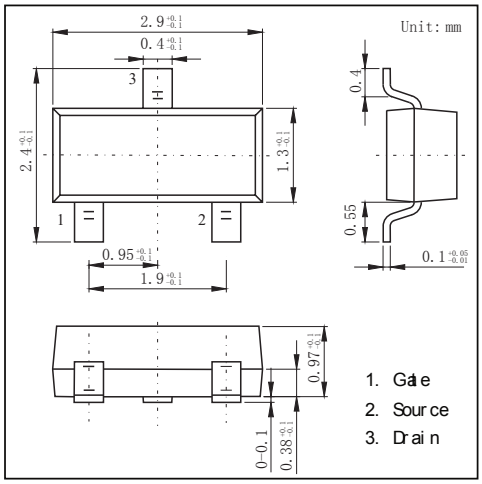
SOT-23 Plastic-Encapsulate MOSFETS

FEATURES

- VDS (V) = 50V
- ID = 200 mA (VGS = 10V)
- RDS(ON) < 3.5Ω (VGS = 10V)
- Fast Switching Speed
- Low On-Resistance
- N-Channel MOSFET

MECHANICAL DATA

- Case style:SOT-23molded plastic
- Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

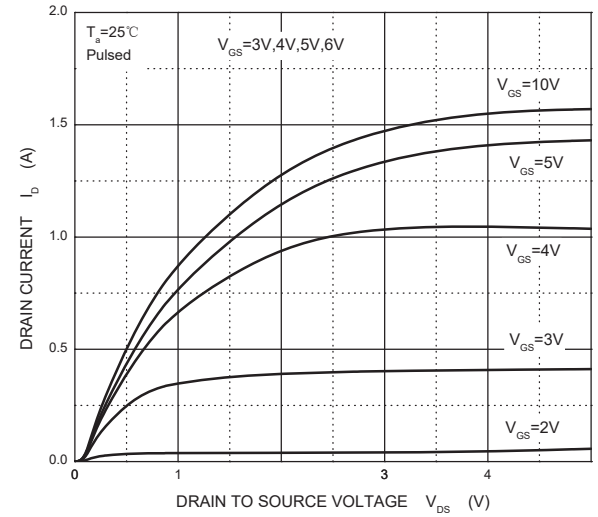
@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	50	V
Continuous Gate-Source Voltage	V_{GSS}	±20	
Continuous Drain Current	I_D	0.22	A
Pulsed Drain Current (tp=10us)	I_{DM}	0.88	A
Power Dissipation	$_DP$	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	℃/W
Operation Junction and Storage Temperature Range	T_j,T_{stg}	-55 ~+150	℃

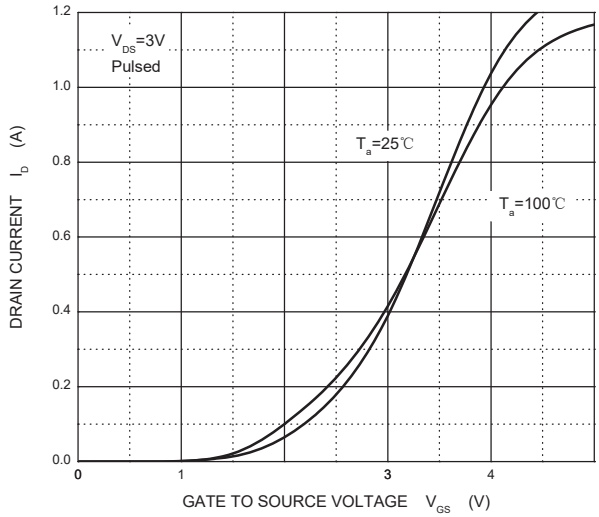
Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Off characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	50			V
Gate-body leakage	I_{GSS}	V_{DS}=10V, V_{GS} =±20V			±100	nA
Zero gate voltage drain current	I_{DSS}	V_{DS} =50V, V_{GS} =0V			0.5	μA
		V_{DS} =30V, V_{GS} =0V			100	nA
On characteristics						
Gate-threshold voltage (note 1)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D=1mA	0.80		1.50	V
Static drain-source on-resistance (note 1)	$R_{DS(on)}$	V_{GS}= 0V, I_D =0.22A		0.88	3.50	Ω
		V_{GS} =4.5V, I_D =0.22A		1.50	6	
Forward transconductance (note 1)	g_{FS}	V_{DS} =10V, I_D =0.22A	0.12			S
Dynamic characteristics (note 2)						
Input capacitance	C_{iss}	V_{DS} =25V,V_{GS} =0V, f=1MHz		27		pF
Output capacitance	C_{oss}			13		
Reverse transfer capacitance	C_{rss}			6		
Switching characteristics						
Turn-on delay time (note 1,2)	$t_{d(on)}$	V_{DD}=30V, V_{DS}=10V, I_D =0.29A,R_{GEN}=6Ω			5	ns
Rise time (note 1,2)	t_r				18	
Turn-off delay time (note 1,2)	$t_{d(off)}$				36	
Fall time (note 1,2)	t_f				14	
Drain-source body diode characteristics						
Body diode forward voltage (note 1)	V_{SD}	Is=0.44A, VGS = 0V			1.4	V

RATINGS AND CHARACTERISTIC CURVES

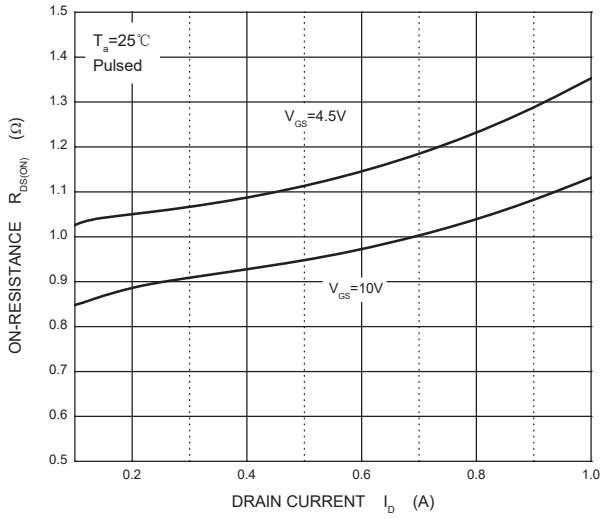
Output Characteristics



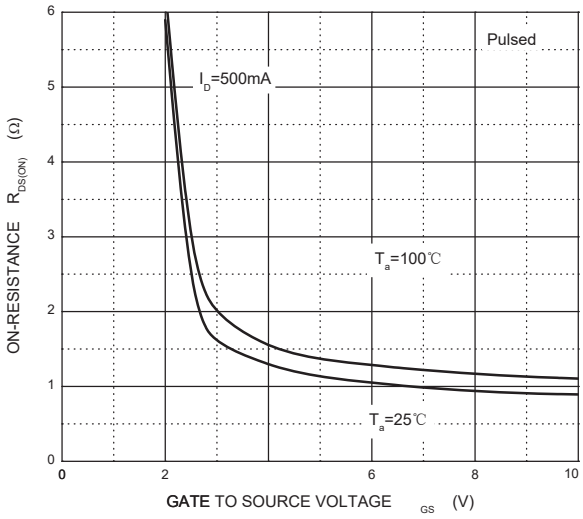
Transfer Characteristics



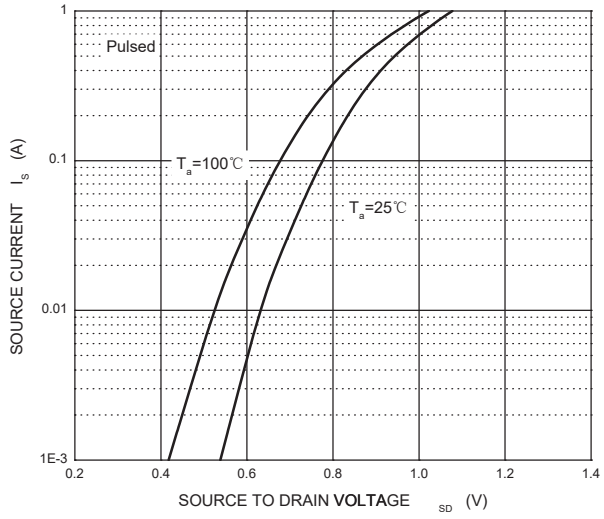
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}



Threshold Voltage