

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
60V	1.1 Ω @10V	340mA
	1.4 Ω @4.5V	

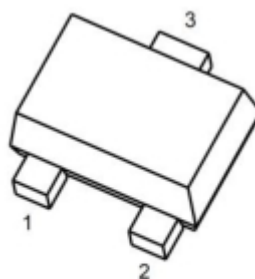
Feature

- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability
- Capable doing Cu wire bonding
- ESD protected Gate HBM 2KV

Application

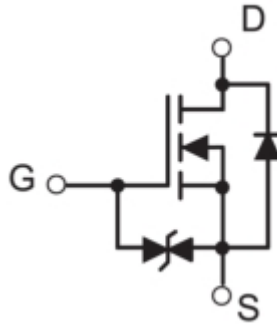
- Power Management in Note book
- Portable Equipment
- Battery Powered System

Package

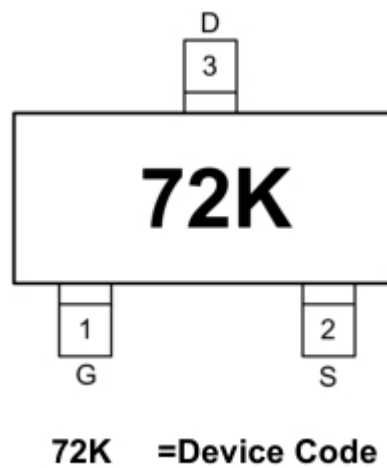


SOT-723

Circuit diagram



Marking



Absolute maximum ratings

($T_a=25^{\circ}\text{C}$ unless otherwise noted)

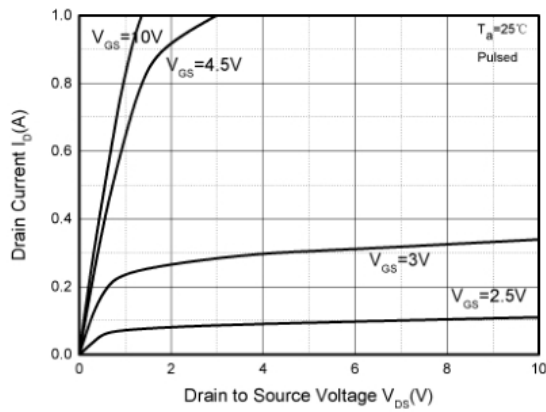
Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	340	mA
Power Dissipation	P_D	0.15	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

Electrical characteristics

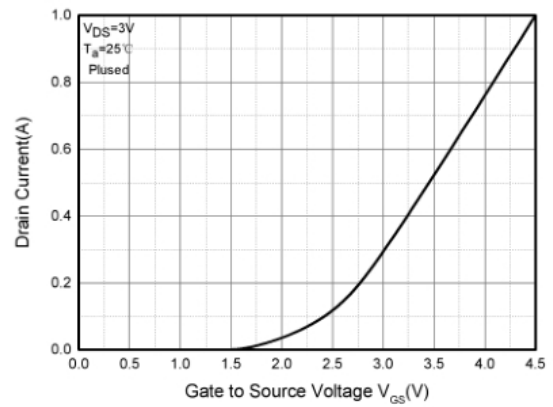
($T_A=25^{\circ}\text{C}$, unless otherwise noted)

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
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1	1.5	2.5	V
Gate-body leakage current	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			± 10	μA
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 60V, V_{GS} = 0V$			1	μA
Drain-source on-resistance	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 200mA$		1.1	3	Ω
		$V_{GS} = 4.5V, I_D = 200mA$		1.4	4	
Dynamic characteristics						
Total Gate Charge	Q_g	$V_{DS} = 10V, V_{GS} = 4.5V, I_D = 250mA$		0.3		nC
Gate-Source Charge	Q_{gs}			0.2		
Gate-Drain Charge	Q_{gd}			0.08		
Input Capacitance	C_{iss}	$V_{DS} = 25V, V_{GS} = 0V, f = 1MHz$		30	50	pF
Output Capacitance	C_{oss}			4.2	25	
Reverse Transfer Capacitance	C_{rss}			2.9	5	
Switching Characteristics						
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = 30V, I_D = 200mA, V_{GEN} = 10V, R_G = 25\Omega$		3.9		ns
Turn-On Rise Time	t_R			3.4		
Turn-Off Delay Time	$t_{d(off)}$			15.7		
Turn-Off Fall Time	t_F			9.9		
Source-Drain Diode Characteristics						
Diode Forward voltage	V_{SD}	$V_{GS} = 0V, I_S = 200mA$		0.82	1.3	V

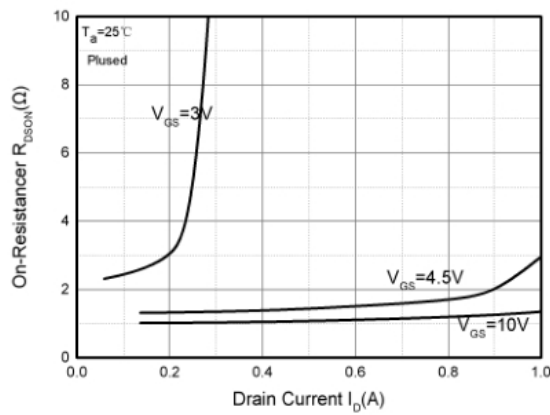
Typical Characteristics



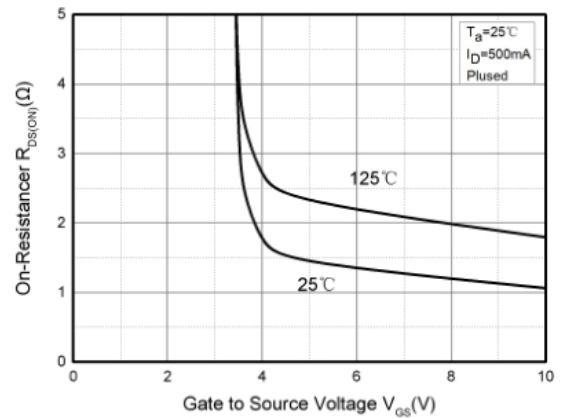
Output Characteristics



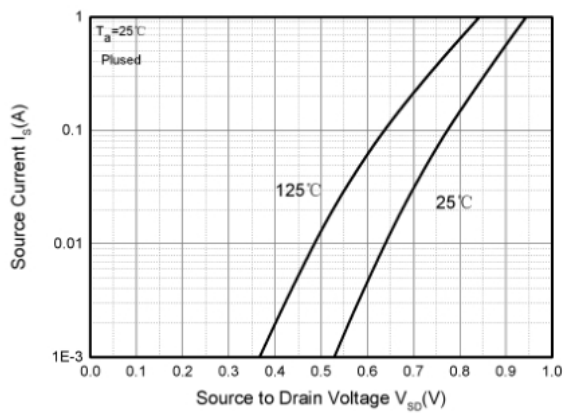
Transfer Characteristics



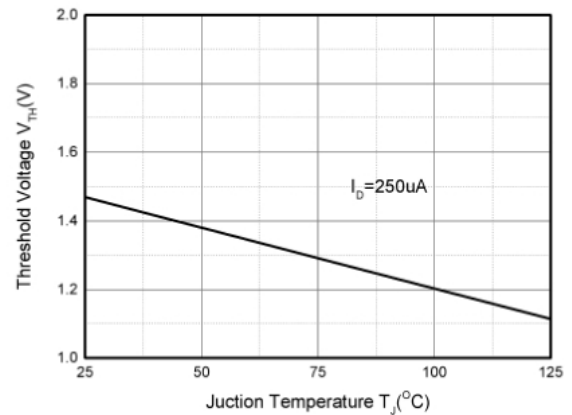
On-Resistance vs. Drain current



On-Resistance vs. Gate to Source Voltage

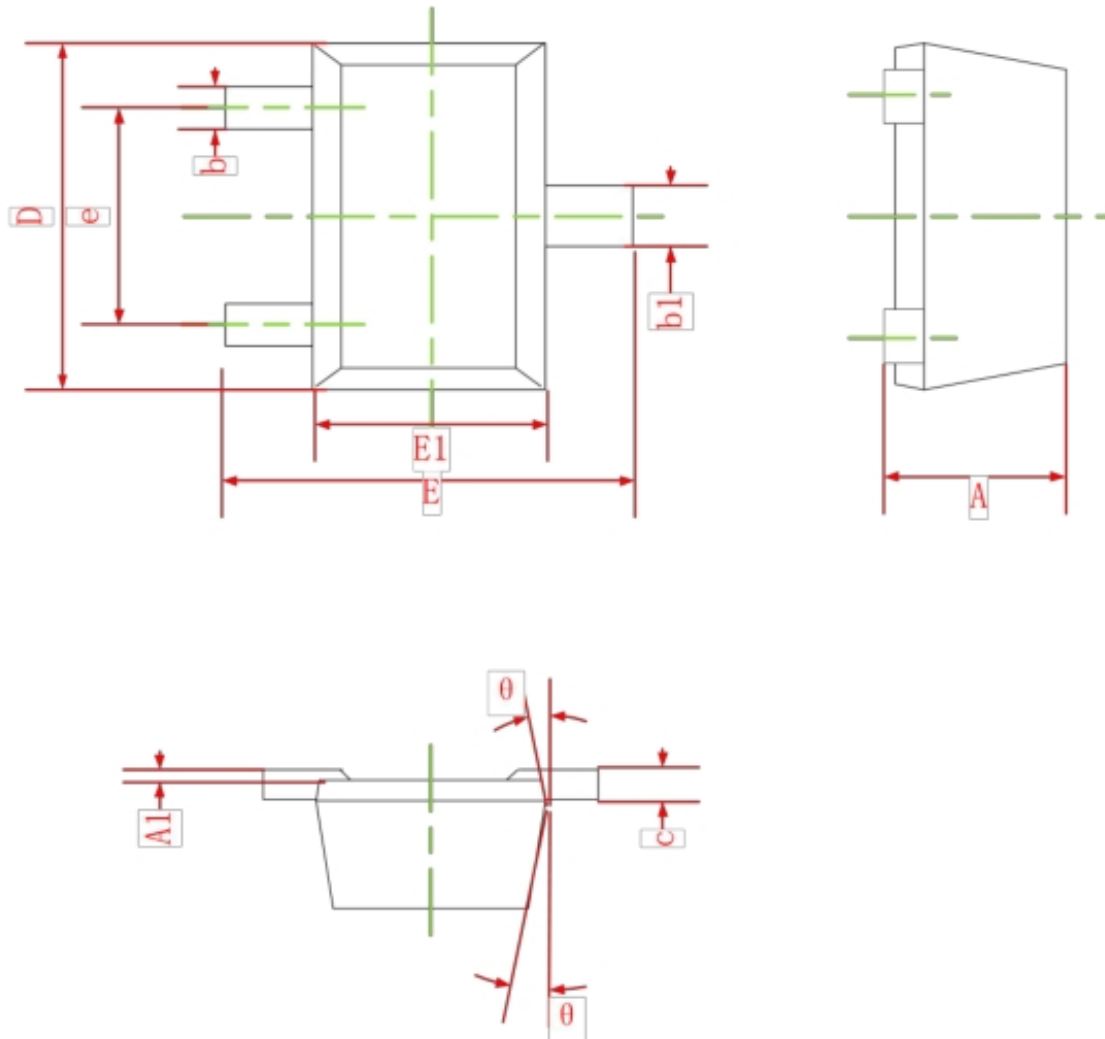


Source Current vs. Source to Drain Voltage



Threshold voltage vs. Junction temperature

SOT-723 Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.430	0.500
A1	0.000	0.050
b	0.170	0.270
b1	0.270	0.370
c	0.080	0.150
D	1.150	1.250
E	1.150	1.250
E1	0.750	0.850
e	0.800TYP.	
θ	7° REF.	