

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-20V	0.65Ω@-4.5V	-0.66A
	0.90Ω@-2.5V	

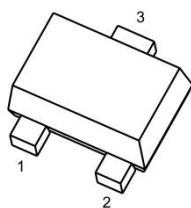
Feature

- Surface Mount Package
- P-Channel Switch with Low $R_{DS(on)}$
- Operated at Low Logic Level Gate Drive
- ESD Protected: HBM 2KV

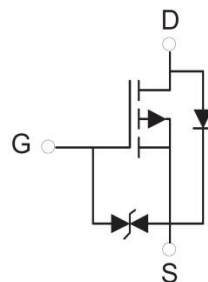
Application

- Load/Power Switching
- Interfacing, Logic Switching
- Battery Management for Ultra Small Portable Electronics

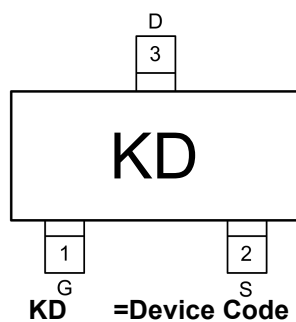
Package


SOT-723

Circuit diagram



Marking



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	± 10	V
Continuous Drain Current	I_D	-0.66	A
Pulsed Drain Current	I_{DM}	-2.6	A
Power Dissipation	P_D	0.15	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

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

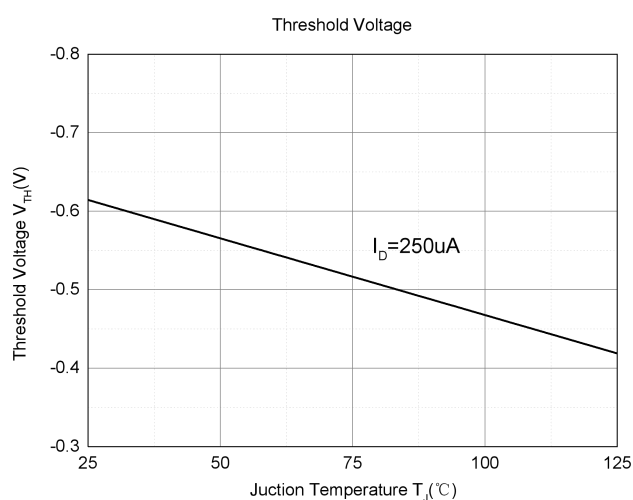
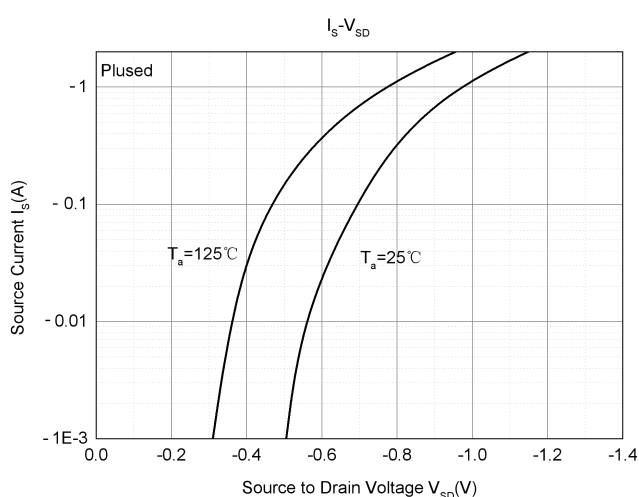
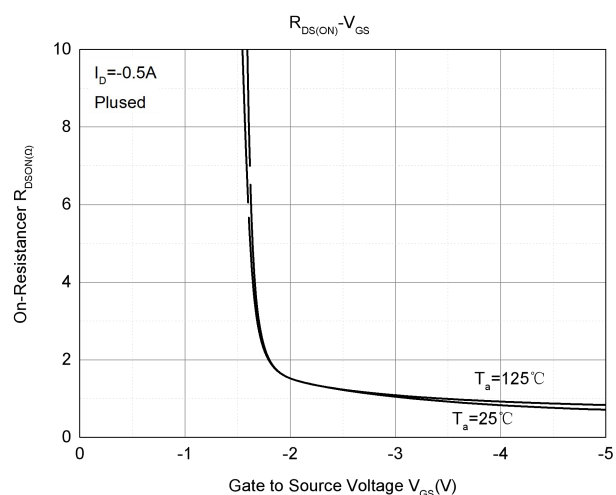
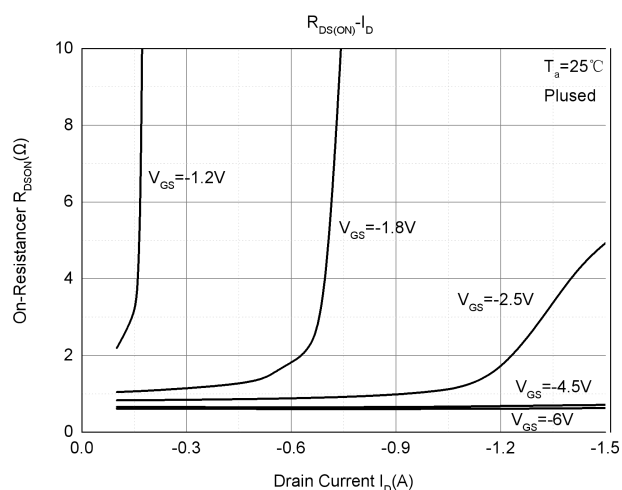
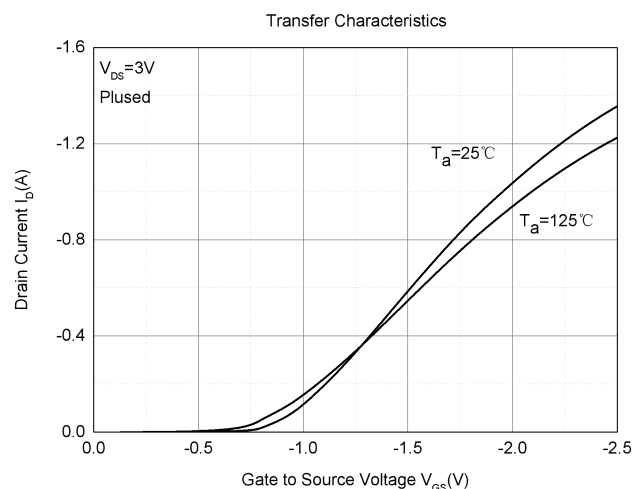
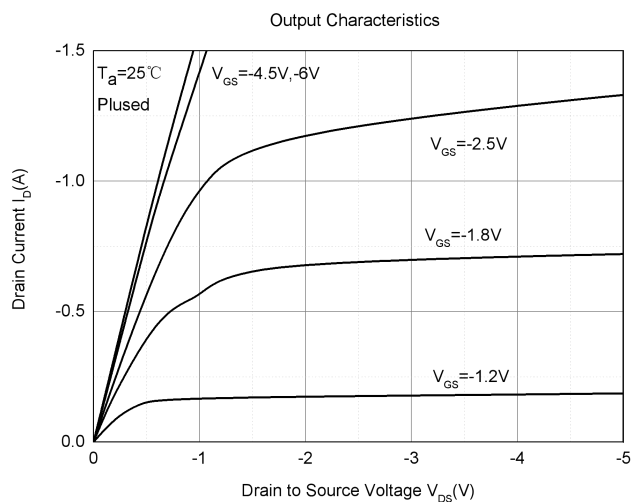
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-20			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -16V, V _{GS} = 0V			-1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±10V, V _{DS} = 0V			±10	μA
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-0.35	-0.65	-1	V
Drain-source on-resistance ¹⁾	R _{DS(on)}	V _{GS} = -4.5V, I _D = -0.5A		0.65	0.8	Ω
		V _{GS} = -2.5V, I _D = -0.2A		0.90	1.1	
		V _{GS} = -1.8V, I _D = -0.1A		1.2		
Dynamic characteristics ²⁾						
Input Capacitance	C _{iss}	V _{DS} = -16V, V _{GS} = 0V, f = 1MHz		113		pF
Output Capacitance	C _{oss}			15		
Reverse Transfer Capacitance	C _{rss}			9		
Turn-on delay time	t _{d(on)}	V _{DS} = -10V, I _D = -200mA, V _{GS} = -4.5V, R _G = 10Ω		9		ns
Turn-on rise time	t _r			5.7		
Turn-off delay time	t _{d(off)}			32.6		
Turn-off fall time	t _f			20.3		
Source-Drain Diode characteristics						
Diode Forward voltage	V _{SD}	V _{GS} = 0V, I _S = -0.5 A			-1.2	V

Notes:

- 1) Pulse Test: Pulse Width < 300 μs , Duty Cycle $\leq 2\%$.
- 2) Guaranteed by design, not subject to production testing.

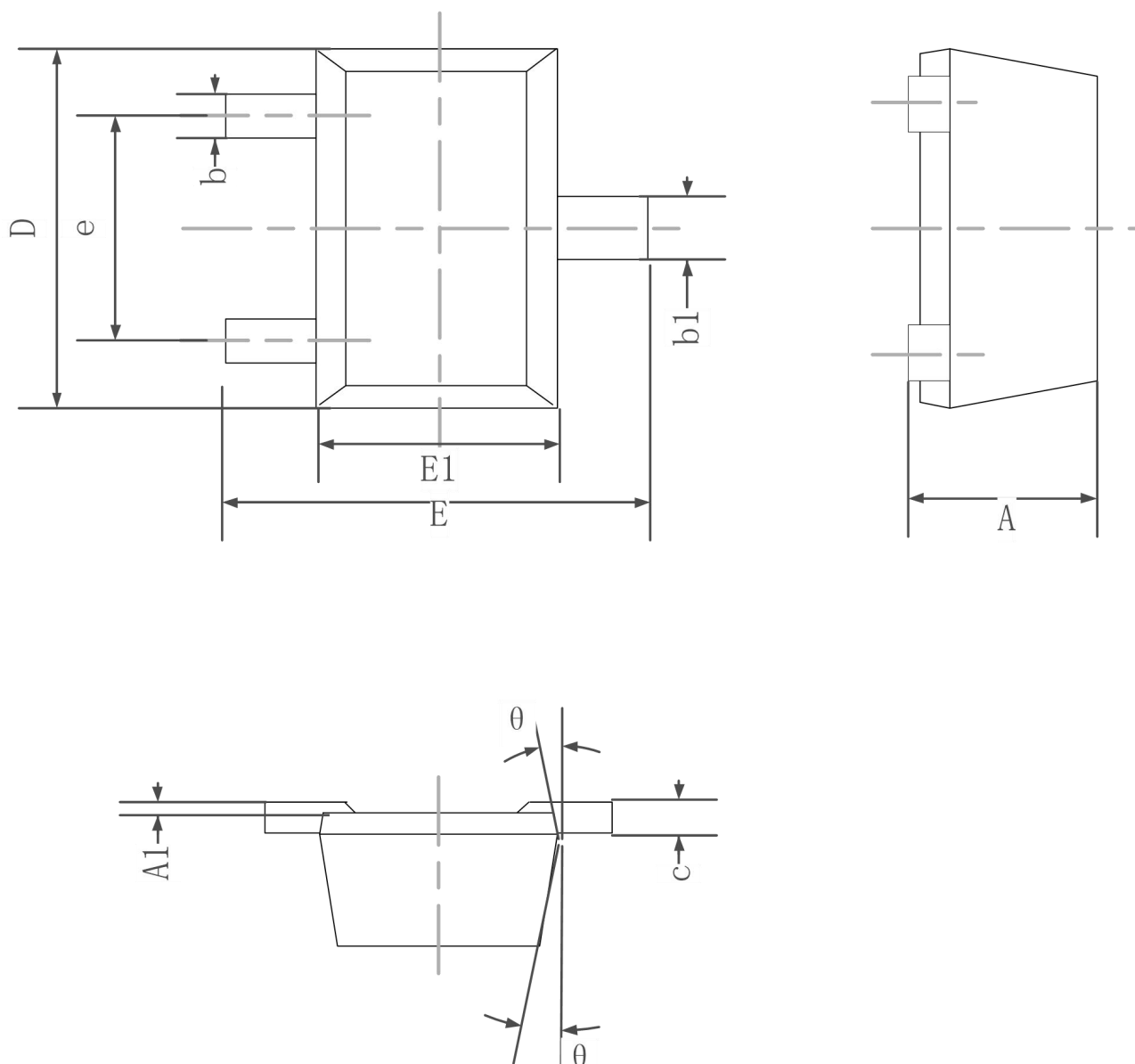


Typical Characteristics





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.	