Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
100V	210mΩ@10V	2A
	230mΩ@4.5V	

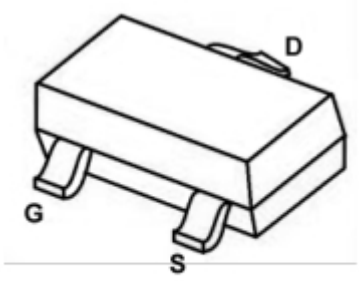
Feature

- Trench Technology
- Supper high density cell design
- Excellent ON resistance for higher DC current

Application

- Driver for Relay, Solenoid, Motor, LED etc.
- DC-DC converter circuit
- Power Switch
- Load Switch
- Charging

Package



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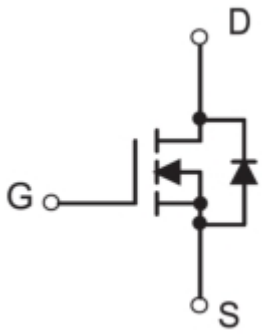
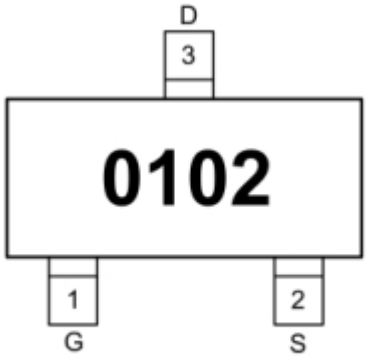
Circuit diagram



Marking



0102 =Device Code

Absolute maximum ratings

(T_a=25℃ 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	2	A
Power Dissipation	P_D	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	℃/ W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃

Electrical characteristics

(T_A=25℃, 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	100			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =100V,V_{GS} = 0V			1	uA
Gate-body leakage current	I_{GSS}	V_{GS} =±20V, V_{DS} = 0V			±100	uA
Gate threshold voltage[3]	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	1	2.1	3	V
Drain-source on-resistance[3]	$R_{DS(on)}$	V_{GS} =10V, I_D =1.4A		210	240	mΩ
		V_{GS} =4.5V, I_D =1.3A		230	280	
Dynamic characteristics						
Input Capacitance	C_{iss}	V_{DS}=50V,V_{GS}=0V, f=1MHz		190		pF
Output Capacitance	C_{oss}			22		
Reverse Transfer Capacitance	C_{rss}			13		
Switching Characteristics						
Total Gate Charge	Q_g	V_{DS}=50V, I_D=1.3A, V_{GS}=10V		5.2		nC
Gate-Source Charge	Q_{gS}			0.75		
Gate-Drain Charge	Q_{gd}			1.4		
Turn-On Delay Time	$T_{d(on)}$	V_{DD}=50V, I_D=1.3A, R_L=39Ω, V_{GS}=10V, R_G=1Ω		6		nS
Rise Time	T_r			10		
Turn-Off Delay Time	$T_{d(off)}$			10		
Fall Time	T_f			6		
Diode Characteristics						
Diode Forward Voltage[3]	V_{SD}	V_{GS} =0V , I_S =1A , T_J =25℃		0.8	1.2	V

Notes:

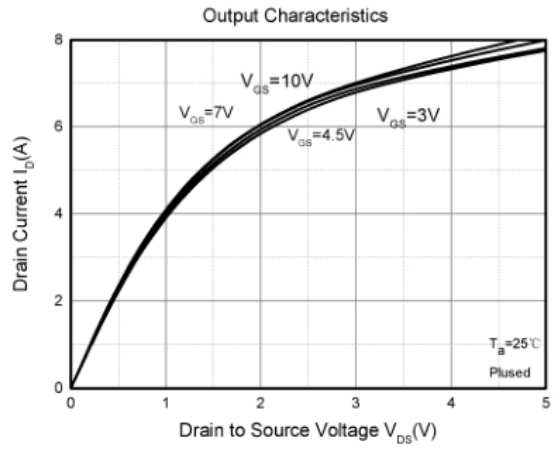
1.Repetitive Rating: Pulse width limited by maximum junction temperature.

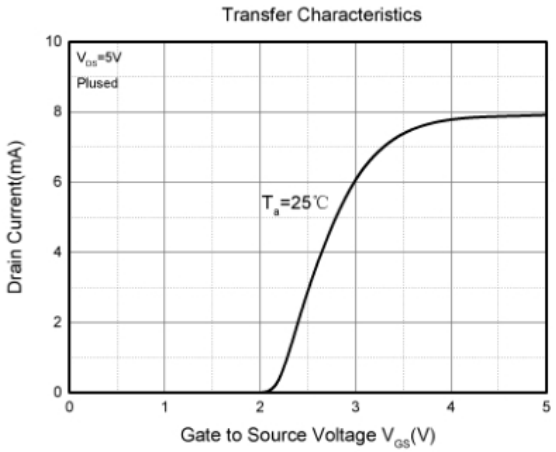
2.Surface Mounted on FR4 Board, t ≤ 10 sec.

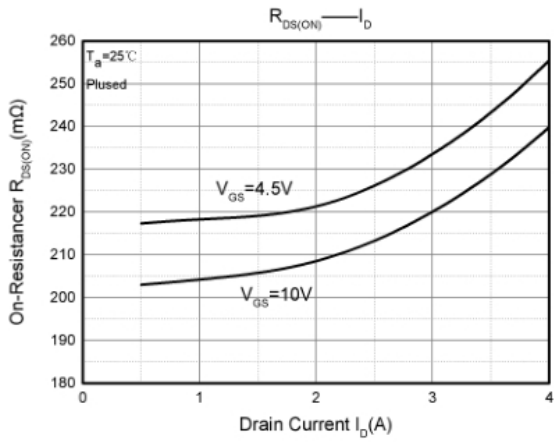
3.Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.

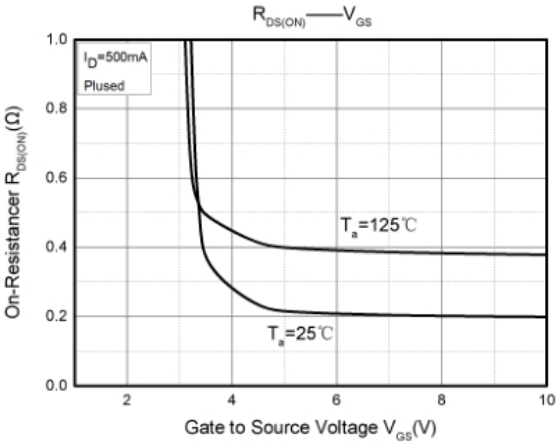
4.Guaranteed by design, not subject to production

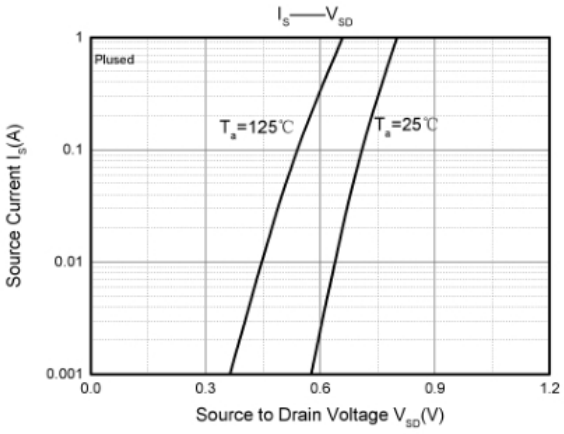
Typical Characteristics

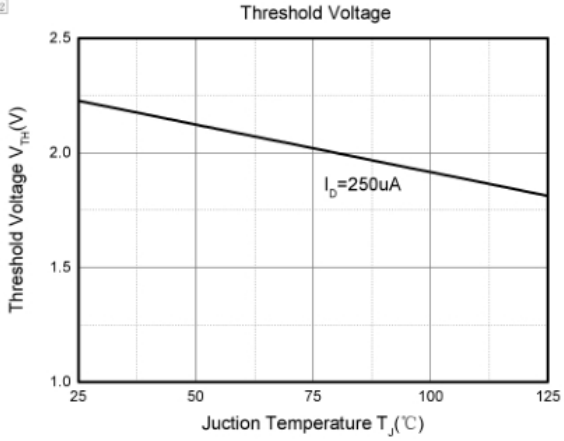




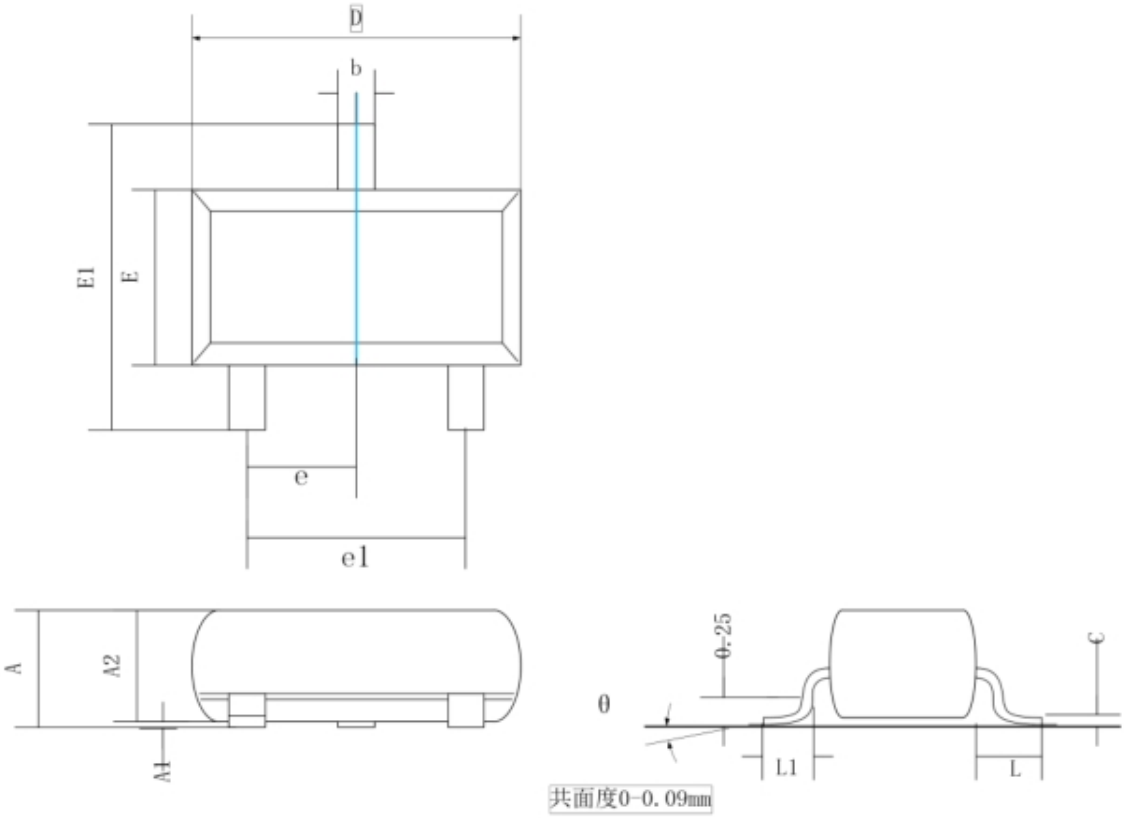








SOT-23 Package Information



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°