

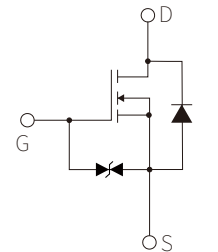
FEATURES

- | High Density Cell Design For Low $R_{DS(on)}$
- | Voltage Controlled Small Signal Switch
- | Rugged and Reliable
- | High Saturation Current Capability
- | ESD protected
- | Load Switch for Portable Devices
- | DC/DC Converter



APPLICATION

- | SOT-23 Small Outline Plastic Package
- | Epoxy UL: 94V-0
- | Mounting Position: Any



Schematic Symbol

APPROVALS

- | | |
|-------------|------------------------------------|
| RoHS | Compliance with 2011/65/EU |
| HF | Compliance with IEC61249-2-21:2003 |

ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Continuous Drain Current	I_D	340	mA
Gate-Source Voltage	V_{GS}	± 20	V
Power Dissipation	P_D	350	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 to 150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (T_A=25°C)

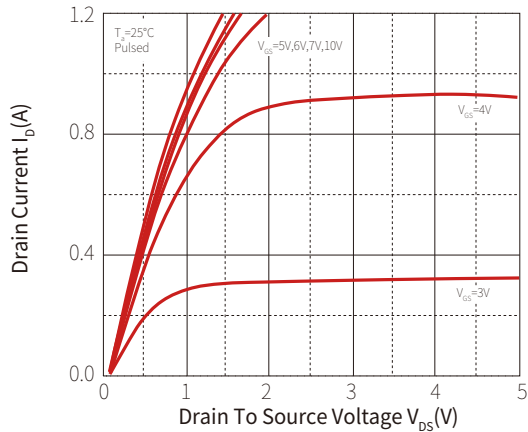
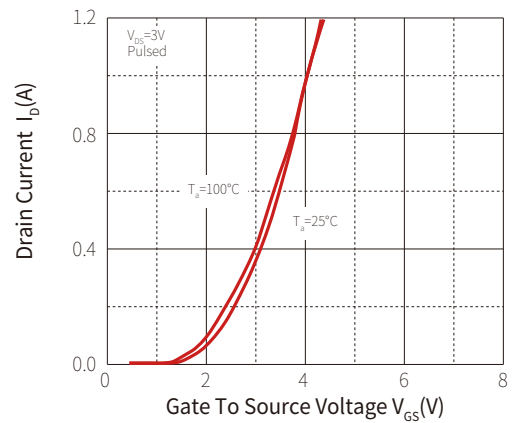
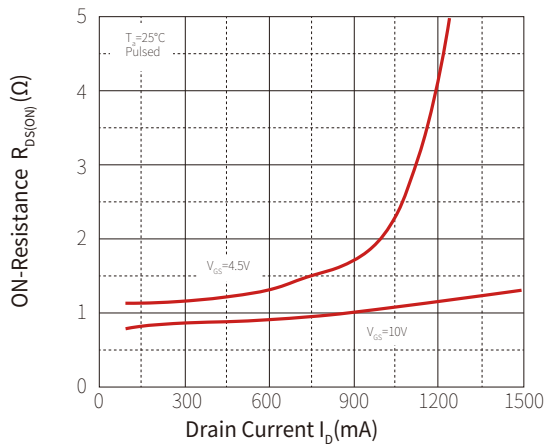
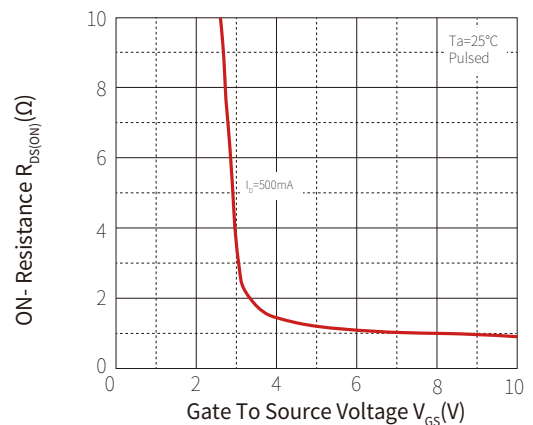
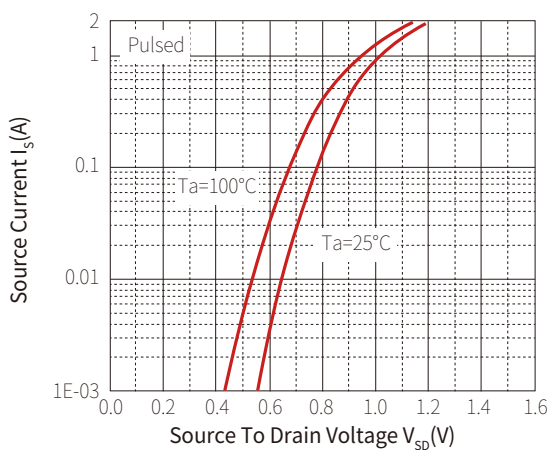
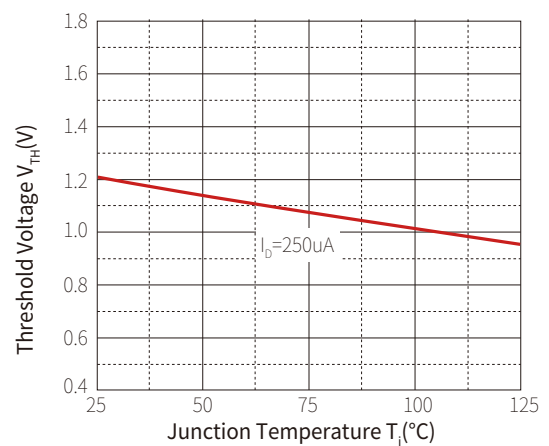
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DS}	V _{GS} =0V, I _D =250μA	60			V
Zero Gate Voltage Drain current	I _{DSS}	V _{DS} =48V, V _{GS} =0V			1	μA
Gate-body Leakage	I _{GSS}	V _{GS} =±20V, V _{DS} =0V			±10	μA
		V _{GS} =±10V, V _{DS} =0V			±200	nA
		V _{GS} =±5V, V _{DS} =0V			±100	nA
Gate-Threshold voltage*	V _{th(GS)}	V _{DS} =V _{GS} , I _D =1mA	1	1.3	2.5	V
Drain-Source On-Resistance*	R _{DS(on)}	V _{GS} =10V, I _C =500mA		0.9	5	Ω
		V _{GS} =4.5V, I _C =200mA		1.1	5.3	Ω
Diode Forward voltage	V _{SD}	I _S =300mA, V _{GS} =0V			1.50	V
Input capacitance**	C _{ISS}	V _{DS} =10V, V _{GS} =0V, f=1MHz			40	pF
Output capacitance**	C _{OSS}				30	pF
Reverse Transfer capacitance**	C _{rss}				10	pF
Switching Time						
Turn-on Time**	t _{d(on)}	V _{DD} =50V, R _L =250Ω, V _{GS} =10V R _{GS} =50Ω, R _G =50Ω			10	ns
Turn-off Time**	t _{d(off)}				15	ns
Reverse recovery Time	t _{rr}	V _{GS} =0V, I _S =300mA, V _R =25V, Dis/dt=-100a/μS		30		ns
Gate-source Zener Diode						
Gate-Source Breakdown Voltage	BV _{GSO}	I _{GS} =±1mA(Open Drain)	±21.5		±30	V

Notes:

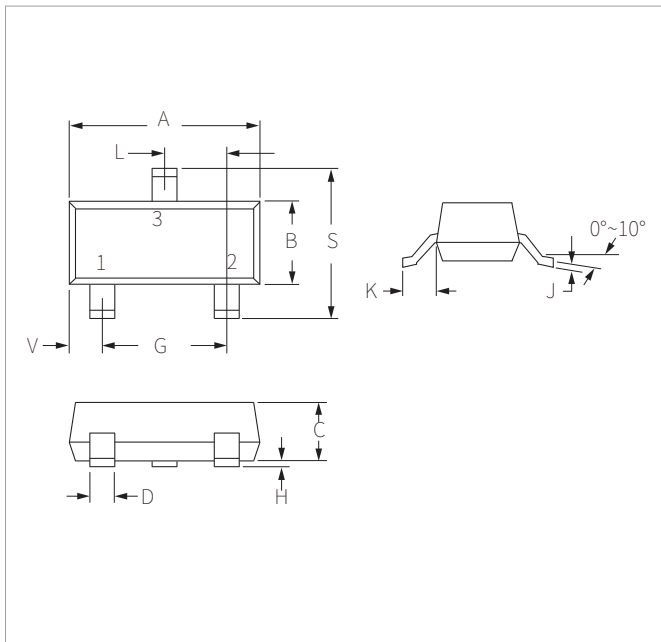
* Pulse Test: Pulse Width ≤300us, Duty Cycle ≤2%.

** These parameters have on way to verify.

PARAMETER CHARACTERISTIC CURVE

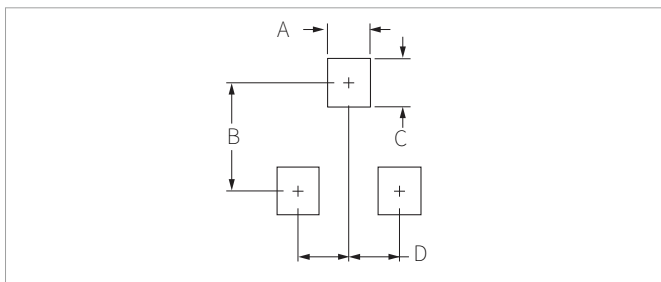
Figure1 : Output Characteristics

Figure2 : Transfer Characteristics

Figure3 : $R_{DS(ON)}$ — I_D

Figure4 : $R_{DS(ON)}$ — V_{GS}

Figure5 : I_S — V_{SD}

Figure6 : Threshold Voltage


SOT-23 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.04	0.110	0.120
B	1.20	1.40	0.047	0.055
C	0.89	1.11	0.035	0.044
D	0.37	0.50	0.015	0.020
G	1.78	2.04	0.070	0.081
H	0.01	0.100	0.001	0.004
J	0.085	0.180	0.003	0.007
K	0.35	0.69	0.014	0.029
L	0.89	1.02	0.035	0.040
S	2.10	2.64	0.083	0.104
V	0.45	0.60	0.018	0.024

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.71	0.97	0.028	0.038
B	1.88	2.13	0.074	0.084
C	0.71	0.97	0.028	0.038
D	0.81	1.07	0.032	0.042

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SNM2N7002KS	SOT-23	3000PCS	7"

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