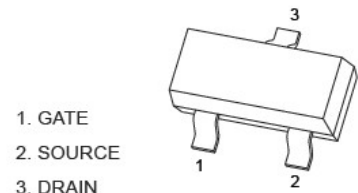


Features

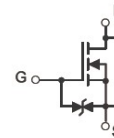
- ◆ High density cell design for low $R_{DS(ON)}$.
- ◆ Voltage controlled small signal switch.
- ◆ Rugged and reliable.
- ◆ High saturation current capability.
- ◆ ESD protected
- ◆ Load Switch for Portable Devices.
- ◆ DC/DC Converter.

Mechanical Data

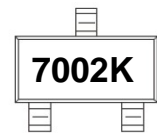
- ◆ SOT-23 Small Outline Plastic Package.
- ◆ Epoxy UL: 94V-0.
- ◆ Mounting Position: Any.

SOT-23


Equivalent circuit



MARKING



Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	340	mA
Power Dissipation	P_D	350	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-50-+150	°C
Thermal Resistance From Junction to Ambient	$R_{\theta JA}$	357	°C/W

Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified).

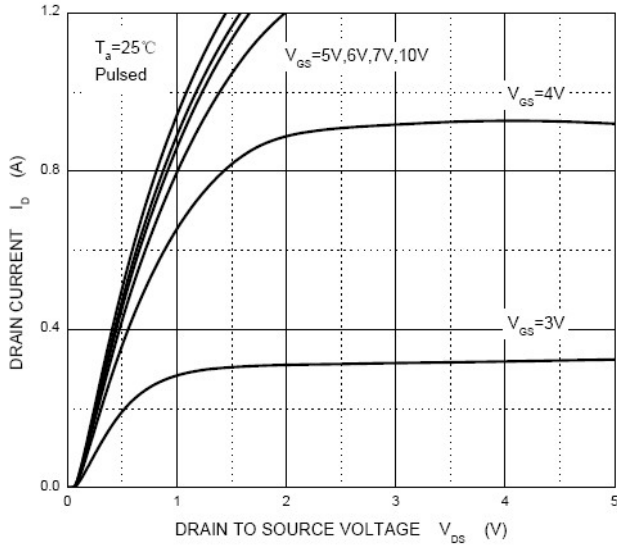
Parameter	Symbols	Test Condition	Limits			Unit
			Min	Typ	Max	
Drain-Source Breakdown Voltage	V_{DS}	$V_{GS}=0V, I_D=250\mu A$	60			V
Gate-Threshold voltage*	$V_{th(GS)}$	$V_{DS}=V_{GS}, I_D=1mA$	1	1.3	2.5	V
Gate-body Leakage	I_{GSS1}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 10	μA
	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 10V$			± 200	nA
	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 5V$			± 100	nA
Zero Gate Voltage Drain current	I_{DSS}	$V_{DS}=48V, V_{GS}=0V$			1	μA
Drain-Source On-Resistance*	$R_{DS(ON)}$	$V_{GS}=10V, I_D=500mA$		0.9	5	Ω
		$V_{GS}=4.5V, I_C=200mA$		1.1	5.3	
Diode Forward voltage	V_{SD}	$I_S=300mA, V_{GS}=0V$			1.50	V
Input capacitance**	C_{iss}	$V_{DS}=10V, V_{GS}=0V, f=1MHz$			40	pF
Output capacitance**	C_{oss}				30	
Reverse Transfer capacitance**	C_{rss}				10	
SWITCHING TIME						
Turn-on Time**	$t_{d(on)}$	$V_{DD}=50V, R_L=250\Omega, V_{GS}=10V,$			10	ns
Turn-off Time**	$t_{d(off)}$	$R_{GS}=50\Omega, R_G=50\Omega$			15	
Reverse recovery Time	t_{rr}	$V_{GS}=0V, I_S=300mA, V_R=25V,$ $Dis/dt=-100a/\mu S$		30		ns
GATE-SOURCE ZENER DIODE						
Gate-Source Breakdown Voltage	BV_{GSO}	$I_{GS}=\pm 1mA$ (Open Drain)	± 21.5		± 30	V

Notes: * Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

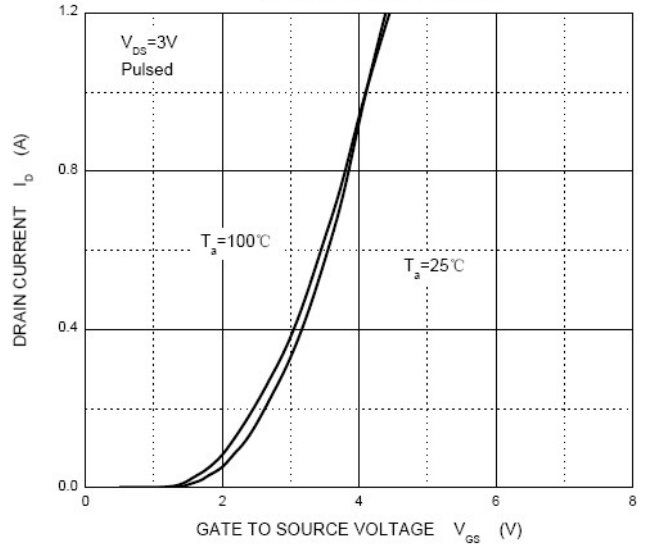
** These parameters have on way to verify.

Typical characteristics

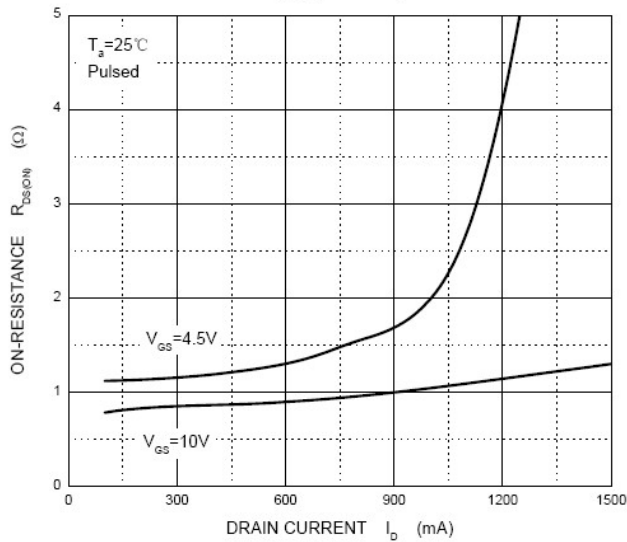
Output Characteristics



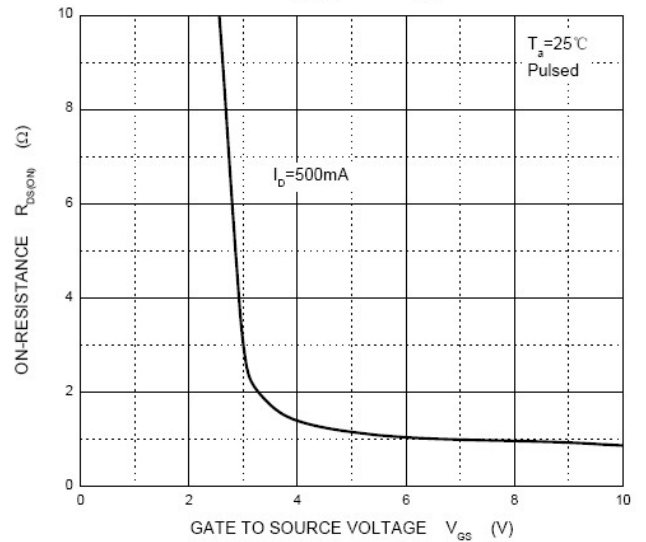
Transfer Characteristics



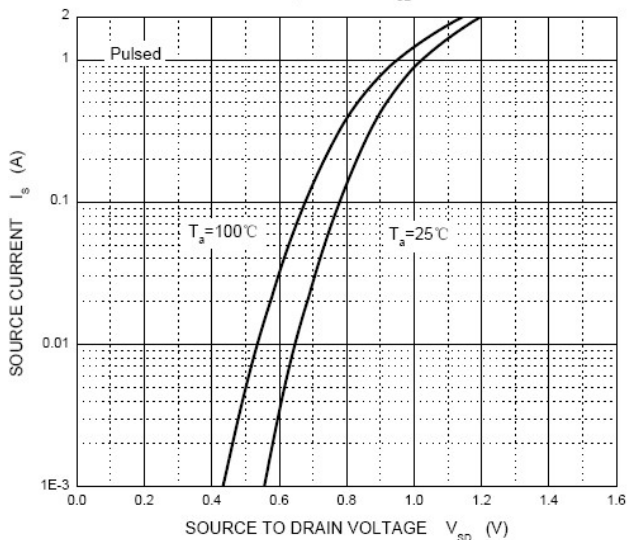
$R_{DS(ON)}$ — I_D



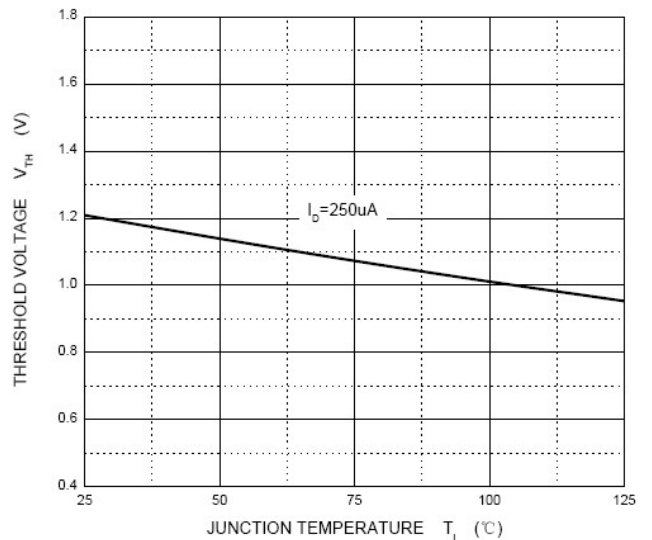
$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}



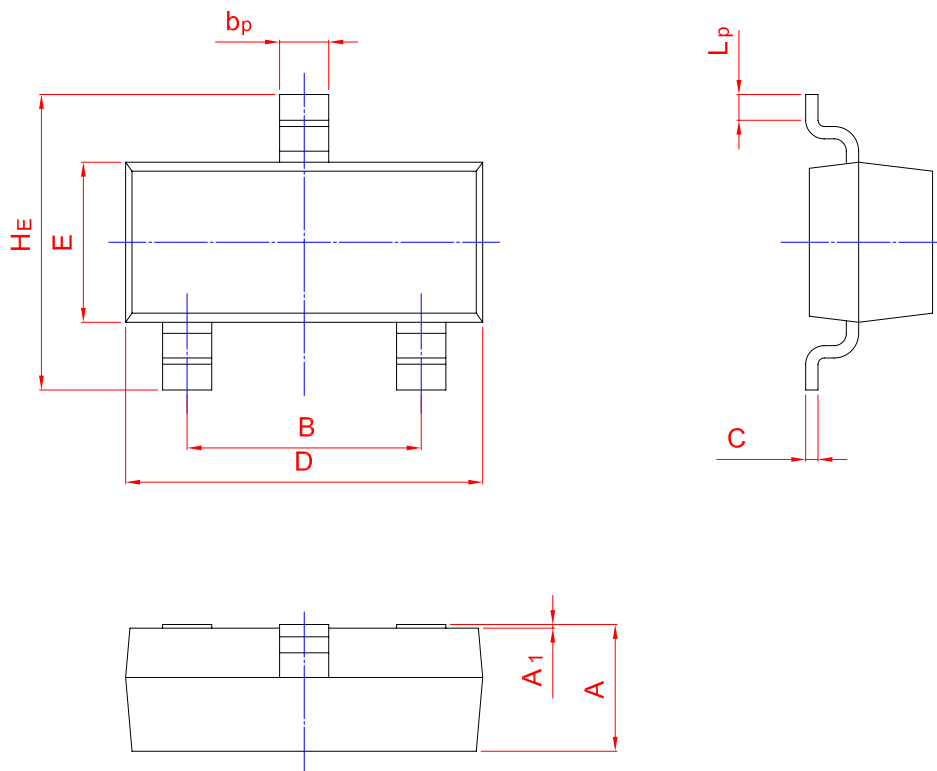
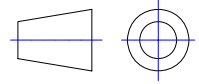
Threshold Voltage



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b _p	C	D	E	H _E	A ₁	L _p
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20

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