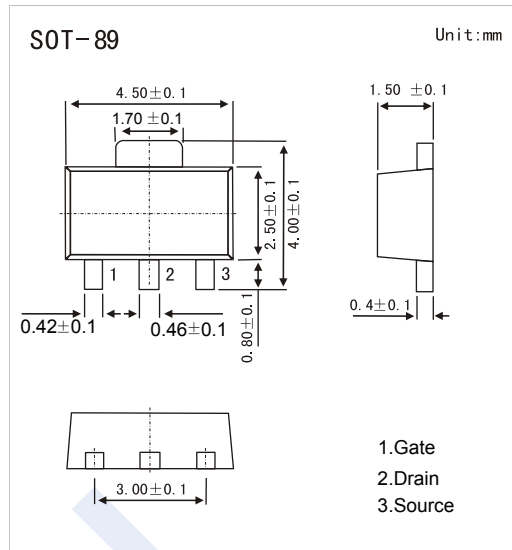
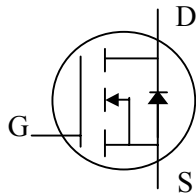


N-Channel MOSFET

A9452

■ Features

- $V_{DS}(V) = 20V$
- $I_D = 4A$ ($V_{GS} = \pm 12V$)
- $R_{DS(ON)} < 0.038\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 0.05\Omega$ ($V_{GS} = 4.5V$)
- $R_{DS(ON)} < 0.08\Omega$ ($V_{GS} = 2.5V$)
- Marking:A9452



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 12	
Continuous Drain Current	I_D	4	A
Power Dissipation	P_D	0.5	W
Thermal Resistance.Junction- to-Ambient	R_{thJA}	250	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to +150	

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DS}	$I_D=250\mu A, V_{GS}=0V$	20			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=20V, V_{GS}=0V$			1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 12V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=0.25mA$	0.6		1.5	V
Static Drain-Source On-Resistance ¹	$R_{DS(on)}$	$V_{GS}=10V, I_D=4A$			0.038	Ω
		$V_{GS}=4.5V, I_D=4A$			0.05	
		$V_{GS}=2.5V, I_D=3A$			0.08	
Forward Transconductance ¹	g_{FS}	$V_{DS}=5V, I_D=3A$	3			S
Input Capacitance	C_{iss}	$V_{GS}=0V, V_{DS}=20V, f=1MHz$			570	pF
Output Capacitance	C_{oss}			80		
Reverse Transfer Capacitance	C_{rss}			65		
Turn-On DelayTime ^{1,2}	$t_{d(on)}$	$V_{GS}=5V, V_{DS}=10V, R_D=10\Omega, I_D=1A, R_{GEN}=3.3\Omega$		8		ns
Turn-On Rise Time ²	t_r			9		
Turn-Off DelayTime ²	$t_{d(off)}$			13		
Turn-Off Fall Time ²	t_f			3		
Maximum Body-Diode Continuous Current	I_S				1	A
Diode Forward Voltage ¹	V_{SD}	$I_S=1A, V_{GS}=0V$			1.3	V

NOTES:1. Pulse Test ; Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

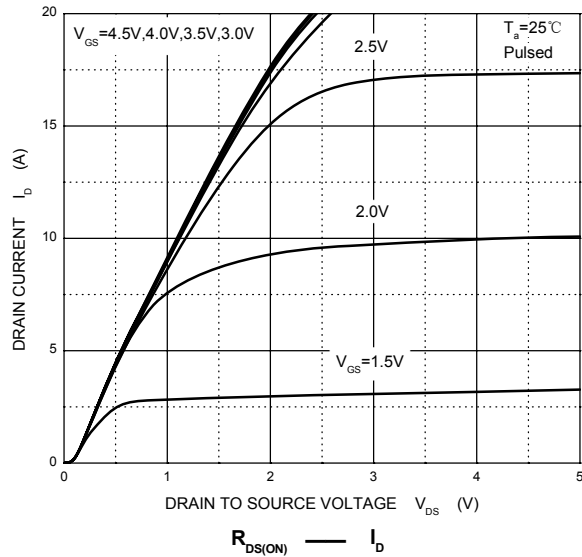
2. These parameters have no way to verify.

N-Channel MOSFET

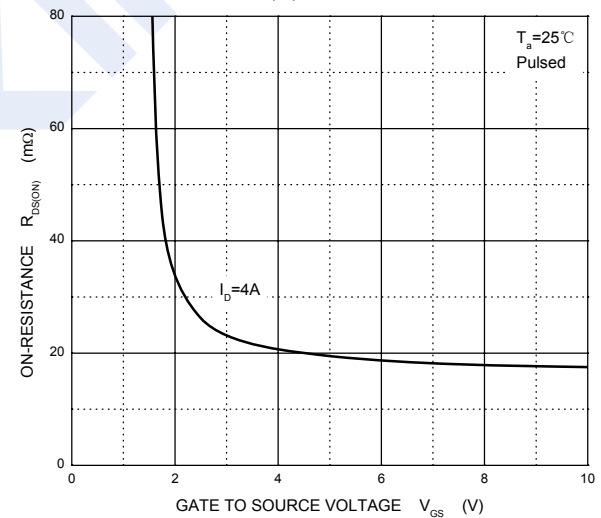
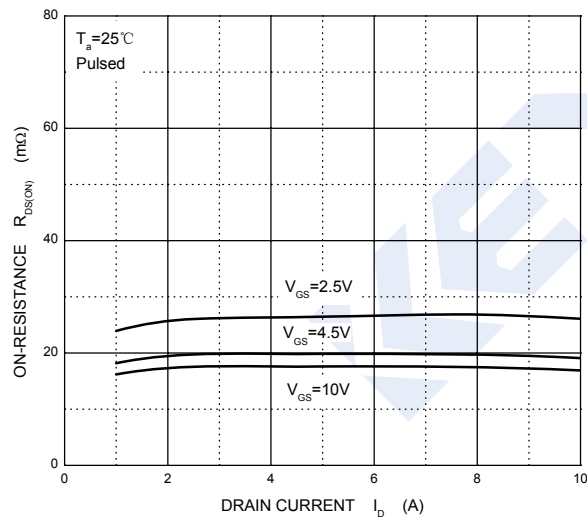
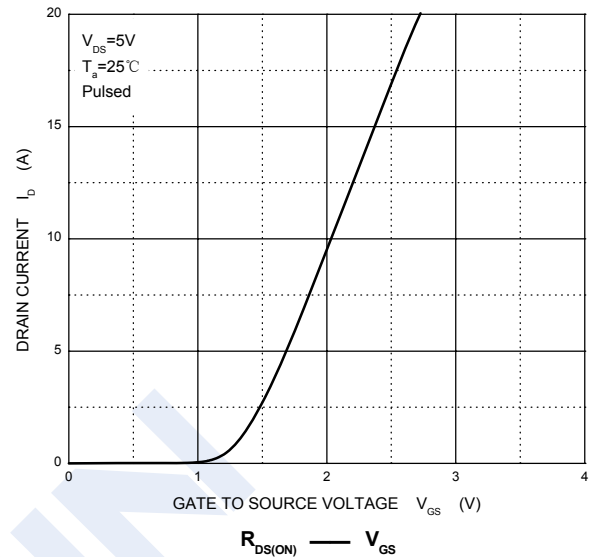
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■ Typical Characteristics

Output Characteristics



Transfer Characteristics



Threshold Voltage

