

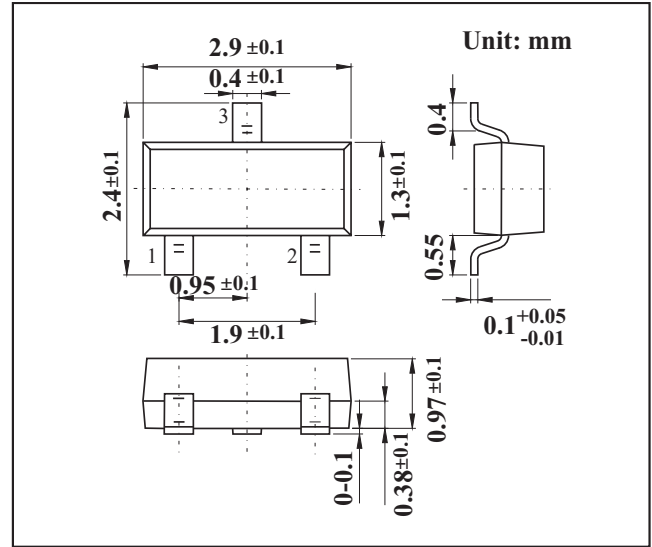
SOT-23 Plastic-Encapsulate MOSFETS

Features

- $I_D = -0.13\text{ A}$
- $V_{DS} (V) = -50V$
- $R_{DS(ON)} \leq 10\Omega$ ($V_{GS} = -5V$)
- P-Channel Enhancement Mode MOSFET

MECHANICAL DATA

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



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-50	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current *	I_D	-130	mA
		-520	
Total Power Dissipation *	P_d	300	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	°C

* Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch;

MOSFET ELECTRICAL CHARACTERISTICS $T_a=25\text{ }^{\circ}\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditons	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS} = 0V, I_D = -250\mu A$	-50			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -50V, V_{GS} = 0V, T_J = 25^{\circ}\text{C}$			-15	μA
		$V_{DS} = -50V, V_{GS} = 0V, T_J = 125^{\circ}\text{C}$			-60	μA
Gate-Body Leakage	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 10	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -1mA$	-0.8		-2.0	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS} = -5V, I_D = -100mA$			10	Ω
Forward Transconductance	g_{FS}	$V_{DS} = -25V, I_D = -0.1A$	0.05			S
Input Capacitance	C_{iss}	$V_{DS} = -25V, V_{GS} = 0V, f = 1.0MHz$			45	pF
Output Capacitance	C_{oss}				25	pF
Reverse Transfer Capacitance	C_{rss}				12	pF
Turn-On Delay Time	$t_{D(ON)}$	$V_{DD} = -30V, I_D = -0.27A, R_{GEN} = 50\Omega, V_{GS} = -10V$		10		ns
Turn-Off Delay Time	$t_{D(OFF)}$			18		ns

RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Output Characteristics

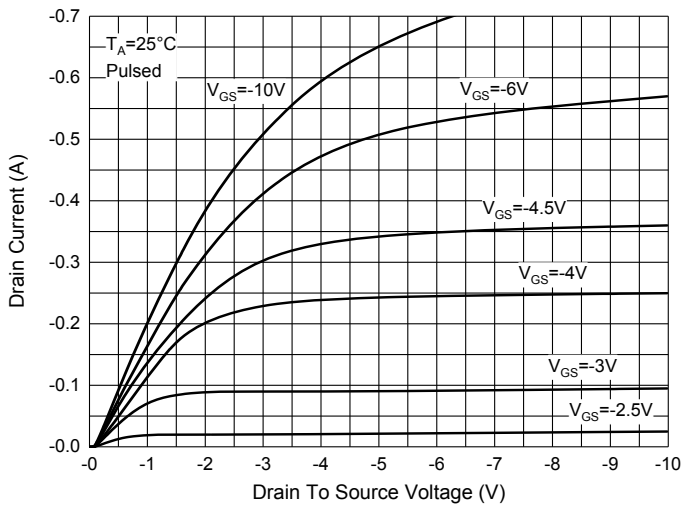


Fig. 2 - Transfer Characteristics

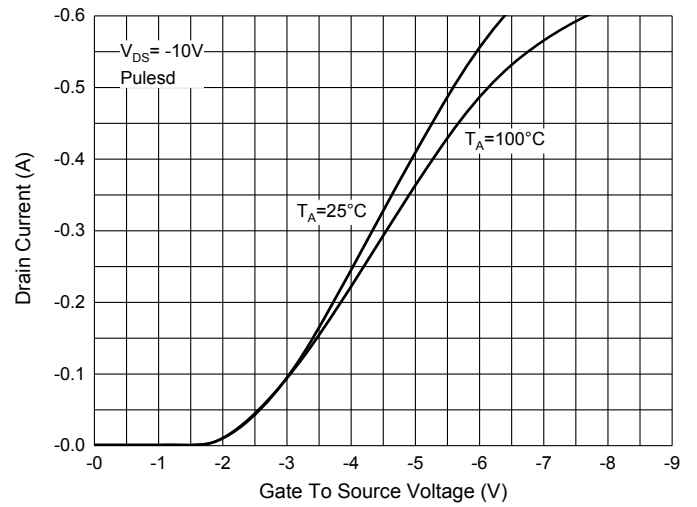


Fig. 3 - $R_{DS(ON)} - I_D$

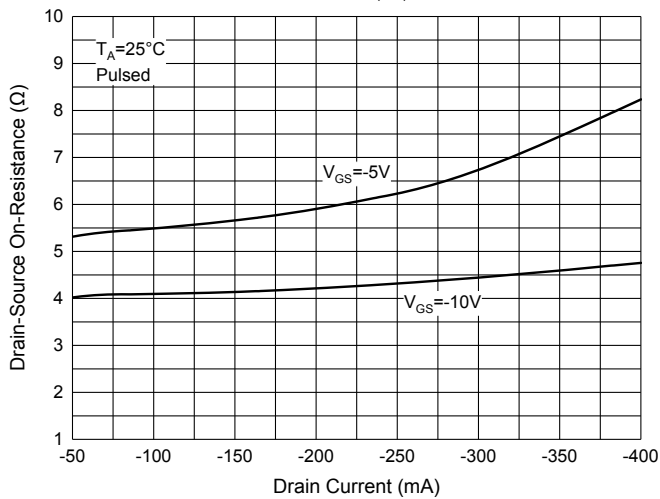


Fig. 4 - $R_{DS(ON)} - V_{GS}$

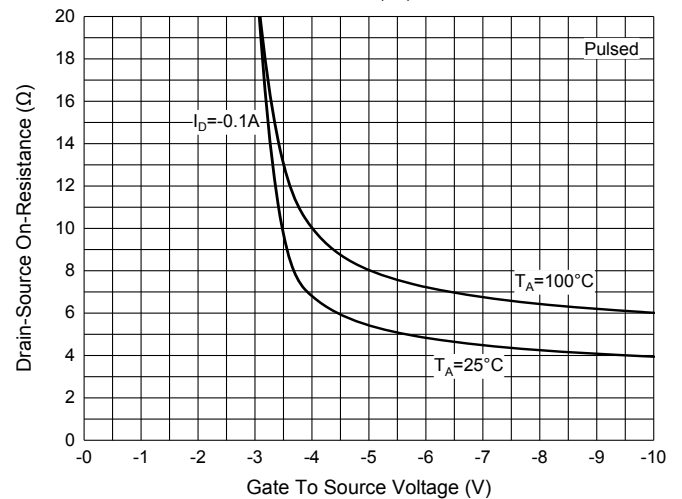


Fig. 5 - $I_S - V_{SD}$

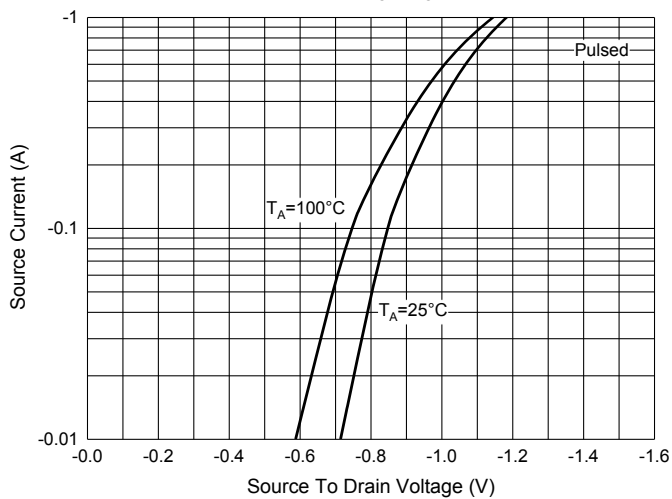


Fig. 6 - Threshold Voltage

