



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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Gate-source leakage	$I_{GSS}$	-	-	±10	μA	$V_{GS}=\pm 20V, V_{DS}=0V$
Drain-source breakdown voltage	$V_{(BR)DSS}$	60	-	-	V	$I_D=1mA, V_{GS}=0V$
Zero gate voltage drain current	$I_{DSS}$	-	-	1	μA	$V_{DS}=60V, V_{GS}=0V$
Gate threshold voltage	$V_{GS(th)}$	1.0	-	2.5	V	$V_{DS}=10V, I_D=1mA$
Static drain-source on-state resistance	$R_{DS(on)}$ *	-	210	290	mΩ	$I_D=1.5A, V_{GS}=10V$
		-	240	330		$I_D=1.5A, V_{GS}=4.5V$
		-	255	350		$I_D=1.5A, V_{GS}=4.0V$
Forward transfer admittance	$ Y_{fs} $ *	1.0	-	-	S	$I_D=1.5A, V_{DS}=10V$
Input capacitance	$C_{iss}$	-	110	-	pF	$V_{DS}=10V$
Output capacitance	$C_{oss}$	-	28	-	pF	$V_{GS}=0V$
Reverse transfer capacitance	$C_{rss}$	-	12	-	pF	$f=1MHz$
Turn-on delay time	$t_{d(on)}$ *	-	6	-	ns	$I_D=0.7A, V_{DD}=30V$
Rise time	$t_r$ *	-	9	-	ns	$V_{GS}=10V$
Turn-off delay time	$t_{d(off)}$ *	-	15	-	ns	$R_L=42.8\Omega$
Fall time	$t_f$ *	-	10	-	ns	$R_G=10\Omega$
Total gate charge	$Q_g$ *	-	2.0	-	nC	$I_D=1.5A$
Gate-source charge	$Q_{gs}$ *	-	0.8	-	nC	$V_{DD}=30V$
Gate-drain charge	$Q_{gd}$ *	-	0.5	-	nC	$V_{GS}=5V$

\*Pulsed

## ● Body diode characteristics (Source-Drain) (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward Voltage	$V_{SD}$ *	-	-	1.2	V	$I_S=1.5A, V_{GS}=0V$

\*Pulsed

●Electrical characteristic curves (Ta=25°C)

Fig.1 Typical Output Characteristics( I )

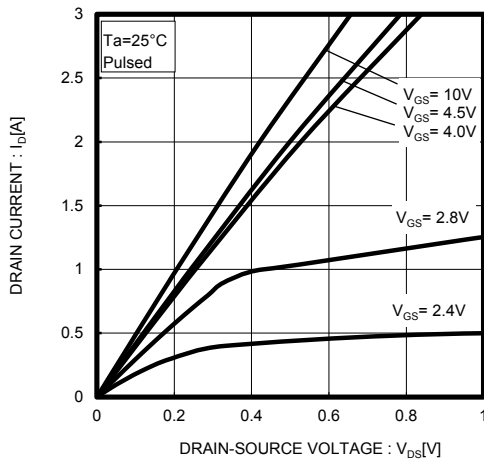


Fig.2 Typical Output Characteristics( II )

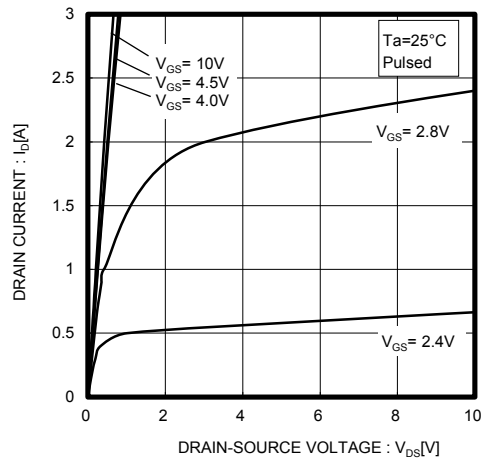


Fig.3 Typical Transfer Characteristics

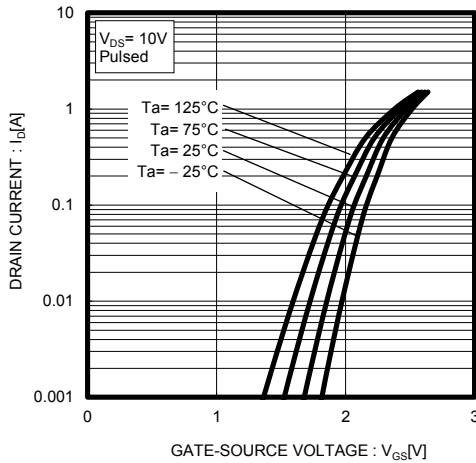


Fig.4 Static Drain-Source On-State Resistance vs. Drain Current( I )

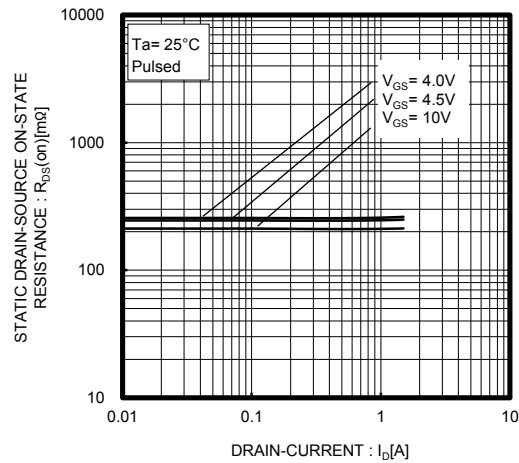


Fig.5 Static Drain-Source On-State Resistance vs. Drain Current( II )

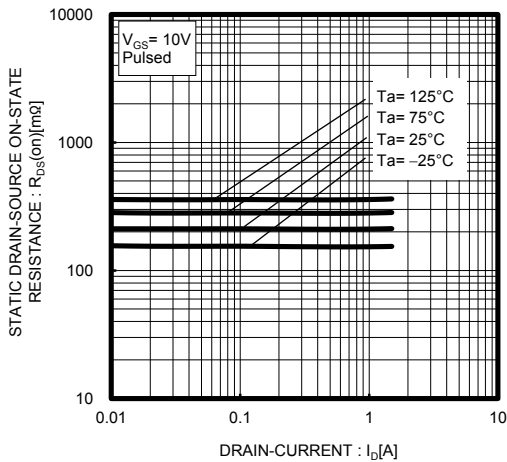


Fig.6 Static Drain-Source On-State Resistance vs. Drain Current( III )

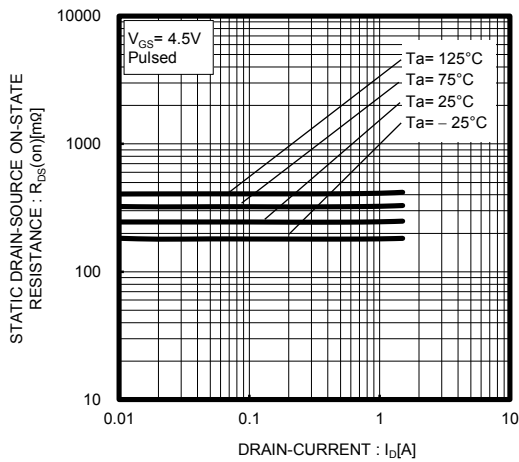


Fig.7 Static Drain-Source On-State Resistance vs. Drain Current(I<sub>D</sub>)

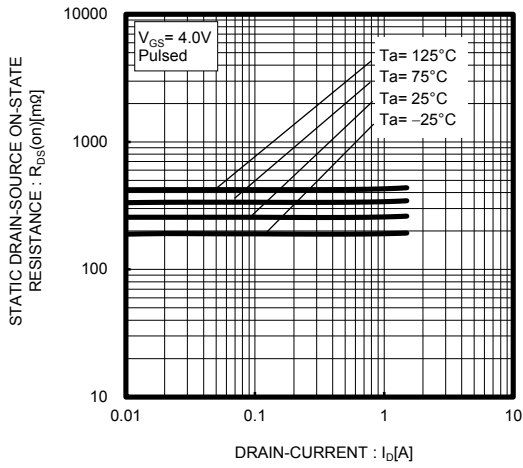


Fig.8 Forward Transfer Admittance vs. Drain Current

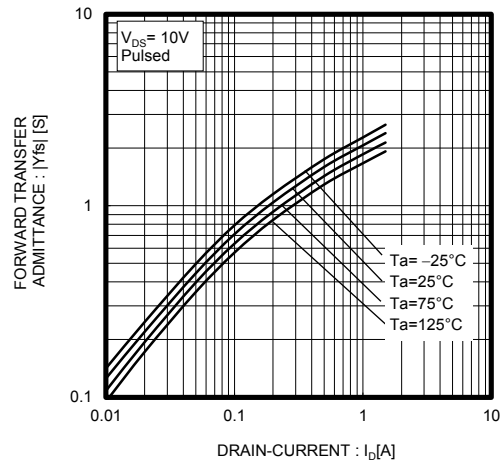


Fig.9 Source Current vs. Source-Drain Voltage

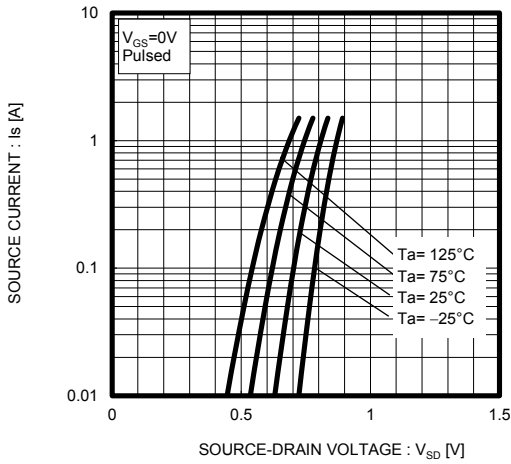


Fig.10 Static Drain-Source On-State Resistance vs. Gate Source Voltage

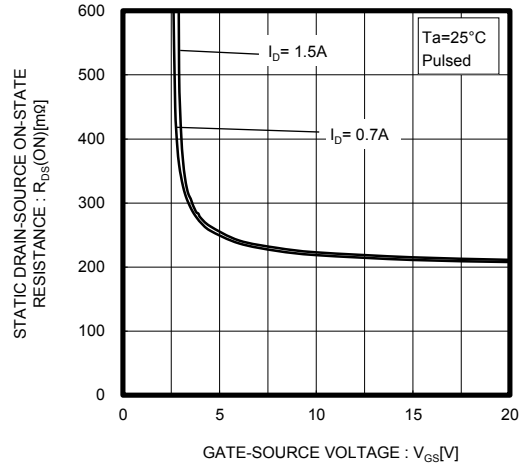


Fig.11 Switching Characteristics

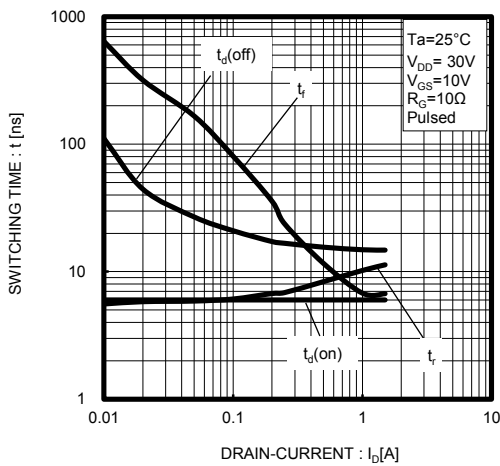


Fig.12 Dynamic Input Characteristics

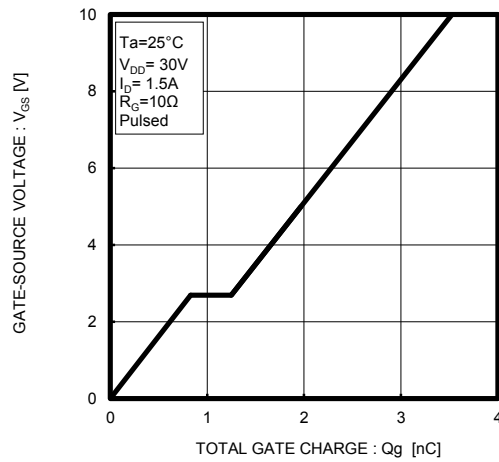
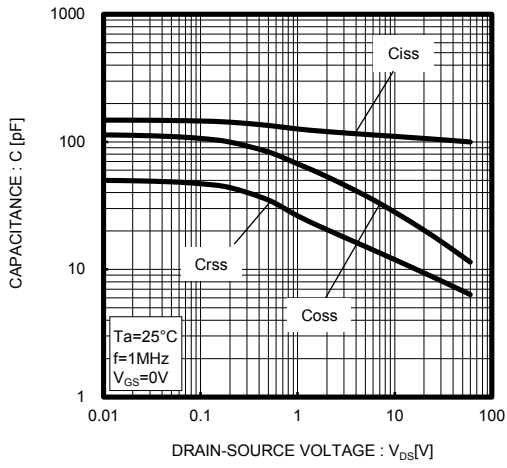


Fig.13 Typical Capacitance vs. Drain-Source Voltage



● Measurement circuits

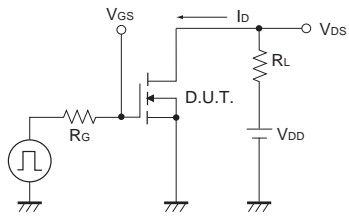


Fig.1-1 Switching Time Measurement Circuit

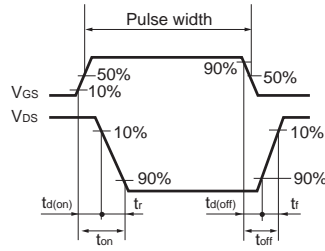


Fig.1-2 Switching Waveforms

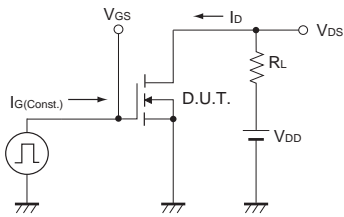


Fig.2-1 Gate Charge Measurement Circuit

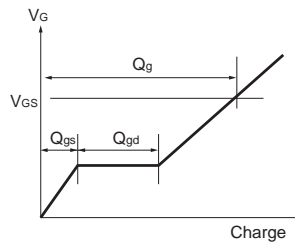


Fig.2-2 Gate Charge Waveform

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