



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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Gate-source leakage	$I_{GSS}$	-	-	-10	$\mu A$	$V_{GS}=-8V, V_{DS}=0V$
Drain-source breakdown voltage	$V_{(BR)DSS}$	-12	-	-	V	$I_D=-1mA, V_{GS}=0V$
Zero gate voltage drain current	$I_{DSS}$	-	-	-10	$\mu A$	$V_{DS}=-12V, V_{GS}=0V$
Gate threshold voltage	$V_{GS(th)}$	-0.3	-	-1.0	V	$V_{DS}=-6V, I_D=-1mA$
Static drain-source on-state resistance	$R_{DS(on)}^*$	-	30	42	m $\Omega$	$I_D=-3.5A, V_{GS}=-4.5V$
		-	40	56		$I_D=-1.7A, V_{GS}=-2.5V$
		-	55	82		$I_D=-1.7A, V_{GS}=-1.8V$
		-	75	150		$I_D=-0.7A, V_{GS}=-1.5V$
Forward transfer admittance	$ Y_{fs} ^*$	4	-	-	S	$I_D=-3.5A, V_{DS}=-6V$
Input capacitance	$C_{iss}$	-	2700	-	pF	$V_{DS}=-6V$
Output capacitance	$C_{oss}$	-	170	-	pF	$V_{GS}=0V$
Reverse transfer capacitance	$C_{rss}$	-	150	-	pF	$f=1MHz$
Turn-on delay time	$t_{d(on)}^*$	-	10	-	ns	$I_D=-1.7A, V_{DD}=-6V$
Rise time	$t_r^*$	-	30	-	ns	$V_{GS}=-4.5V$
Turn-off delay time	$t_{d(off)}^*$	-	230	-	ns	$R_L=3.5\Omega$
Fall time	$t_f^*$	-	75	-	ns	$R_G=10\Omega$
Total gate charge	$Q_g^*$	-	22	-	nC	$I_D=-3.5A$
Gate-source charge	$Q_{gs}^*$	-	3.9	-	nC	$V_{DD}=-6V$
Gate-drain charge	$Q_{gd}^*$	-	3.1	-	nC	$V_{GS}=-4.5V$

\*Pulsed

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward Voltage	$V_{SD}^*$	-	-	-1.2	V	$I_s=-3.5A, V_{GS}=0V$

\*Pulsed

●Electrical characteristic curves (Ta=25°C)

Fig.1 Typical Output Characteristics( I )

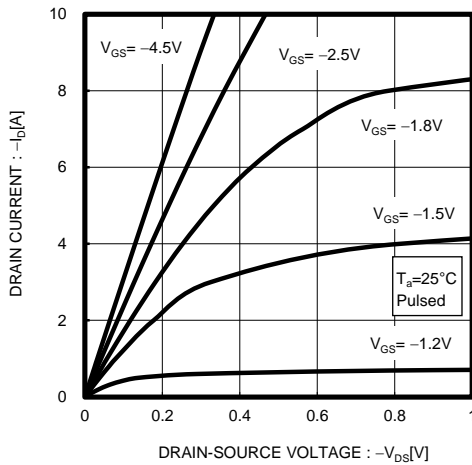


Fig.2 Typical Output Characteristics( II )

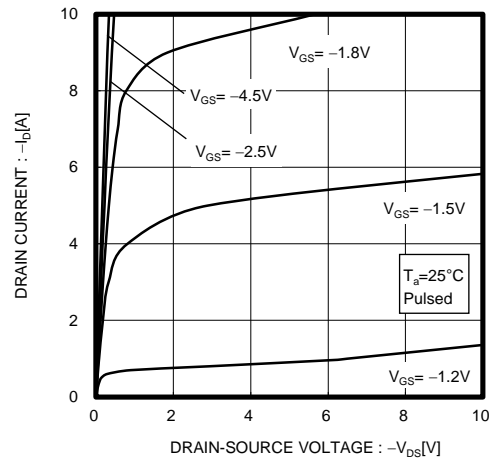


Fig.3 Typical Transfer Characteristics

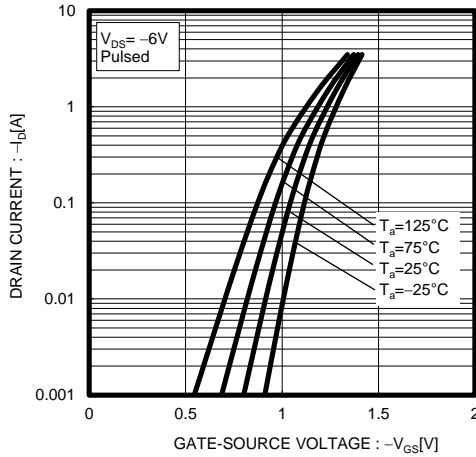


Fig.4 Static Drain-Source On-State Resistance vs. Drain Current( I )

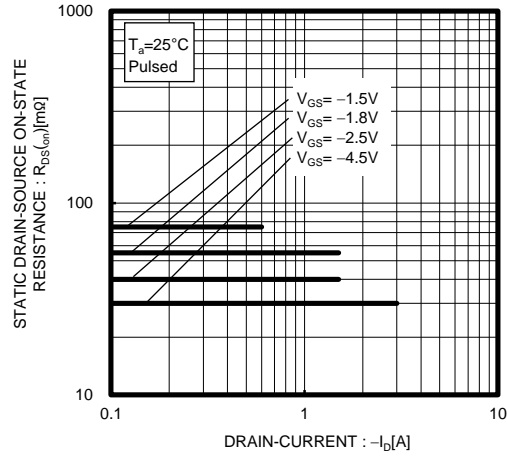


Fig.5 Static Drain-Source On-State Resistance vs. Drain Current( II )

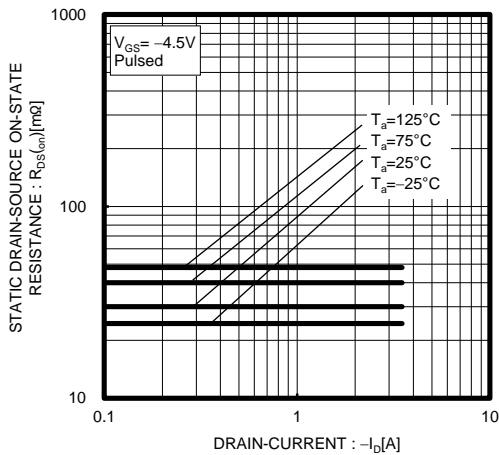


Fig.6 Static Drain-Source On-State Resistance vs. Drain Current( II )

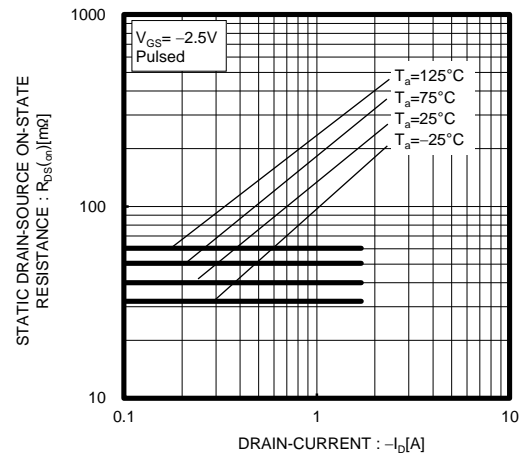


Fig.7 Static Drain-Source On-State Resistance vs. Drain Current(III)

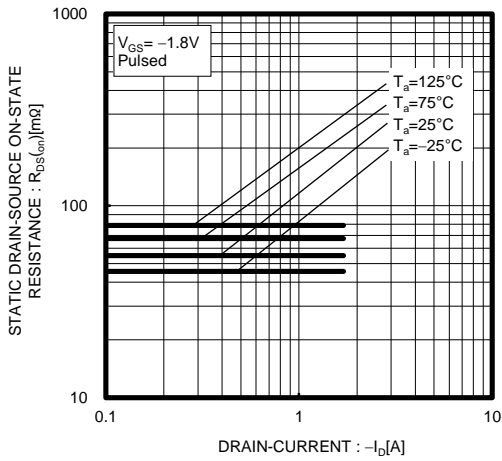


Fig.8 Static Drain-Source On-State Resistance vs. Drain Current(IV)

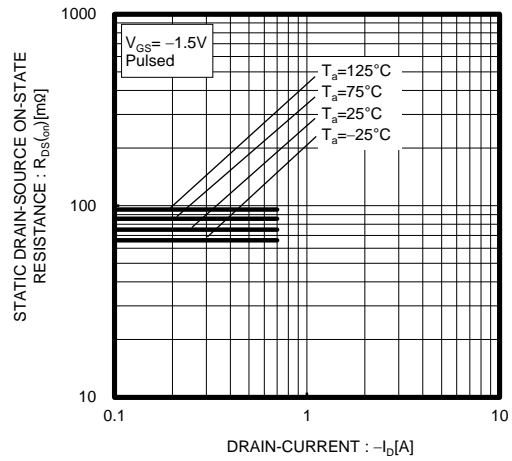


Fig.9 Forward Transfer Admittance vs. Drain Current

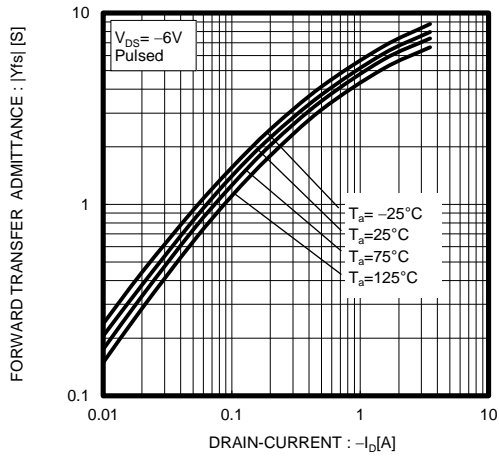


Fig.10 Reverse Drain Current vs. Source-Drain Voltage

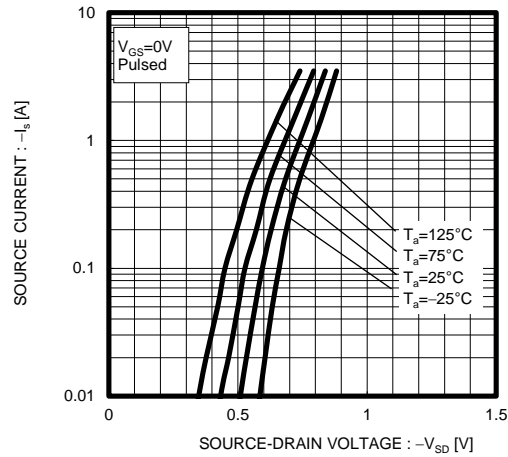


Fig.11 Static Drain-Source On-State Resistance vs. Gate Source Voltage

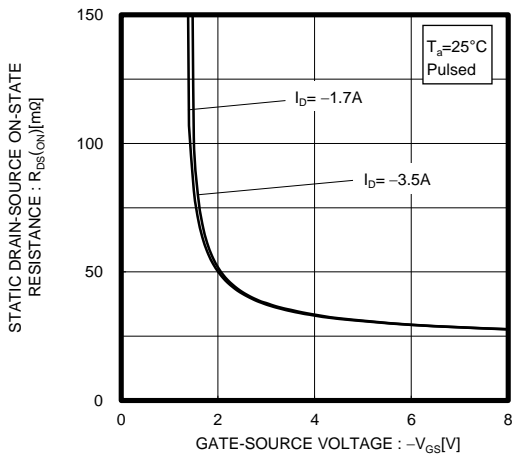


Fig.12 Switching Characteristics

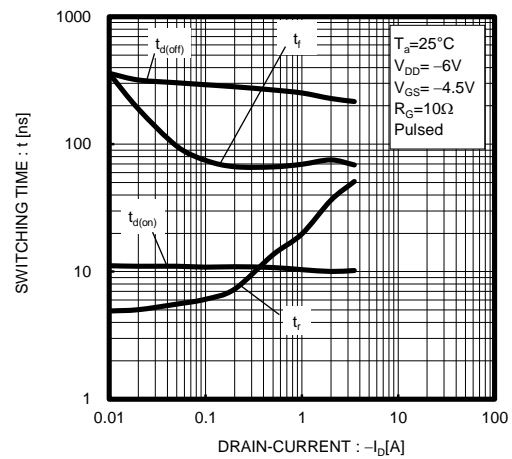


Fig.13 Dynamic Input Characteristics

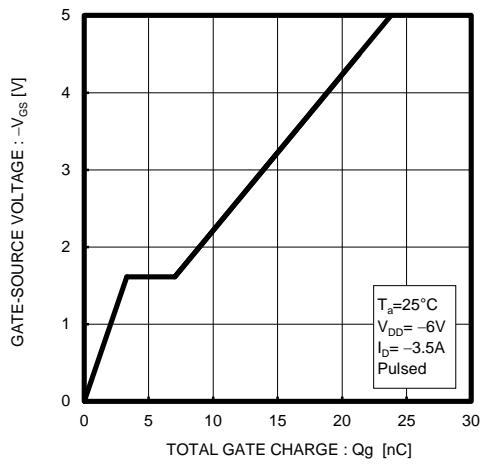
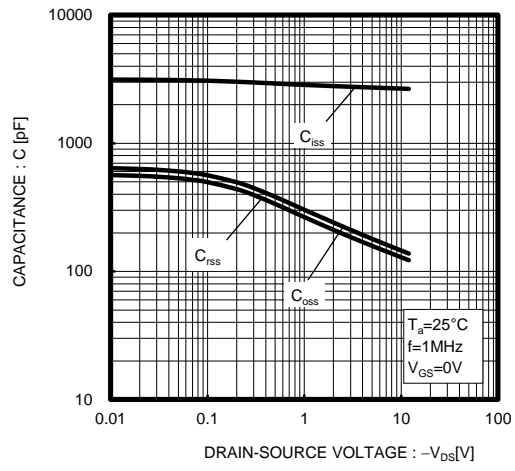


Fig.14 Typical Capacitance vs. Drain-Source Voltage



● Measurement circuits

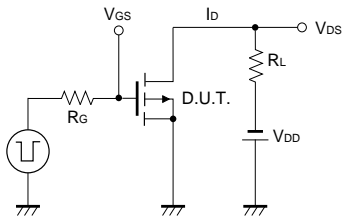


Fig.1-1 Switching Time Measurement Circuit

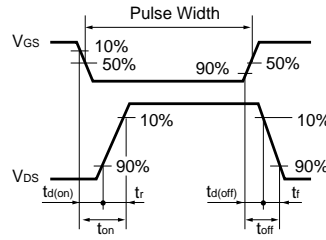


Fig.1-2 Switching Waveforms

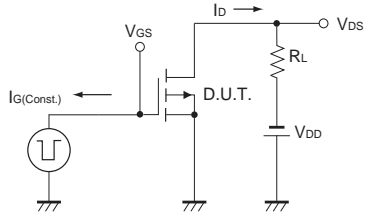


Fig.2-1 Gate Charge Measurement Circuit

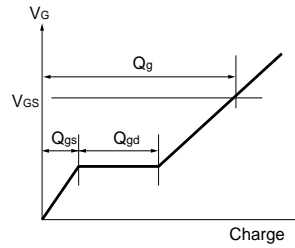


Fig.2-2 Gate Charge Waveform

● Notice

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