

● Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Gate-source leakage	I_{GSS}	-	-	± 10	μA	$V_{GS}=\pm 25V, V_{DS}=0V$
Drain-source breakdown voltage	$V_{(BR)DSS}$	500	-	-	V	$I_D=1mA, V_{GS}=0V$
Zero gate voltage drain current	I_{DSS}	-	-	100	μA	$V_{DS}=500V, V_{GS}=0V$
Gate threshold voltage	$V_{GS(th)}$	2.5	-	4.5	V	$V_{DS}=10V, I_D=1mA$
Static drain-source on-state resistance	$R_{DS(on)}$ *	-	1.3	1.6	Ω	$I_D=2.5A, V_{GS}=10V$
Forward transfer admittance	$ Y_{fs} $ *	1.5	2.7	-	S	$V_{DS}=10V, I_D=2.5A$
Input capacitance	C_{iss}	-	320	-	pF	$V_{DS}=25V$
Output capacitance	C_{oss}	-	180	-	pF	$V_{GS}=0V$
Reverse transfer capacitance	C_{rss}	-	15	-	pF	$f=1MHz$
Turn-on delay time	$t_{d(on)}$ *	-	20	-	ns	$V_{DD}=250V, I_D=2.5A$
Rise time	t_r *	-	25	-	ns	$V_{GS}=10V$
Turn-off delay time	$t_{d(off)}$ *	-	40	-	ns	$R_L=100\Omega$
Fall time	t_f *	-	20	-	ns	$R_G=10\Omega$
Total gate charge	Q_g *	-	10.8	-	nC	$V_{DD}=250V$
Gate-source charge	Q_{gs} *	-	3.2	-	nC	$I_D=5.0A$
Gate-drain charge	Q_{gd} *	-	4.4	-	nC	$V_{GS}=10V$

*Pulsed

● Body diode characteristics (Source-Drain)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward Voltage	V_{SD} *	-	-	1.5	V	$I_S=5.0A, V_{GS}=0V$

*Pulsed

●Electrical characteristic curves

Fig.1 Typical Output Characteristics (I)

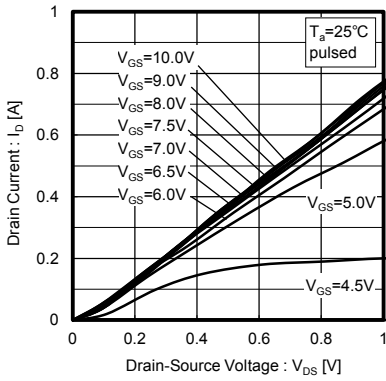


Fig.2 Typical Output Characteristics (II)

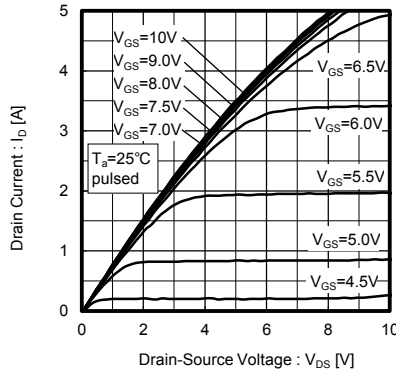


Fig.3 Typical Transfer Characteristics

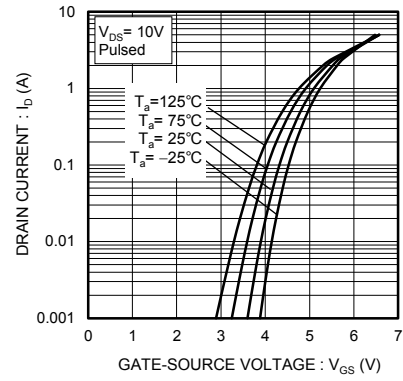


Fig.4 Gate Threshold Voltage vs. Channel Temperature

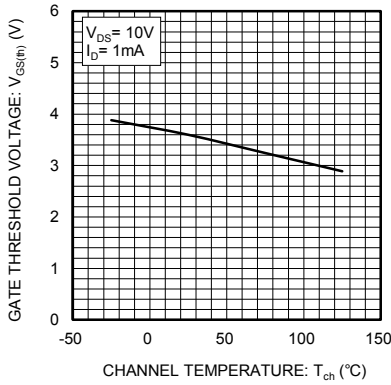


Fig.5 Static Drain-Source On-State Resistance vs. Drain Current

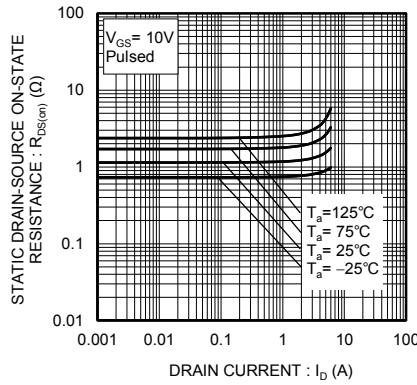


Fig.6 Static Drain-Source On-State Resistance vs. Gate Source Voltage

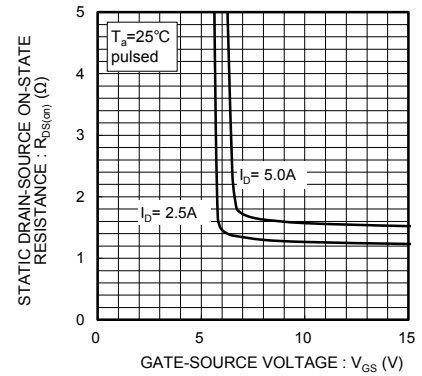


Fig.7 Static Drain-Source On-State Resistance vs. Channel Temperature

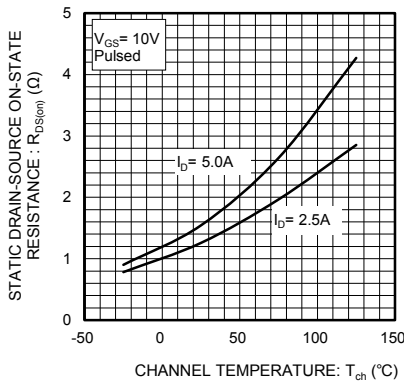


Fig.8 Forward Transfer Admittance vs. Drain Current

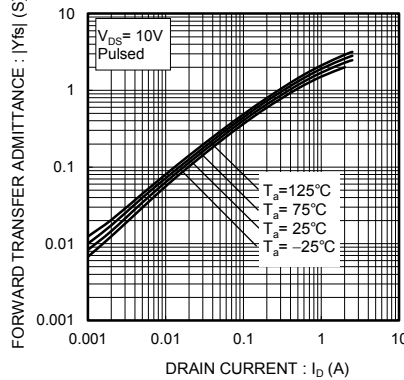


Fig.9 Reverse Drain Current vs. Source-Drain Voltage

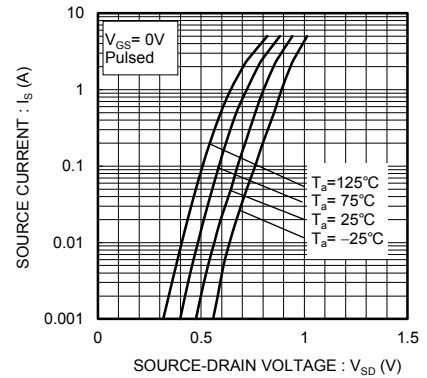


Fig.10 Typical Capacitance vs. Drain-Source Voltage

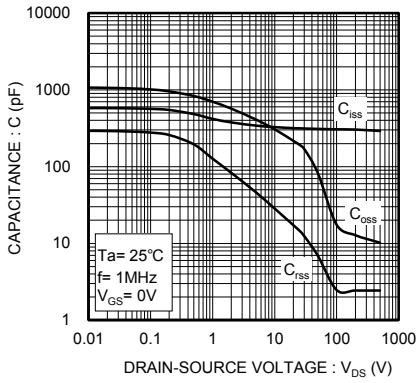


Fig.11 Reverse Recovery Time vs. Source Current

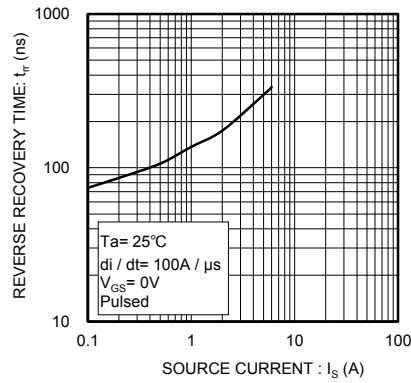


Fig.12 Switching Characteristics

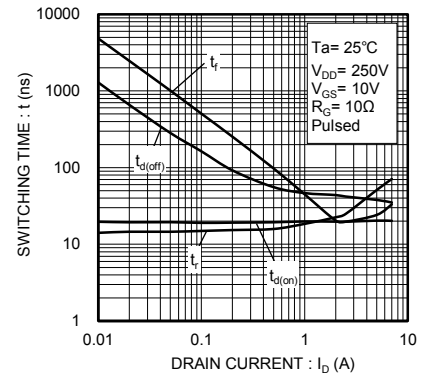
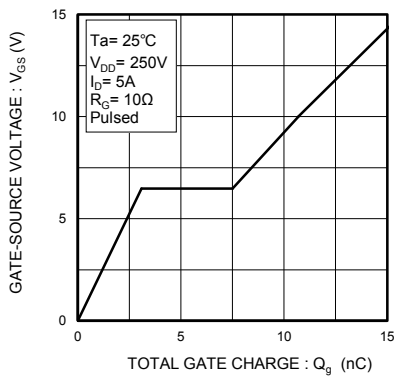


Fig.13 Dynamic Input Characteristics



● Measurement circuits

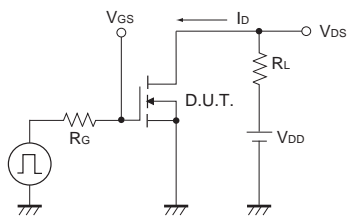


Fig.1-1 Switching Time Measurement Circuit

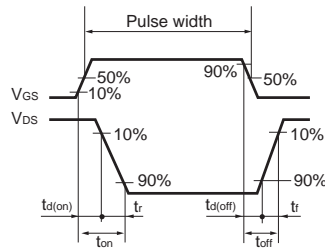


Fig.1-2 Switching Waveforms

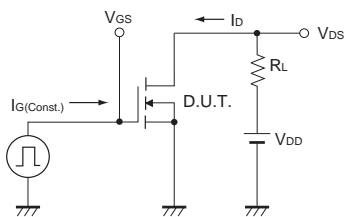


Fig.2-1 Gate Charge Measurement Circuit

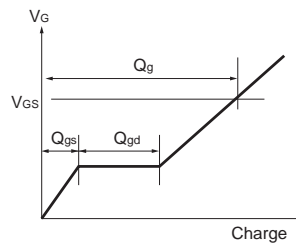


Fig.2-2 Gate Charge Waveform

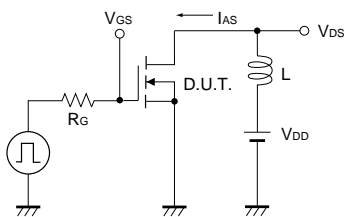


Fig.3-1 Avalanche Measurement Circuit

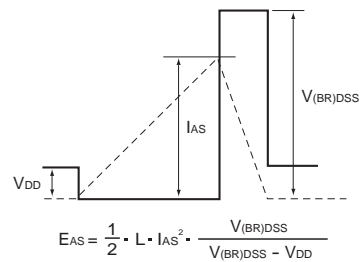


Fig.3-2 Avalanche Waveform

Notes

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