

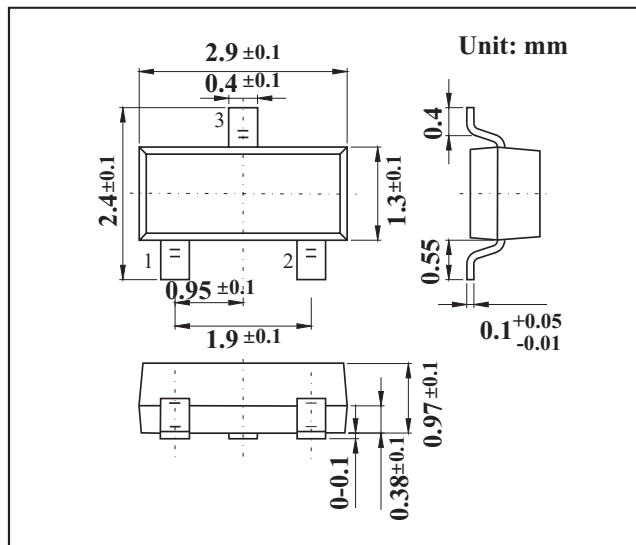
SOT-23 Plastic-Encapsulate MOSFETS

Features

- N-Channel Enhancement MOSFET
- Low On-Resistance: $R_{DS(ON)}$ Low Gate Threshold Voltage
- Low Input Capacitance Fast Switching Speed
- Low Input/Output Leakage
- ESD Protected 2KV HBM

MECHANICAL DATA

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



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage-Continuous	V_{GS}	± 20	
Drain Current -Continuous (Note:1)	I_D	300	mA
		800	
Power Dissipation (Note:1)	P_D	350	mW
Thermal Resistance Junction-to-Ambient	R_{thJA}	357	$^{\circ}C/W$
Junction Temperature	T_J	150	$^{\circ}C$
Junction and Storage Temperature Range	T_{stg}	- 55 to 150	

Notes: 1. Device mounted on FR-4 PCB.

Mosfet Electrical Characteristics $T_A=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage (Note.2)	V_{DSS}	$I_D=100\mu A, V_{GS}=0V$	60			V
Zero Gate Voltage Drain Current (Note.2)	I_{DSS}	$V_{DS}=60V, V_{GS}=0V$			1	μA
Gate-Body Leakage Current (Note.2)	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 10	μA
Gate Threshold Voltage (Note.2)	$V_{GS(th)}$	$V_{DS}=10V, I_D=1mA$	1	1.6	2.5	V
Static Drain-Source On-Resistance (Note.2)	$R_{DS(on)}$	$V_{GS}=10V, I_D=500mA$			2	Ω
		$V_{GS}=10V, I_D=50mA$			3	
Forward Transfer Admittance (Note.2)	$ Y_{fs} $	$V_{GS}=10V, I_D=200mA$	80			ms
Input Capacitance	C_{iss}	$V_{GS}=0V, V_{DS}=25V, f=1MHz$			50	pF
Output Capacitance	C_{oss}				25	
Reverse Transfer Capacitance	C_{rss}				5	
Total Gate Charge	Q_g	$V_{GS}=4.5V, V_{DS}=15V, I_D=200mA$			0.8	nC
Turn-On DelayTime	$t_{d(on)}$	$I_D=200mA, V_{DS}=30V, R_G=10\Omega, V_{GEN}=10V, R_L=150\Omega$			20	ns
Turn-Off DelayTime	$t_{d(off)}$				40	

Note: 2. Short duration test pulse used to minimize self-heating effect.

RATINGS AND CHARACTERISTIC CURVES

Typical Characteristics

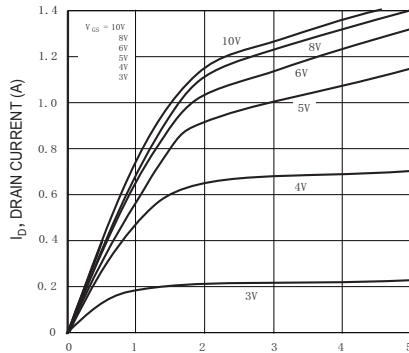


Fig. 1 Typical Output Characteristics

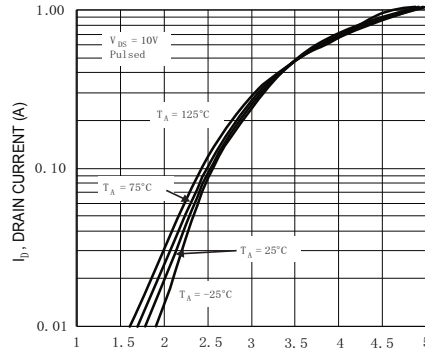


Fig. 2 Typical Transfer Characteristics

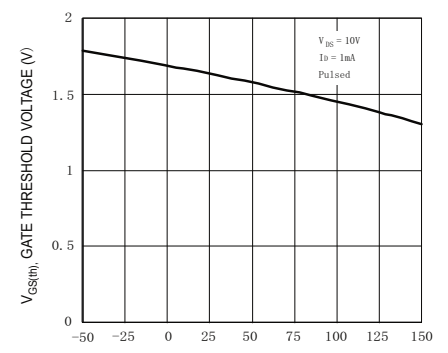


Fig. 3 Gate Threshold Voltage vs. Channel Temperature

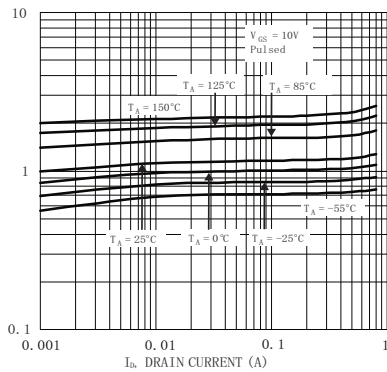


Fig. 4 Static Drain-Source On-Resistance vs. Drain Current

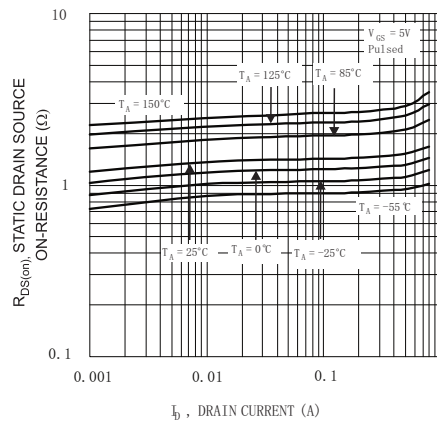


Fig. 5 Static Drain-Source On-Resistance vs. Drain Current

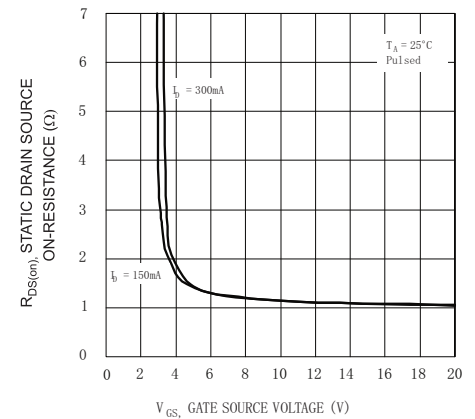


Fig. 6 Static Drain-Source On-Resistance vs. Gate-Source Voltage

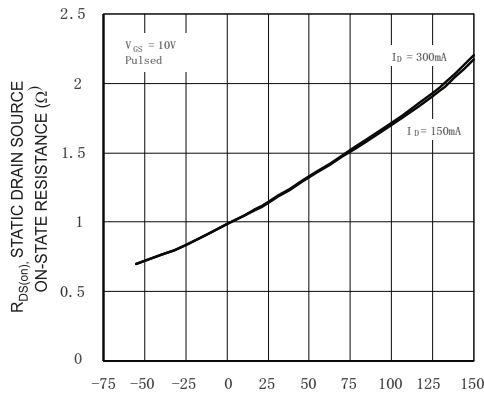


Fig. 7 Static Drain-Source On-State Resistance vs. Channel Temperature

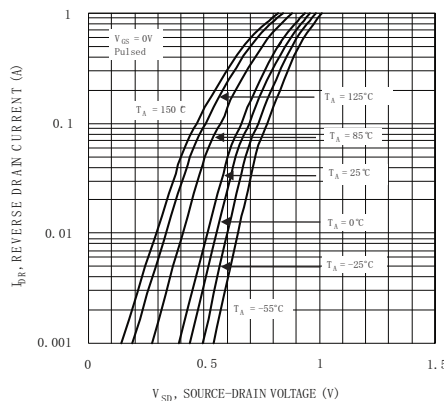


Fig. 8 Reverse Drain Current vs. Source-Drain Voltage

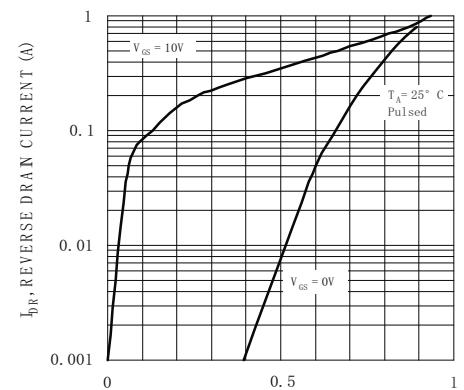


Fig. 9 Reverse Drain Current vs. Source-Drain Voltage

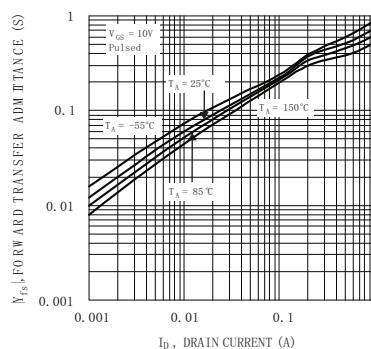


Fig. 10 Forward Transfer Admittance