

Transistor

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Gate-source leakage	I _{GSS}	-	-	±10	μA	V _{GS} =±20V, V _{DS} =0V
Drain-source breakdown voltage	V _{(BR)DSS}	-45	-	-	V	I _D =-1mA, V _{GS} =0V
Zero gate voltage drain current	I _{DSS}	-	-	-1	μA	V _{DS} =-45V, 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)} ¹⁾	-	19	27	mΩ	I _D =-7A, V _{GS} =-10V
		-	25	35	mΩ	I _D =-7A, V _{GS} =-4.5V
		-	28	39	mΩ	I _D =-7A, V _{GS} =-4.0V
Forward transfer admittance	Y _{fs} ²⁾	10.0	-	-	S	V _{DS} =-10V, I _D =-7A
Input capacitance	C _{iss}	-	4100	-	pF	V _{DS} =-10V
Output capacitance	C _{oss}	-	510	-	pF	V _{GS} =0V
Reverse transfer capacitance	C _{rss}	-	330	-	pF	f=1MHz
Turn-on delay time	t _{d(on)} ³⁾	-	31	-	ns	V _{DD} =-25V
Rise time	t _r ⁴⁾	-	35	-	ns	I _D =-3.5A
Turn-off delay time	t _{d(off)} ⁵⁾	-	135	-	ns	V _{GS} =-10V
Fall time	t _f ⁶⁾	-	50	-	ns	R _L =7Ω
Total gate charge	Q _g ⁷⁾	-	34.0	47.6	nC	V _{DD} =-25V V _{GS} =-5V
Gate-source charge	Q _{gs} ⁸⁾	-	9.5	-	nC	I _D =-7A
Gate-drain charge	Q _{gd} ⁹⁾	-	12	-	nC	R _L =3.5Ω R _G =10Ω

¹⁾Pulsed

Body diode characteristics (Source-Drain)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V _{SD} [*]	-	-	-1.2	V	I _S =-7A, V _{GS} =0V

^{*}Pulsed

Transistor

●Electrical characteristic curves

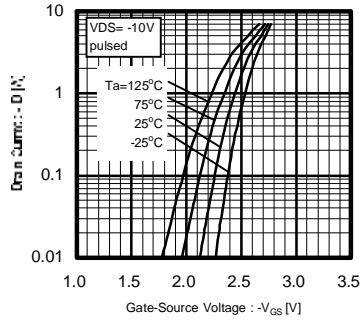


Fig.1 Typical Transfer Characteristics

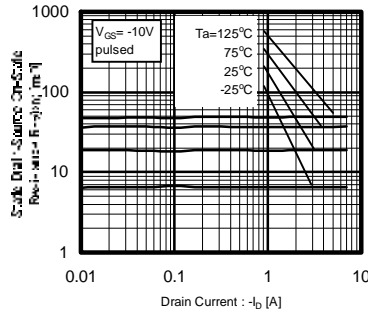


Fig.2 Static Drain-Source On-State Resistance vs. Drain Current (1)

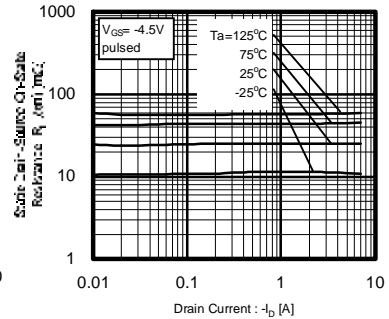


Fig.3 Static Drain-Source On-State Resistance vs. Drain Current (2)

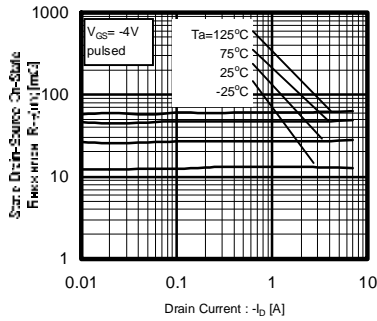


Fig.4 Static Drain-Source On-State Resistance vs. Drain Current (3)

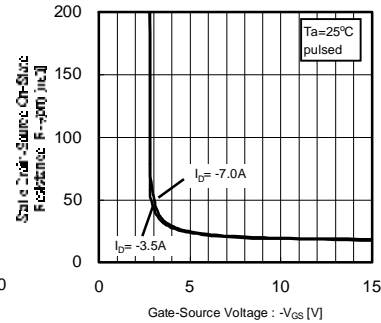


Fig.5 Static Drain-Source On-State Resistance vs. Gate-Source Voltage

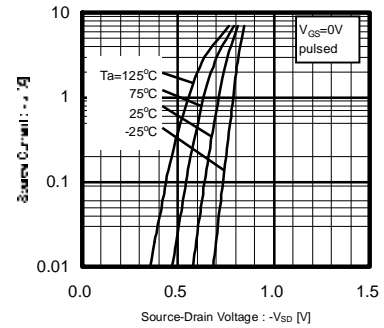


Fig.6 Source-Current vs. Source-Drain Voltage

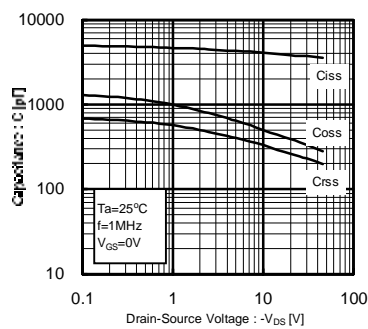


Fig.7 Typical capacitance vs. Source-Drain Voltage

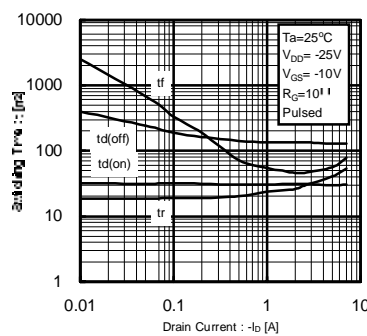


Fig.8 Switching Characteristics

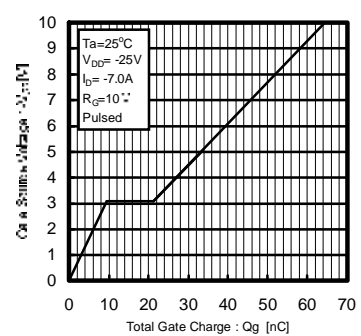


Fig.9 Dynamic Input Characteristics

Transistor

●Measurement circuits

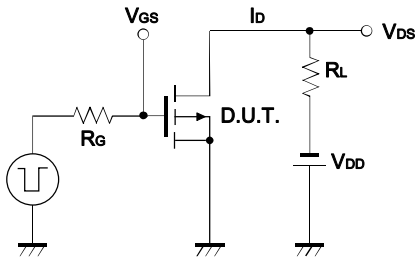


Fig.10 Switching Time Test Circuit

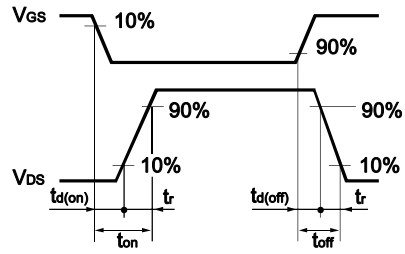


Fig.11 Switching Time Waveforms

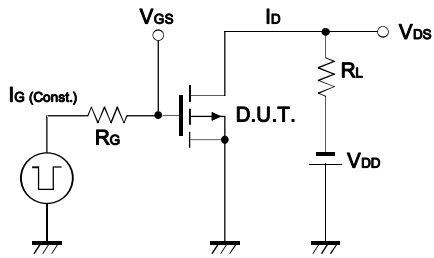


Fig.12 Gate Charge Test Circuit

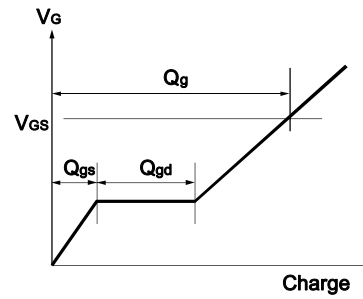


Fig.13 Gate Charge Waveform

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