

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
100V	4.2Ω@10V	170mA
	4.3Ω@4.5V	

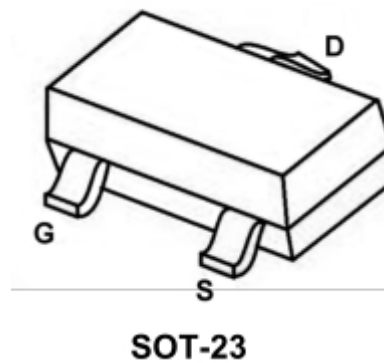
Feature

- Advanced trench cell design
- High speed switch
- ESD Protected, HBM ≥ 2 KV

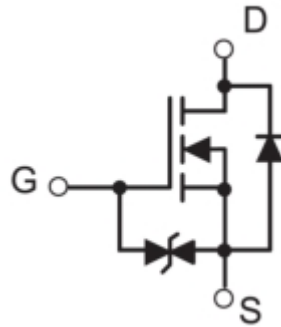
Application

- Portable appliances
- Load switch appliances

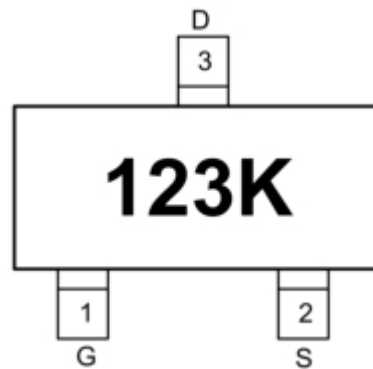
Package



Circuit diagram



Marking



Absolute maximum ratings

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

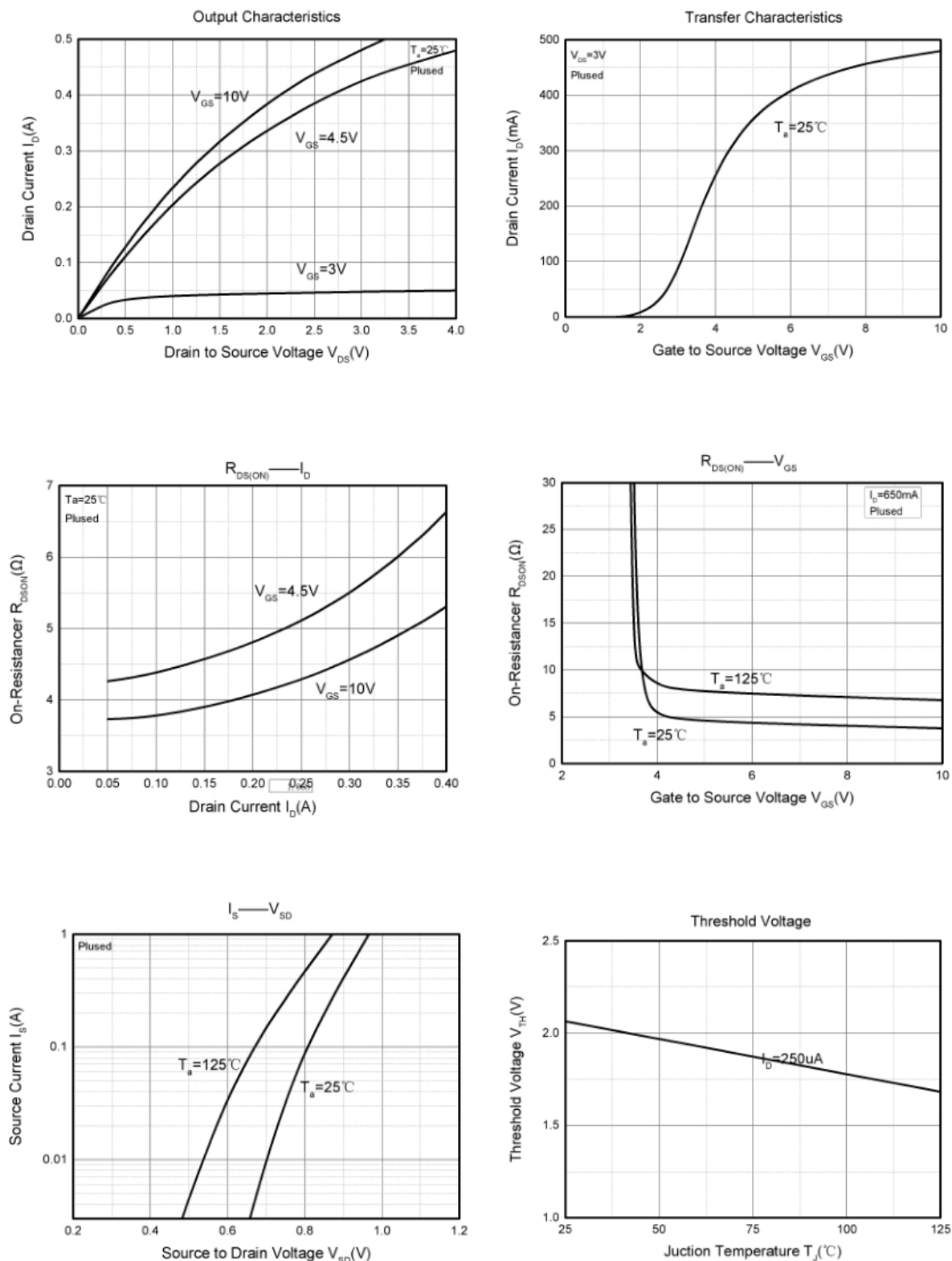
Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	170	mA
Power Dissipation	P_D	0.35	W
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

Electrical characteristics

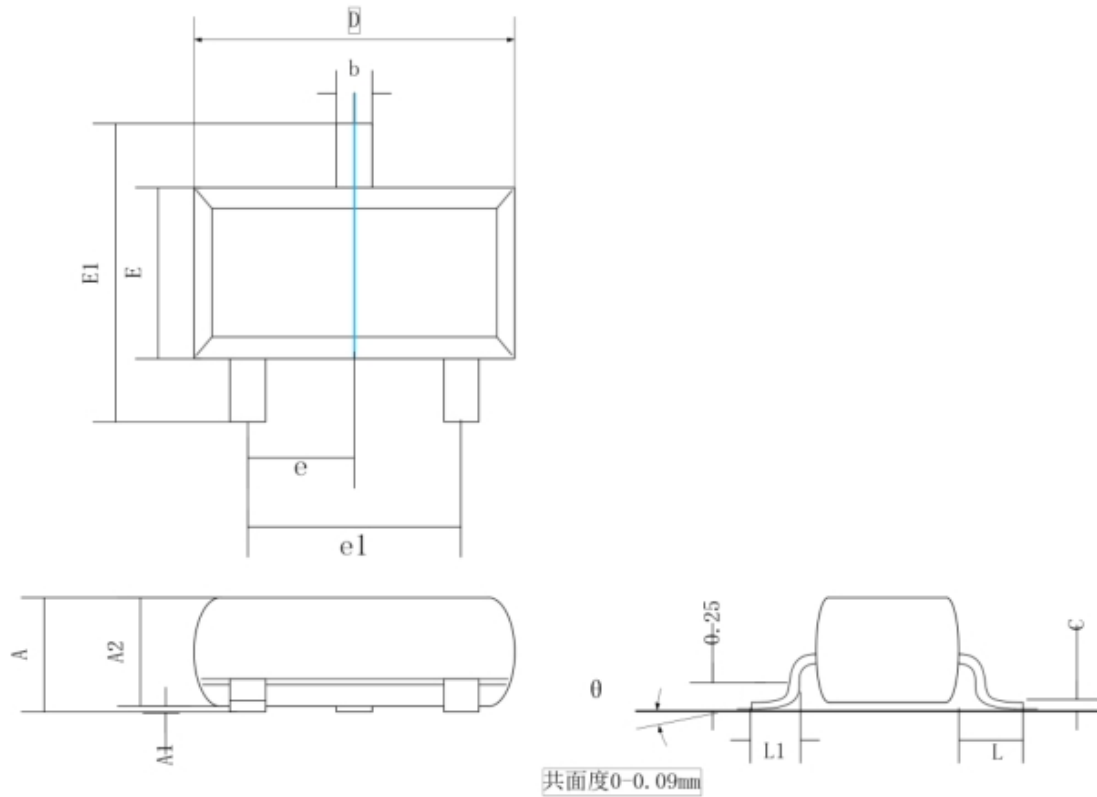
(T_A=25°C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	100			V
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.3	1.7	2.5	V
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 10	μA
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 80V, V_{GS} = 0V$			1	μA
Drain-source on-resistance	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 250mA$		4	6	Ω
		$V_{GS} = 4.5V, I_D = 200mA$		4.3	9	
Dynamic characteristics						
Total Gate Charge	Q_g	$V_{DS} = 10V, V_{GS} = 10V,$ $I_D = 220mA$			2	nC
Gate-Source Charge	Q_{gs}				0.25	
Gate-Drain Charge	Q_{gd}				0.4	
Input Capacitance	C_{iss}	$V_{DS} = 25V, V_{GS} = 0V,$ $f = 1MHz$			60	pF
Output Capacitance	C_{oss}				15	
Reverse Transfer Capacitance	C_{rss}				6	
Switching Characteristics						
Turn-on delay time	$t_{d(on)}$	$V_{DD} = 30V, V_{GS} = 10V,$ $I_D = -280mA, R_G = 50\Omega$			8	ns
Turn-On Rise Time	t_r				8	
Turn-off delay time	$t_{d(off)}$				13	
Turn-Off Fall Time	t_f				16	
Source-Drain Diode Characteristics						
Diode Forward voltage	V_{SD}	$V_{GS} = 0V, I_S = 400mA$			1.3	V

Typical Characteristics



SOT-23 Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.90	1.15
A1	0.00	0.10
A2	0.90	1.05
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	1.20	1.40
E1	2.25	2.55
e	0.95 REF.	
e1	1.80	2.00
L	0.55 REF.	
L1	0.30	0.50
θ	0°	8°