

●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	$V_{(BR)DSS}$	30	–	–	V	$I_D=1mA, V_{GS}=0V$
Zero gate voltage drain current	I_{DSS}	–	–	1	μA	$V_{DS}=30V, V_{GS}=0V$
Gate threshold voltage	$V_{GS(th)}$	1.0	–	2.5	V	$V_{DS}=10V, I_D=1mA$
Static drain-source on-state resistance	$R_{DS(on)}$ *	–	45	63	m Ω	$I_D=3.5A, V_{GS}=10V$
		–	60	84		$I_D=3.5A, V_{GS}=4.5V$
		–	65	91		$I_D=3.5A, V_{GS}=4V$
Forward transfer admittance	$ Y_{fs} $ *	1.7	–	–	S	$I_D=3.5A, V_{DS}=10V$
Input capacitance	C_{iss}	–	400	–	pF	$V_{DS}=10V$
Output capacitance	C_{oss}	–	65	–	pF	$V_{GS}=0V$
Reverse transfer capacitance	C_{rss}	–	55	–	pF	$f=1MHz$
Turn-on delay time	$t_{d(on)}$ *	–	10	–	ns	$I_D=1.7A, V_{DD} \doteq 15V$
Rise time	t_r *	–	15	–	ns	$V_{GS}=10V$
Turn-off delay time	$t_{d(off)}$ *	–	30	–	ns	$R_L \doteq 8.8\Omega$
Fall time	t_f *	–	5	–	ns	$R_G=10\Omega$
Total gate charge	Q_g *	–	4.5	–	nC	$V_{DD} \doteq 15V$
Gate-source charge	Q_{gs} *	–	1.5	–	nC	$V_{GS}=5V \quad R_G=10\Omega$
Gate-drain charge	Q_{gd} *	–	1.4	–	nC	$I_D=3.5A \quad R_L \doteq 4.3\Omega$

*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 characteristics curves

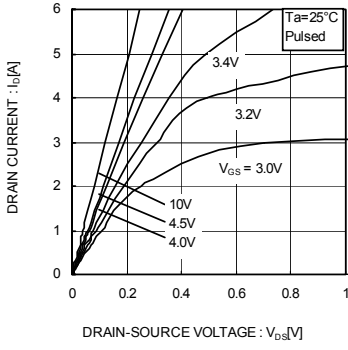


Fig.1 Typical output characteristics (I)

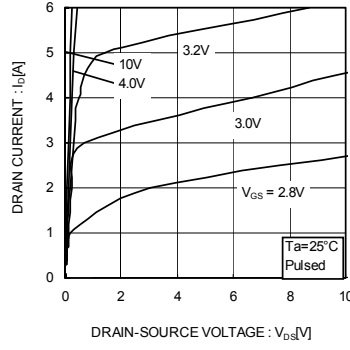


Fig.2 Typical output characteristics (II)

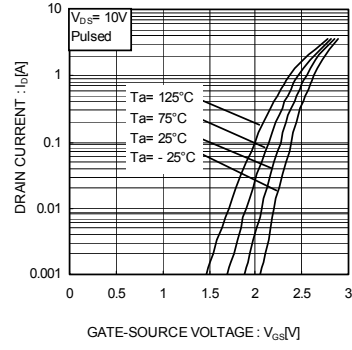


Fig.3 Typical Transfer Characteristics

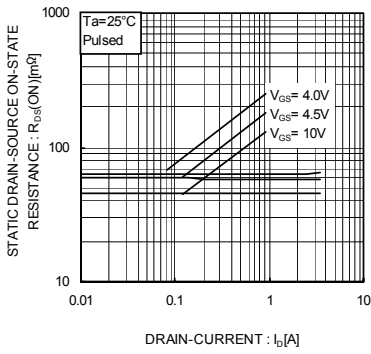


Fig.4 Static Drain-Source On-State Resistance vs. Drain Current (I)

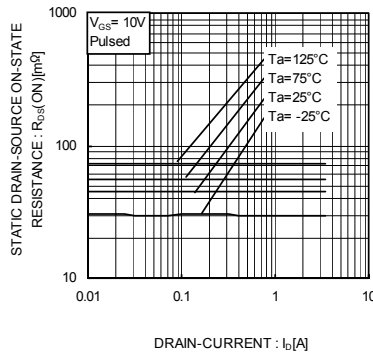


Fig.5 Static Drain-Source On-State Resistance vs. Drain Current(II)

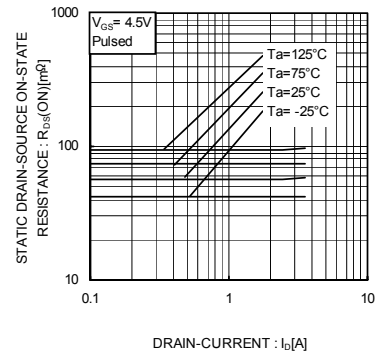


Fig.6 Static Drain-Source On-State Resistance vs. Drain Current(III)

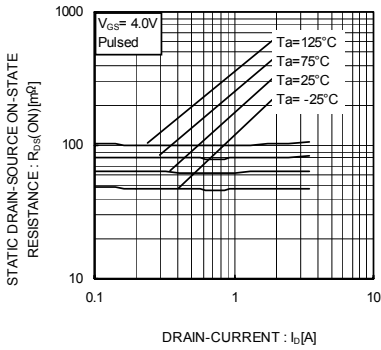


Fig.7 Static Drain-Source On-State Resistance vs. Drain Current(IV)

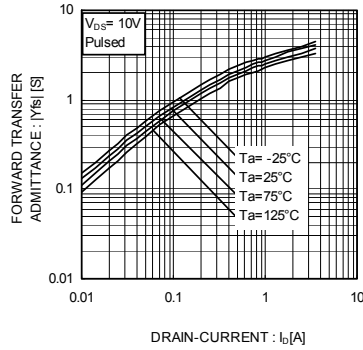


Fig.8 Forward Transfer Admittance vs. Drain Current

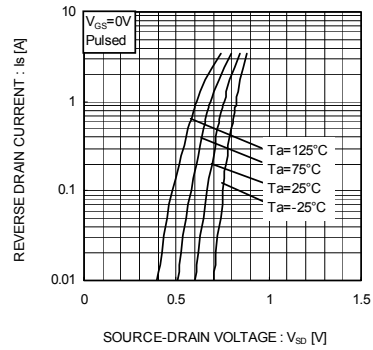


Fig.9 Reverse Drain Current vs. Source-Drain Voltage

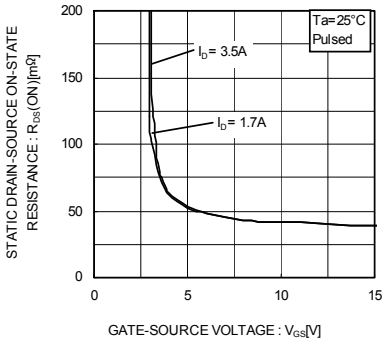


Fig.10 Static Drain-Source On-State Resistance vs. Gate-Source Voltage

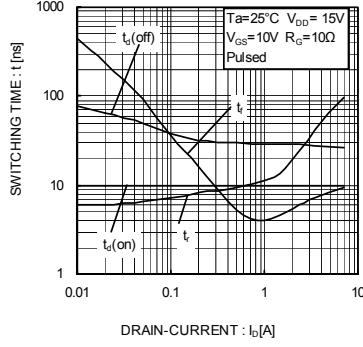


Fig.11 Switching Characteristics

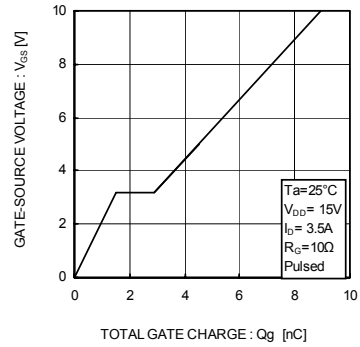


Fig.12 Dynamic Input Characteristics

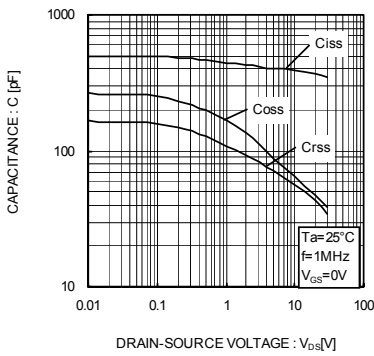


Fig.13 Typical Capacitance vs. Drain-Source Voltage

●Measurement circuits

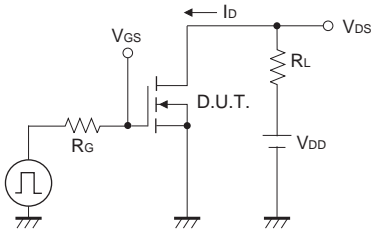


Fig.1-1 Switching Time Measurement Circuit

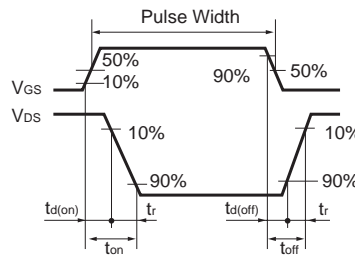


Fig.1-2 Switching Waveforms

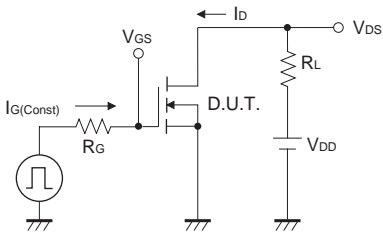


Fig.2-1 Gate Charge Measurement Circuit

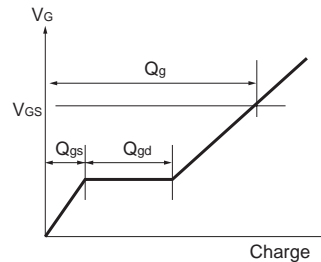


Fig.2-2 Gate Charge Waveforms

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