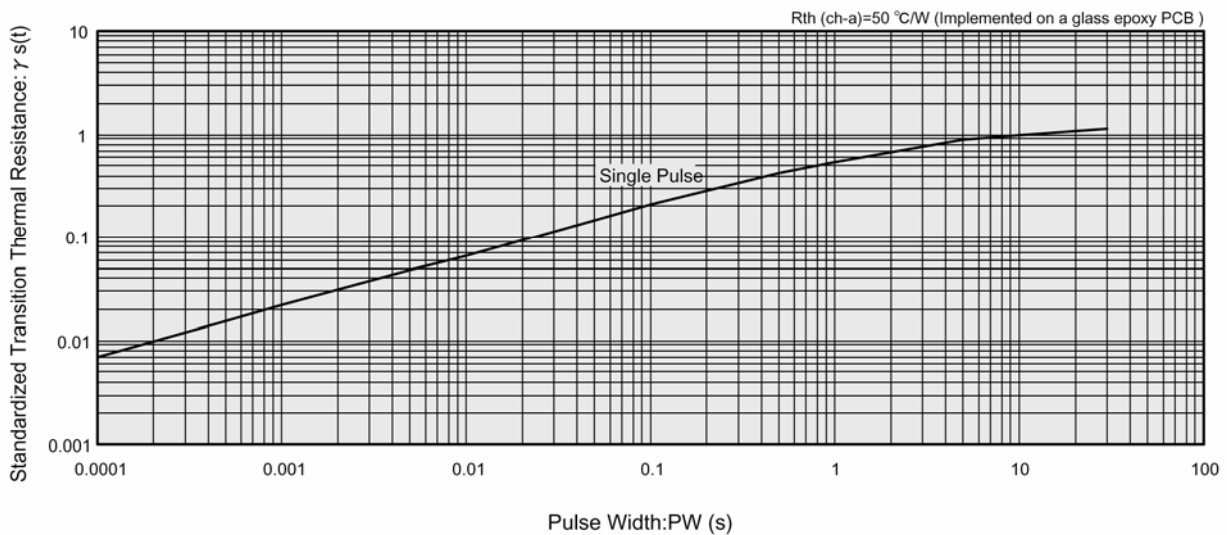
(9) Gate-Source Voltage vs. Gate Charge



(10) Reverse Drain Current vs. Source-Drain Voltage



(11) Standardized transition Thermal Resistance vs. Pulse Width



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