

RDN080N25

Transistors

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Gate-Source Leakage	I_{GSS}	—	—	± 10	μA	$V_{GS}=\pm 30V, V_{DS}=0V$
Drain-Source Breakdown Voltage	$V_{(BR) DSS}$	250	—	—	V	$I_D=250\mu A, V_{GS}=0V$
Zero Gate Voltage Drain Current	I_{DSS}	—	—	25	μA	$V_{DS}=250V, V_{GS}=0V$
Gate Threshold Voltage	$V_{GS(th)}$	2.0	—	4.0	V	$V_{DS}=10V, I_D=1mA$
Static Drain-Source On-State Resistance	$R_{DS(on)}$	—	0.38	0.5	Ω	$I_D=4A, V_{GS}=10V$
Forward Transfer Admittance	$ Y_{fs} $	1.9	3.1	—	S	$V_{DS}=10V, I_D=4.0A$
Input Capacitance	C_{iss}	—	543	—	pF	$V_{DS}=10V$
Output Capacitance	C_{oss}	—	193	—	pF	$V_{GS}=0V$
Reverse Transfer Capacitance	C_{rss}	—	64	—	pF	$f=1MHz$
Turn-On Delay Time	$t_d(on)$	—	13	—	ns	$I_D=4.0A, V_{DD} \approx 100V$
Rise Time	t_r	—	25	—	ns	$V_{GS}=10V$
Turn-Off Delay Time	$t_d(off)$	—	38	—	ns	$R_L=25\Omega$
Fall Time	t_f	—	26	—	ns	$R_{GS}=10\Omega$
Reverse Recovery Time	t_{rr}	—	151	—	ns	$I_{DR}=8A, V_{GS}=0V$
Reverse Recovery Charge	Q_{rr}	—	0.63	—	μC	$di/dt=100A/\mu s$
Total Gate Charge	Q_g	—	15	—	nC	$V_{DD}=125V, V_{GS}=10V, I_D=8A$

●Electrical characteristic curves

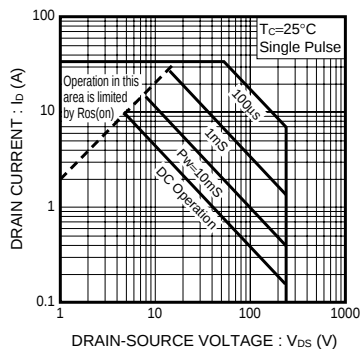


Fig.1 Maximum Safe Operating Area

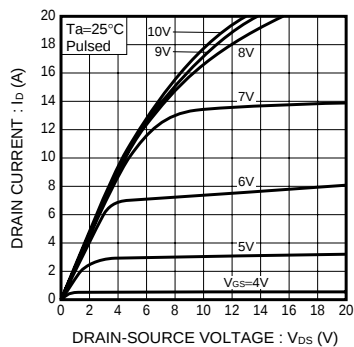


Fig.2 Typical Output Characteristics

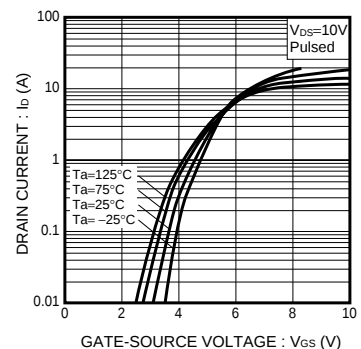


Fig.3 Typical Transfer Characteristics

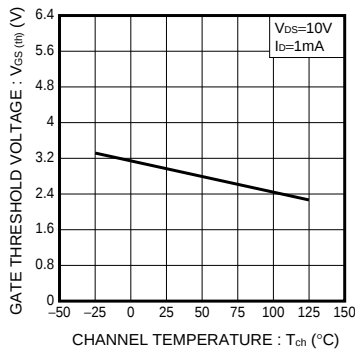


Fig.4 Gate Threshold Voltage vs. Channel Temperature

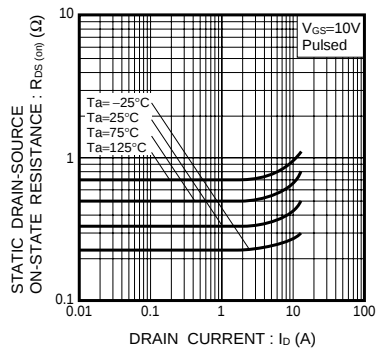


Fig.5 Static Drain-Source On-State Resistance vs. Drain Current

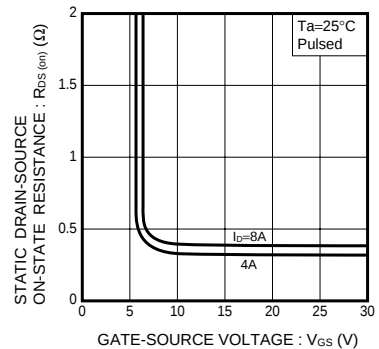


Fig.6 Static Drain-Source On-State Resistance vs. Gate-Source Voltage

Transistors

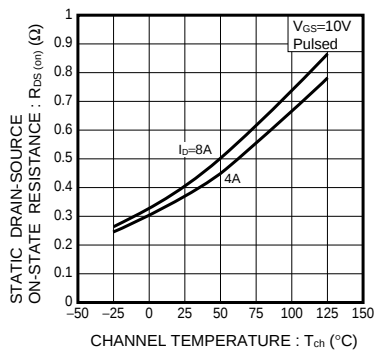


Fig.7 Static Drain-Source On-State Resistance vs. Channel Temperature

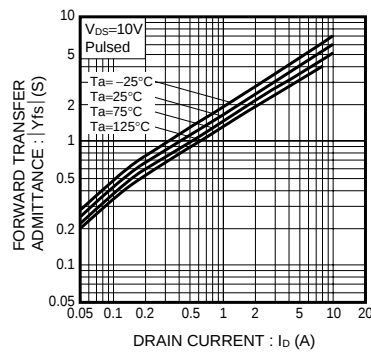


Fig.8 Forward Transfer Admittance vs. Drain Current

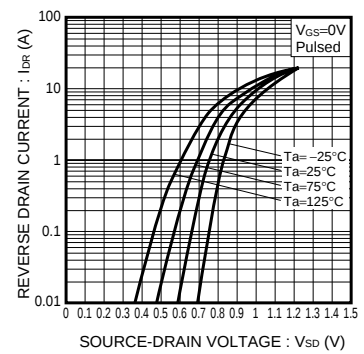


Fig.9 Reverse Drain Current vs. Source-Drain Voltage

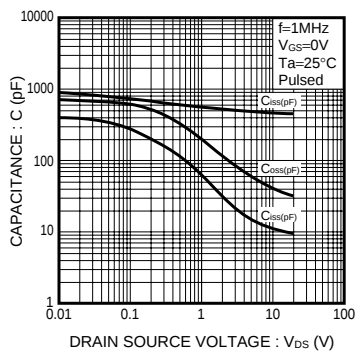


Fig.10 Typical Capacitance vs. Drain-Source Voltage

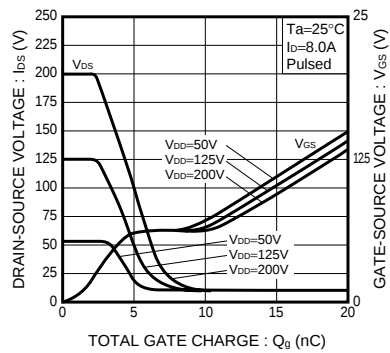


Fig.11 Dynamic Input Characteristics

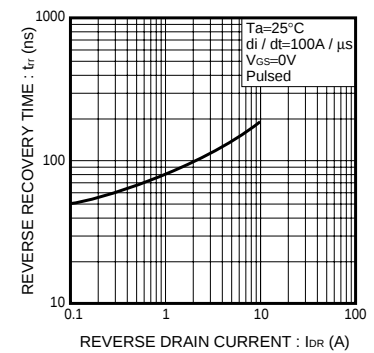


Fig.12 Reverse Recovery Time vs. Reverse Drain Current

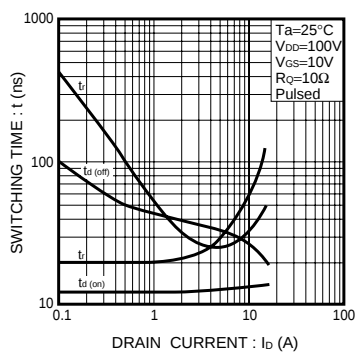


Fig.13 Switching Characteristics

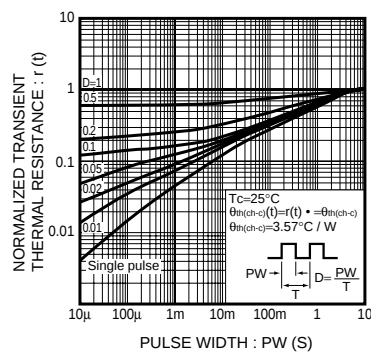


Fig.14 Normalized Transient Thermal Resistance vs. Pulse Width

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