

FEATURES

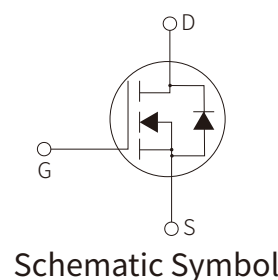
- | High Density Cell Design For Low $R_{DS(On)}$
- | Voltage Controlled Small Signal Switch
- | Rugged and Reliable
- | High Saturation Current Capability
- | Lead free product is acquired

APPLICATION

- | Direct logic-level interface: TTL/CMOS
- | Drivers: relays, solenoids, lamps
- | hammers, display, memories, etc.
- | Battery operated systems
- | Solid-state relays

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
Maximum Drain Current - Continuous	I_D	0.115	A
Gate-Source Voltage	V_{GS}	± 20	V
Maximum Power Dissipation	P_D	0.225	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	556	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V,I _D =250μA	60			V
Zero gate voltage drain current	I _{DSS}	V _{GS} =60V,V _{GS} =0V			80	nA
Gate-body leakage current	I _{GSS}	V _{DS} =±20V,V _{DS} =0V			±80	nA
On-state Drain current	I _{D(ON)}	V _{GS} =10V,V _{DS} =7V	500			mA
Gate threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} ,I _D =250μA	1		2.5	V
Drain-source on-resistance	R _{DS(on)}	V _{GS} =10V,I _C =500mA			5	Ω
		V _{GS} =5V,I _C =50mA			7	Ω
Forward Trans conductance	gfs	V _{DS} =10V,I _D =200mA	80			ms
Drain-source on-voltage	V _{DS(on)}	V _{GS} =10V,I _D =500mA			3.75	V
		V _{GS} =5V,I _D =50mA			0.375	V
Diode Forward voltage	V _{SD}	I _S =115mA,V _{DS} =0V	0.55		1.20	V
Input capacitance*	C _{iss}	V _{DS} =25V,V _{GS} =0V,f=1MHz			50	pF
Output capacitance*	C _{oss}				25	pF
Reverse transfer capacitance*	C _{rss}				5	pF
Switching Time						
Turn-on delay time*	t _{d(on)}	V _{DD} =25V,R _L =50Ω,I _D =500mA V _{GEN} =10V,R _G =25Ω			20	nS
Turn-Off Delay Time*	t _{d(off)}				40	nS

Notes:

* These parameters have on way to verify.

PARAMETER CHARACTERISTIC CURVE

Figure 1: Output Characteristics

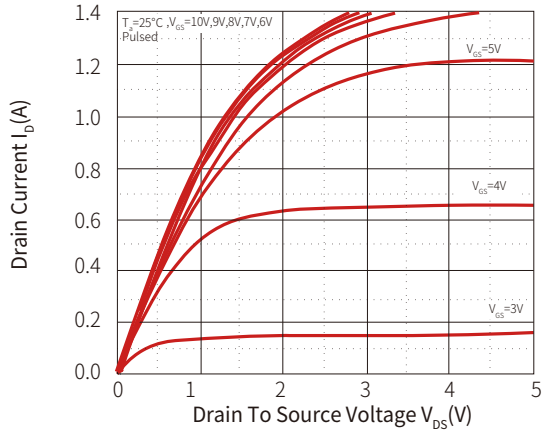


Figure 2: Transfer Characteristics

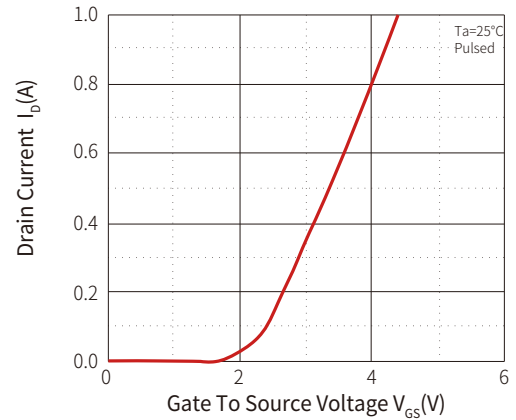


Figure 3: $R_{DS(ON)}$ — I_D

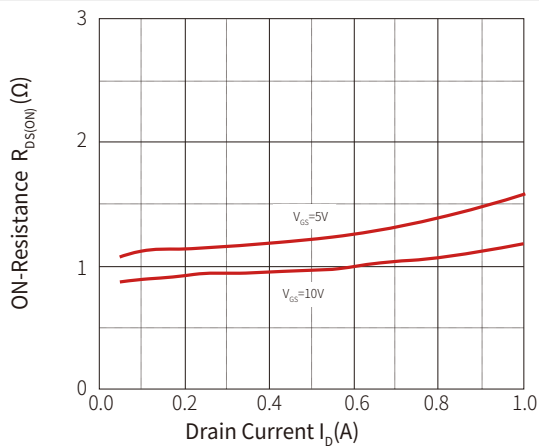


Figure 4: $R_{DS(ON)}$ — V_{GS}

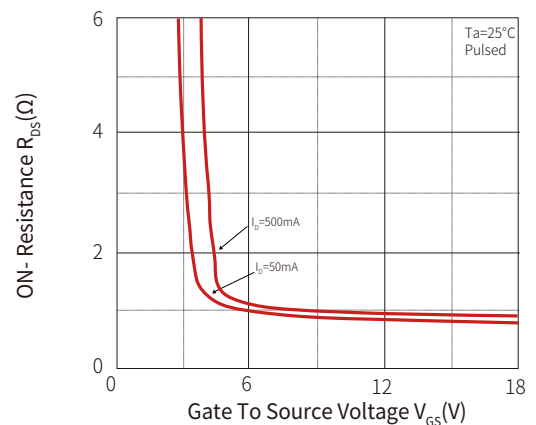
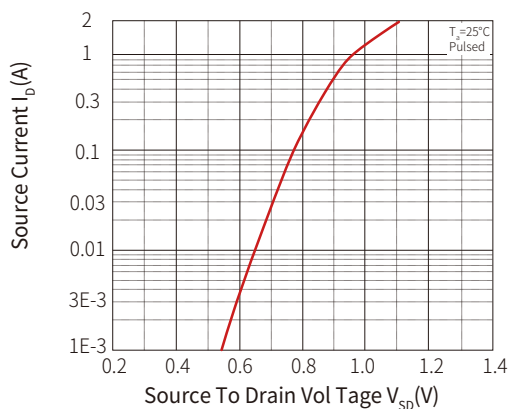
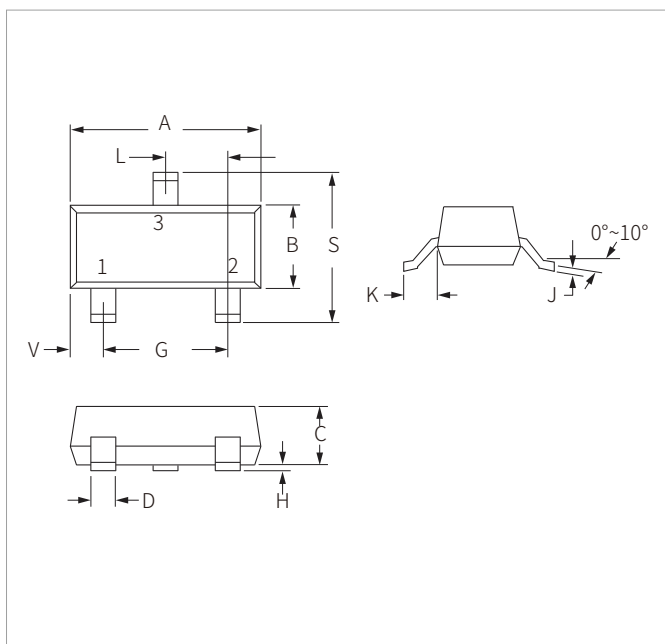


Figure 5: I_S — V_{SD}

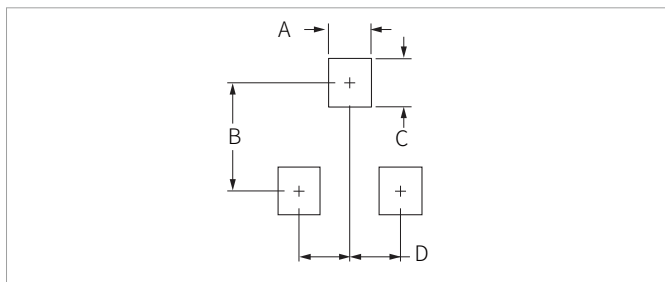


SOT-23 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.05	0.110	0.120
B	1.20	1.40	0.047	0.055
C	0.90	1.15	0.035	0.045
D	0.37	0.50	0.015	0.020
G	1.75	2.05	0.069	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	2.65	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
SNM2N7002	SOT-23	3000PCS	7"

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By QR Code

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