

Transistors

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Gate-source leakage	I_{GSS}	—	—	±10	μA	$V_{GS}=\pm 12V$, $V_{DS}=0V$
Drain-source breakdown voltage	$V_{(BR)DSS}$	−20	—	—	V	$I_D = -1mA$, $V_{GS}=0V$
Zero gate voltage drain current	I_{DSS}	—	—	−1	μA	$V_{DS} = -20V$, $V_{GS}=0V$
Gate threshold voltage	$V_{GS(th)}$	−0.7	—	−2.0	V	$V_{DS} = -10V$, $I_D = -1mA$
Static drain-source on-state resistance	$R_{DS(on)}$ *	—	100	135	mΩ	$I_D = -2.0A$, $V_{GS} = -4.5V$
		—	110	150	mΩ	$I_D = -2.0A$, $V_{GS} = -4.0V$
		—	180	250	mΩ	$I_D = -1.0A$, $V_{GS} = -2.5V$
Forward transfer admittance	$ Y_{fs} $ *	1.2	—	—	S	$V_{DS} = -10V$, $I_D = -1.0A$
Input capacitance	C_{iss}	—	430	—	pF	$V_{DS} = -10V$
Output capacitance	C_{oss}	—	80	—	pF	$V_{GS}=0V$
Reverse transfer capacitance	C_{rss}	—	55	—	pF	$f=1MHz$
Turn-on delay time	$t_{d(on)}$ *	—	11	—	ns	$I_D = -1.0A$
Rise time	t_r *	—	13	—	ns	$V_{DD} \doteq -15V$ $V_{GS} = -4.5V$
Turn-off delay time	$t_{d(off)}$ *	—	38	—	ns	$R_L=15\Omega$
Fall time	t_f *	—	12	—	ns	$R_{GS}=10\Omega$
Total gate charge	Q_g	—	4.9	—	nC	$V_{DD} \doteq -15V$
Gate-source charge	Q_{gs}	—	1.2	—	nC	$V_{GS} = -4.5V$
Gate-drain charge	Q_{gd}	—	1.3	—	nC	$I_D = -2.0A$

*Pulsed

Body diode characteristics (source-drain characteristics)

Forward voltage	V_{SD}	—	—	−1.2	V	$I_S = -0.8A$, $V_{GS}=0V$
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Transistors

●Electrical characteristic curves

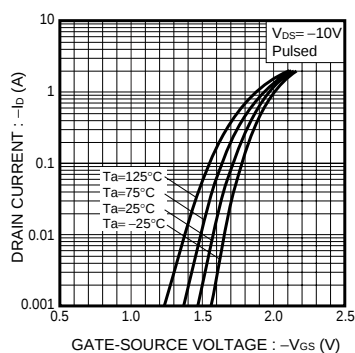


Fig.1 Typical Transfer Characteristics

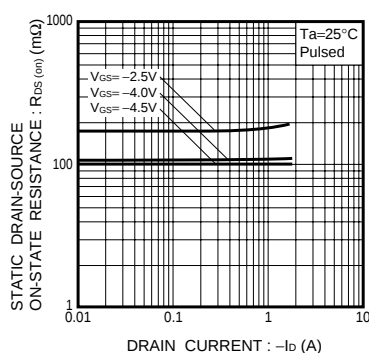


Fig.2 Static Drain-Source On-State Resistance vs. Drain Current

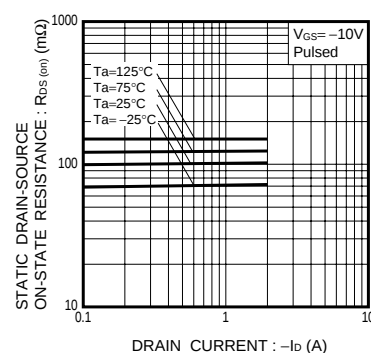


Fig.3 Static Drain-Source On-State Resistance vs. Drain Current

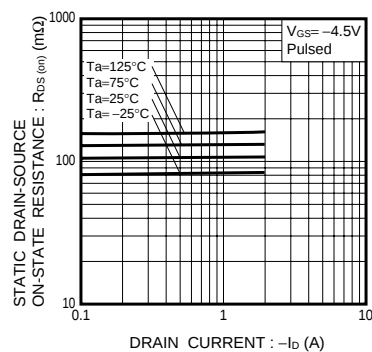


Fig.4 Static Drain-Source On-State Resistance vs. Drain Current

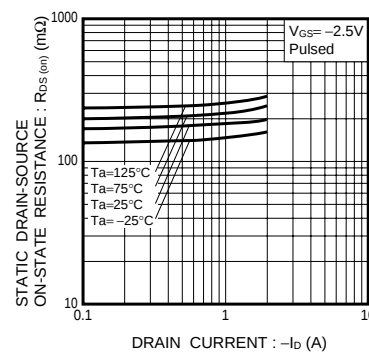


Fig.5 Static Drain-Source On-State Resistance vs. Drain Current

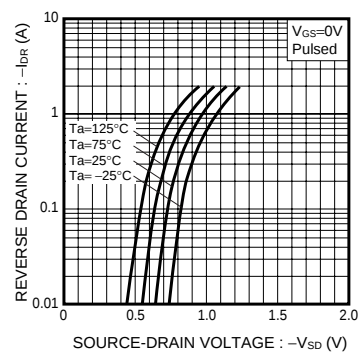


Fig.6 Reverse Drain Current vs. Source-Drain Voltage

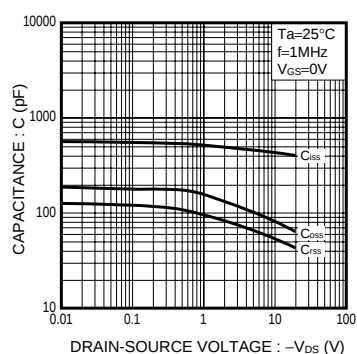


Fig.7 Typical Capacitance vs. Drain-Source Voltage

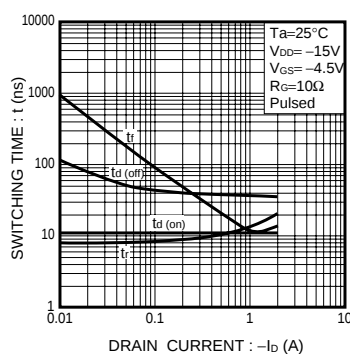


Fig.8 Switching Characteristics

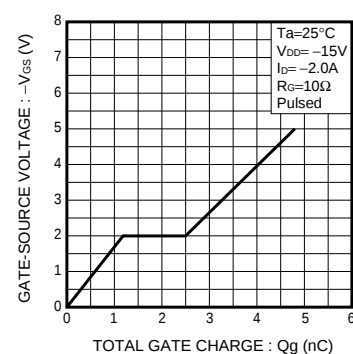


Fig.9 Dynamic Input Characteristics

Transistors

●Measurement circuits

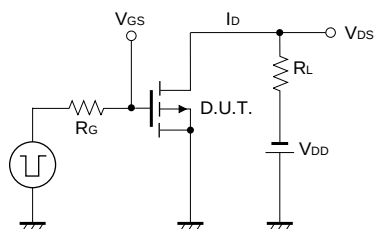


Fig.10 Switching Time Test Circuit

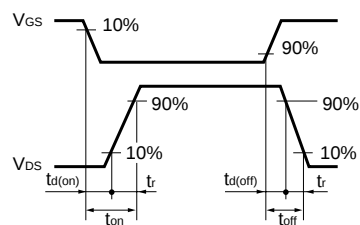


Fig.11 Switching Time Waveforms

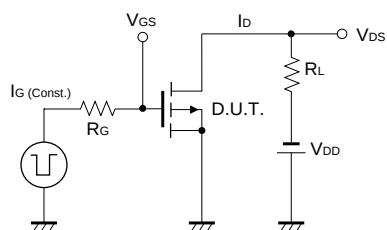


Fig.12 Gate Charge Test Circuit

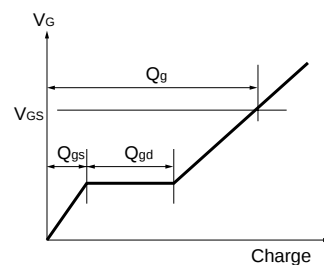


Fig.13 Gate Charge Waveform

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