

RSR025N03

Transistors

●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	$R_{DS(on)}$ *	—	50	68	m Ω	$I_D=2.5A$, $V_{GS}=10V$
		—	74	102		$I_D=2.5A$, $V_{GS}=4.5V$
		—	83	115		$I_D=2.5A$, $V_{GS}=4V$
Forward transfer admittance	$ Y_{fs} $ *	1.5	—	—	S	$I_D=2.5A$, $V_{DS}=10V$
Input capacitance	C_{iss}	—	165	—	pF	$V_{DS}=10V$
Output capacitance	C_{oss}	—	55	—	pF	$V_{GS}=0V$
Reverse transfer capacitance	C_{rss}	—	35	—	pF	$f=1MHz$
Turn-on delay time	$t_{d(on)}$ *	—	6	—	ns	$I_D=1.25A$, $V_{DD}\doteq 15V$
Rise time	t_r *	—	10	—	ns	$V_{GS}=10V$
Turn-off delay time	$t_{d(off)}$ *	—	20	—	ns	$R_L=12.0\Omega$
Fall time	t_f *	—	5	—	ns	$R_{GS}=10\Omega$
Total gate charge	Q_g *	—	2.9	4.1	nC	$V_{DD}=15V$
Gate-source charge	Q_{gs} *	—	0.8	—	nC	$V_{GS}=10V$
Gate-drain charge	Q_{gd} *	—	0.9	—	nC	$I_D=2.5A$

*Pulsed

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_{SD} *	—	—	1.2	V	$I_S=3.2A$, $V_{GS}=0V$

*Pulsed

Transistors

●Electrical characteristic curves

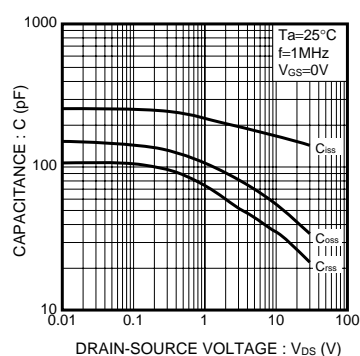


Fig.1 Typical Capacitance vs. Drain-Source Voltage

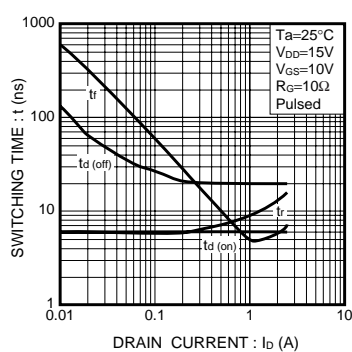


Fig.2 Switching Characteristics

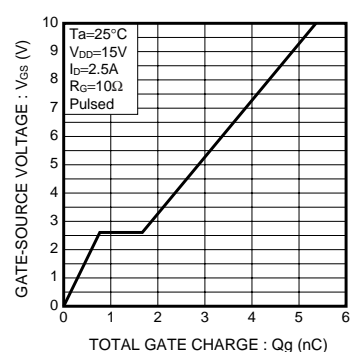


Fig.3 Dynamic Input Characteristics

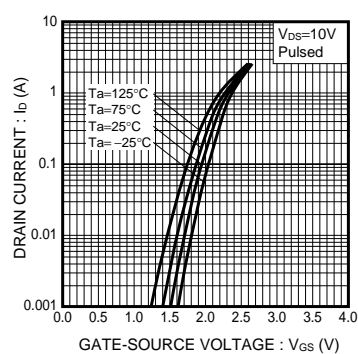


Fig.4 Typical Transfer Characteristics

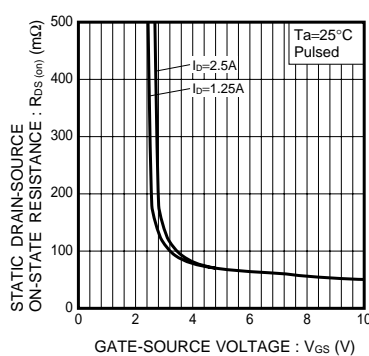


Fig.5 Static Drain-Source On-State Resistance vs. Gate-Source Voltage

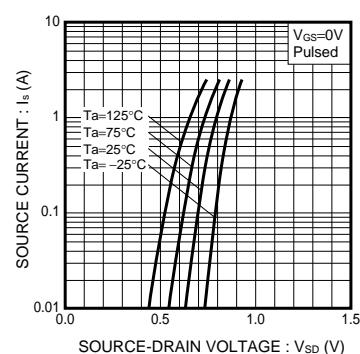


Fig.6 Source Current vs. Source-Drain Voltage

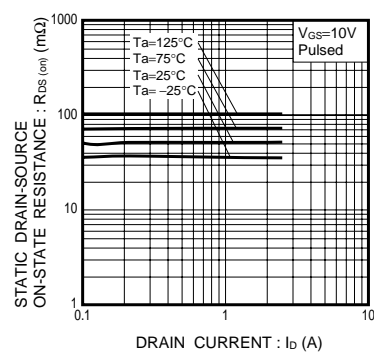


Fig.7 Static Drain-Source On-State Resistance vs. Drain Current (I)

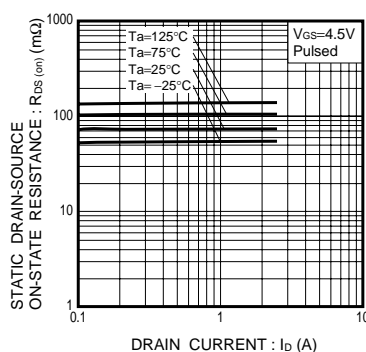


Fig.8 Static Drain-Source On-State Resistance vs. Drain Current (II)

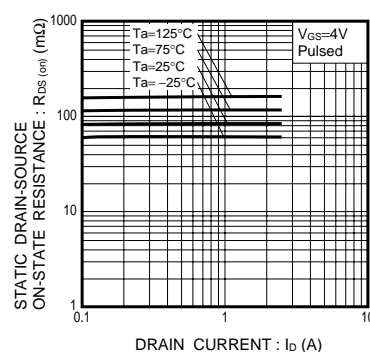


Fig.9 Static Drain-Source On-State Resistance vs. Drain Current (III)

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