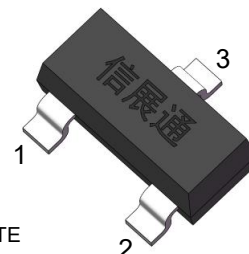




Product Summary

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
60V	5.0Ω@10V	340mA
	5.3Ω@4.5V	

SOT-23



1. GATE
2. SOURCE
3. DRAIN

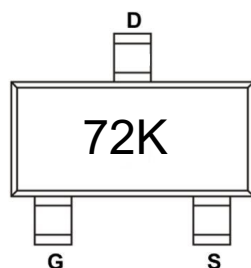
Feature

- High density cell design for ultra low on-resistance
- Voltage controlled small signal switch
- Rugged and reliable
- High saturation current capability
- ESD protected

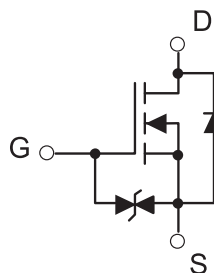
Application

- Load Switch for Portable Devices
- DC/DC Converter

Marking



Circuit diagram



**Absolute maximum ratings (Ta=25°C unless otherwise noted)**

Parameter	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
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°C

Electrical characteristics (Ta=25 °C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	60			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 48V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 10	μA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 1mA$	1.0		2.5	V
Drain-source on-resistance ¹⁾	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 500A$		0.9	5	Ω
		$V_{GS} = 4.5V, I_D = 200A$		1.1	5.3	
Dynamic characteristics ²⁾						
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	
Turn-on delay time	$t_{d(on)}$	$V_{DD} = 50V, V_{GS} = 10V, R_L = 250\Omega, R_{GEN} = 50\Omega$			10	nS
Turn-off delay time	$t_{d(off)}$				15	
Source-Drain Diode characteristics						
Diode Forward voltage	V_{SD}	$V_{GS} = 0V, I_S = 0.3A$			1.5	V

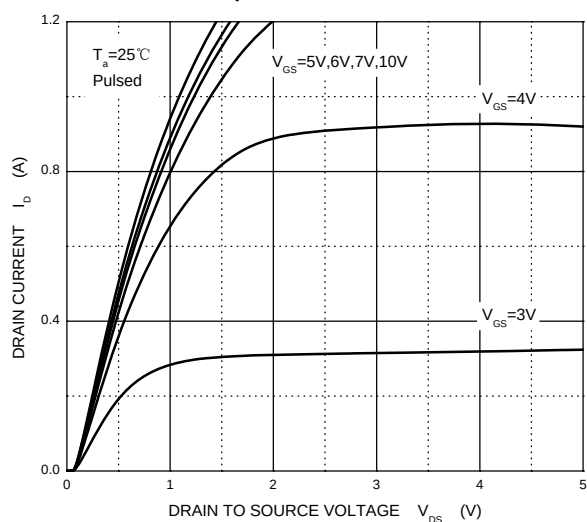
Notes: 1) Pulse Test: Pulse Width < 300 μs , Duty Cycle $\leq 2\%$.

2) Guaranteed by design, not subject to production testing.

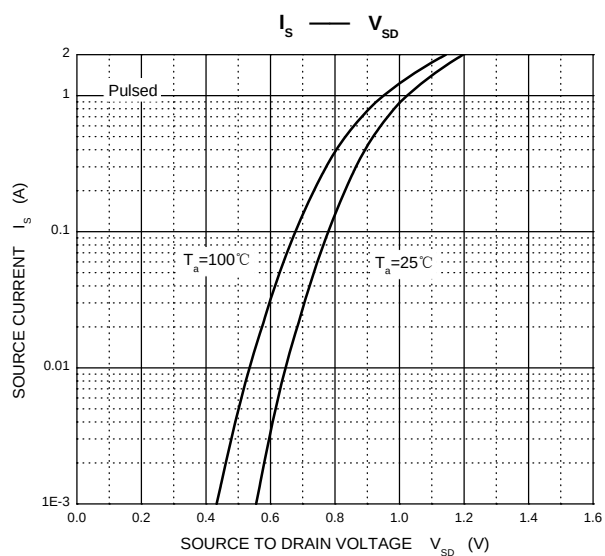
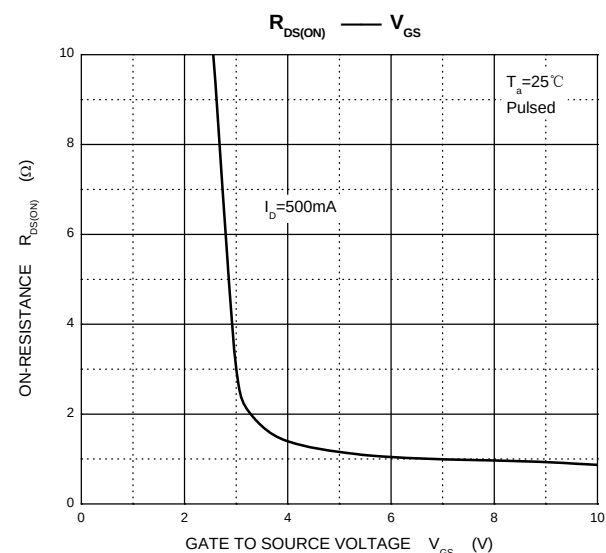
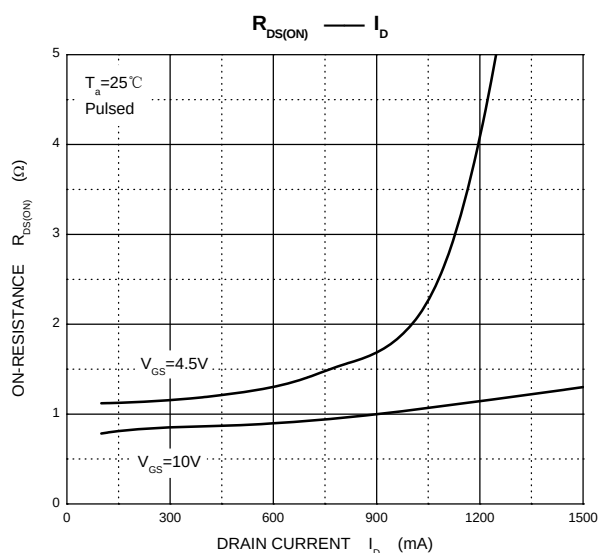
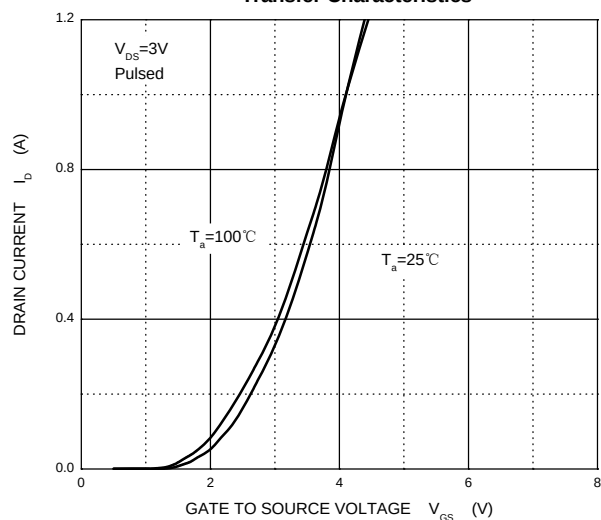


Typical Characteristics

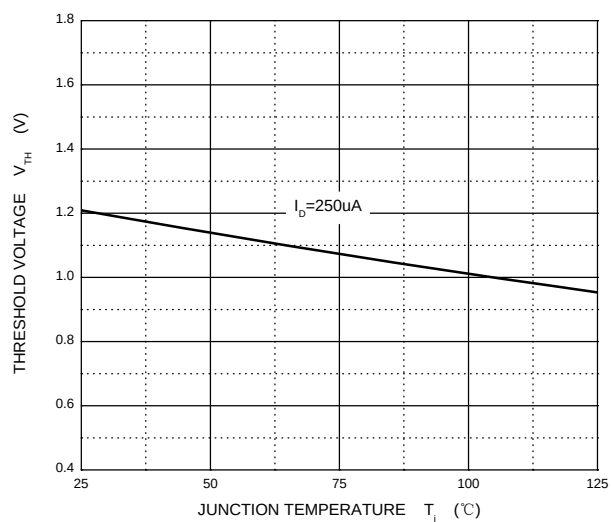
Output Characteristics



Transfer Characteristics

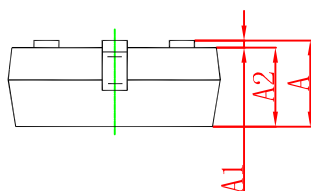
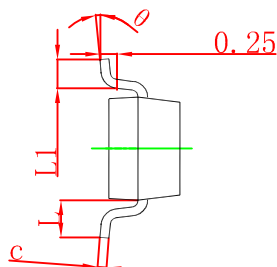
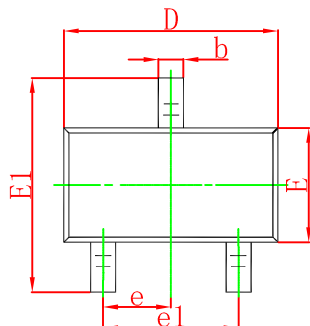


Threshold Voltage



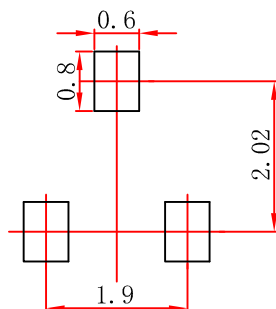


SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.