



## ● Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Gate-source leakage	$I_{GSS}$	-	-	±100	nA	$V_{GS}=\pm 30V, V_{DS}=0V$
Drain-source breakdown voltage	$V_{(BR)DSS}$	525	-	-	V	$I_D=1mA, V_{GS}=0V$
Zero gate voltage drain current	$I_{DSS}$	-	-	100	μA	$V_{DS}=525V, V_{GS}=0V$
Gate threshold voltage	$V_{GS(th)}$	2.5	-	4.5	V	$V_{DS}=10V, I_D=1mA$
Static drain-source on-state resistance	$R_{DS(on)}^*$	-	0.78	1.0	Ω	$I_D=3.5A, V_{GS}=10V$
Forward transfer admittance	$ Y_{fs} ^*$	2.5	-	-	S	$V_{DS}=10V, I_D=3.5A$
Input capacitance	$C_{iss}$	-	500	-	pF	$V_{DS}=25V$
Output capacitance	$C_{oss}$	-	300	-	pF	$V_{GS}=0V$
Reverse transfer capacitance	$C_{rss}$	-	23	-	pF	$f=1MHz$
Turn-on delay time	$t_{d(on)}^*$	-	20	-	ns	$V_{DD}=250V, I_D=3.5A$
Rise time	$t_r^*$	-	22	-	ns	$V_{GS}=10V$
Turn-off delay time	$t_{d(off)}^*$	-	50	-	ns	$R_L=71.4\Omega$
Fall time	$t_f^*$	-	25	-	ns	$R_G=10\Omega$
Total gate charge	$Q_g^*$	-	13	-	nC	$V_{DD}=250V$
Gate-source charge	$Q_{gs}^*$	-	3.5	-	nC	$I_D=7A$
Gate-drain charge	$Q_{gd}^*$	-	5.5	-	nC	$V_{GS}=10V$

\*Pulsed

## ● Body diode characteristics (Source-Drain)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward Voltage	$V_{SD}^*$	-	-	1.5	V	$I_S=7A, V_{GS}=0V$

\*Pulsed

●Electrical characteristic curves

Fig.1 Typical Output Characteristics ( I )

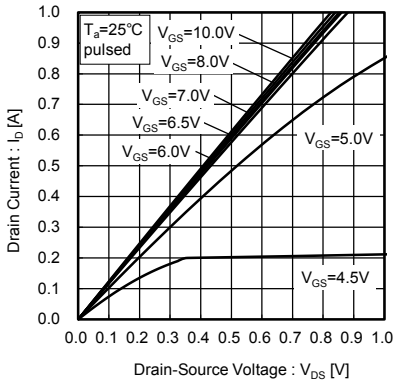


Fig.2 Typical Output Characteristics ( II )

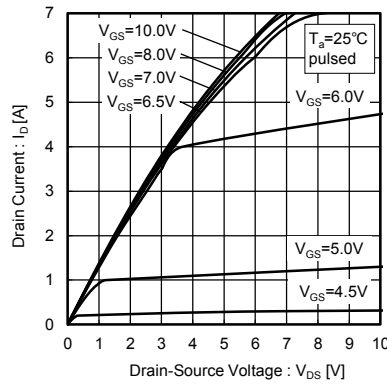


Fig.3 Typical Transfer Characteristics

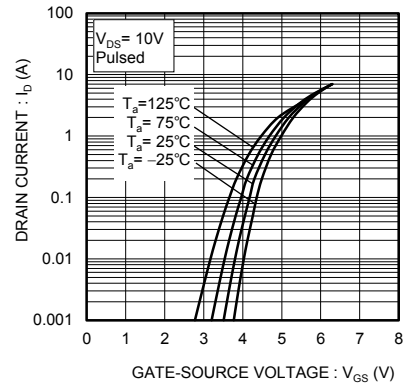


Fig.4 Gate Threshold Voltage vs. Channel Temperature

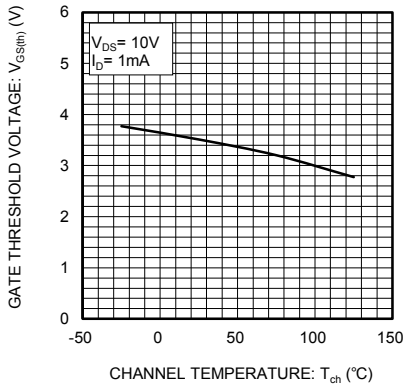


Fig.5 Static Drain-Source On-State Resistance vs. Drain Current

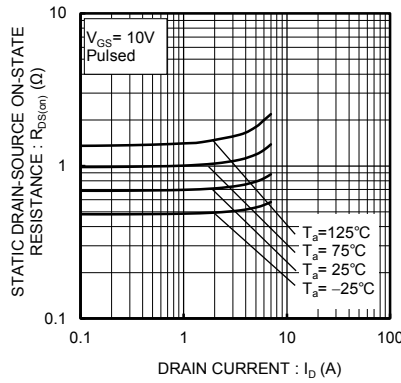


Fig.6 Static Drain-Source On-State Resistance vs. Gate Source Voltage

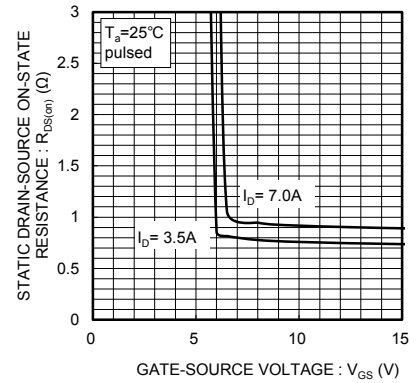


Fig.7 Static Drain-Source On-State Resistance vs. Channel Temperature

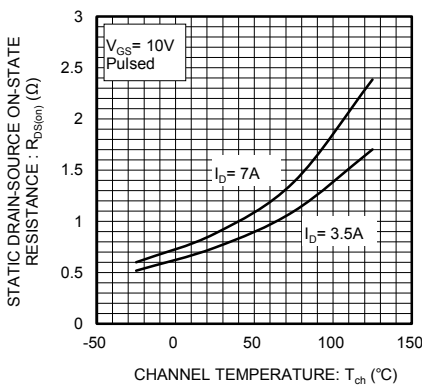


Fig.8 Forward Transfer Admittance vs. Drain Current

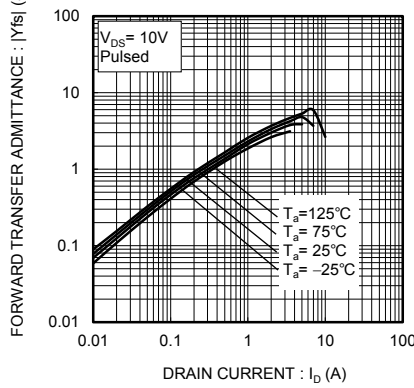


Fig.9 Source Current vs. Source-Drain Voltage

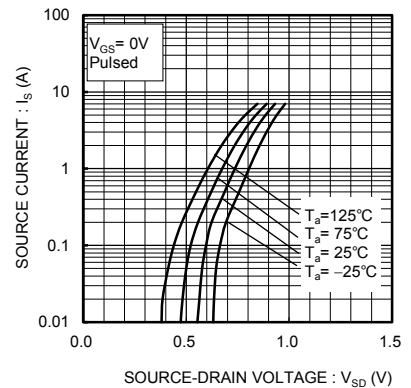


Fig.10 Typical Capacitance vs. Drain-Source Voltage

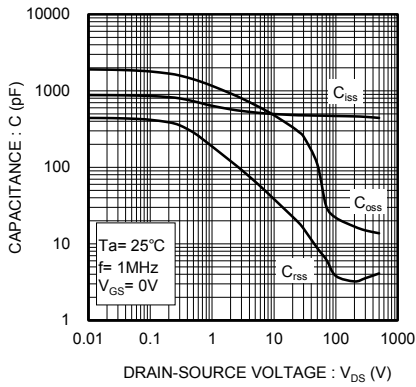


Fig.11 Dynamic Input Characteristics

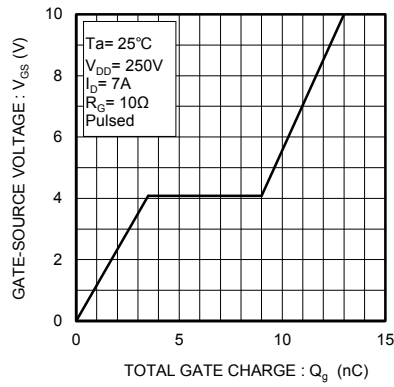


Fig.12 Reverse Recovery Time vs. Source Current

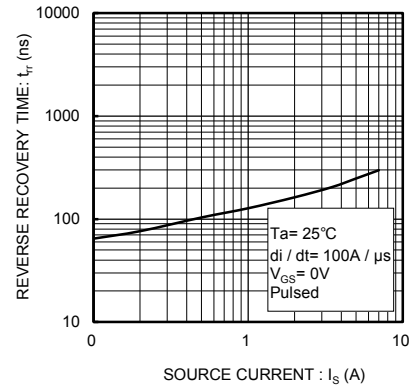
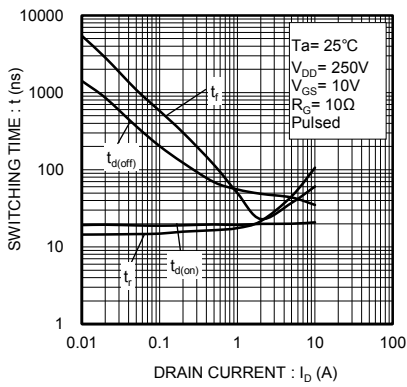


Fig.13 Switching Characteristics



● Measurement circuits

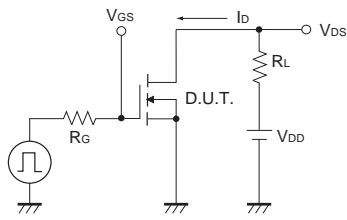


Fig.1-1 Switching Time Measurement Circuit

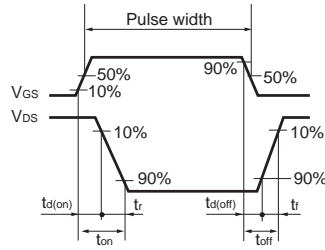


Fig.1-2 Switching Waveforms

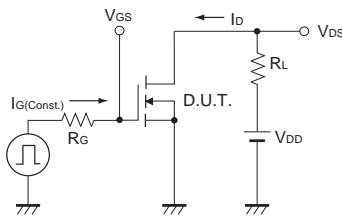


Fig.2-1 Gate Charge Measurement Circuit

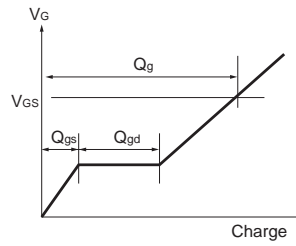


Fig.2-2 Gate Charge Waveform

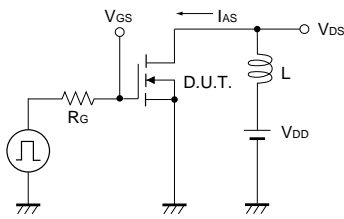


Fig.3-1 Avalanche Measurement Circuit

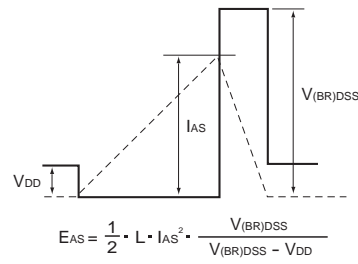


Fig.3-2 Avalanche Waveform

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