

EVVOSEMI[®]

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

Product Specification

▶ Domestic	Part Number	2N7002BKV
▶ Overseas	Part Number	2N7002BKV
▶ Equivalent	Part Number	2N7002BKV

EV is the abbreviation of name EVVO

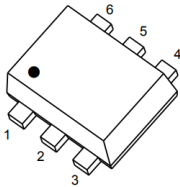
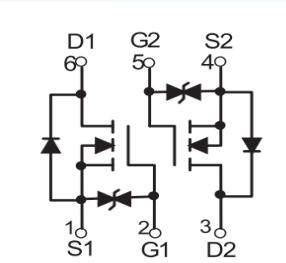
Plastic-Encapsulate MOSFETS

FEATURE

- High density cell design for Low $R_{DS(on)}$
- Voltage controlled small signal switch
- Rugged and reliable
- High saturation current capability
- ESD protected

APPLICATION

- Load Switch for Portable Devices
- DC/DC Converter



SOT563

MARKING : KAS

N-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
60 V	5Ω @10V	340mA
	5.3Ω @4.5V	

MOSFET MAXIMUM RATINGS (T_a=25Я unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{DS}	Drain-Source Voltage	60	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Continuous Drain Current	340	mA
I_{DM}	Pulsed Drain Current(note1)	800	mA
P_D	Power Dissipation	0.2	W
T_j	Junction Temperature	150	Я
T_{stg}	Storage Temperature	-55~+150	Я
$R_{\S JA}$	Thermal Resistance from Junction to Ambient	625	Я/W

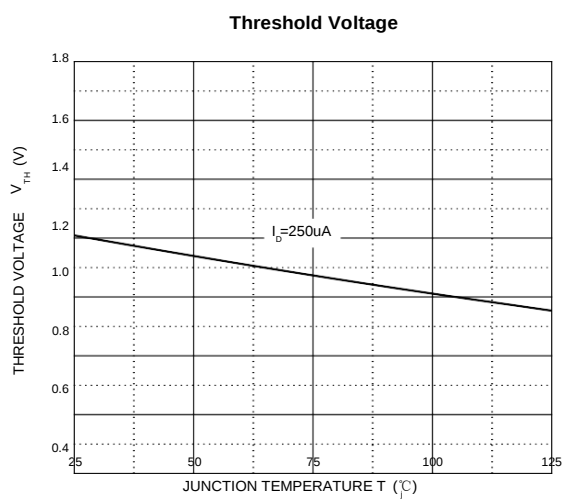
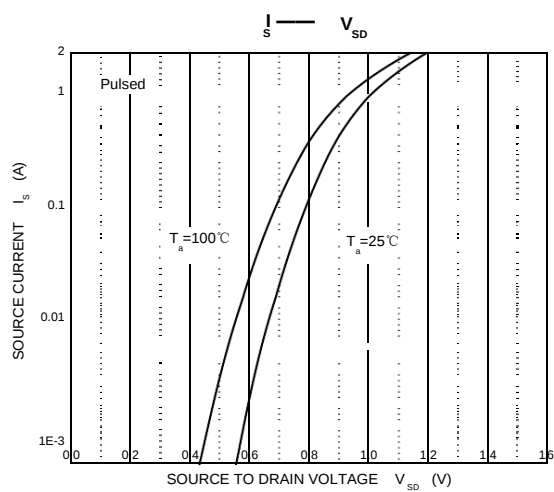
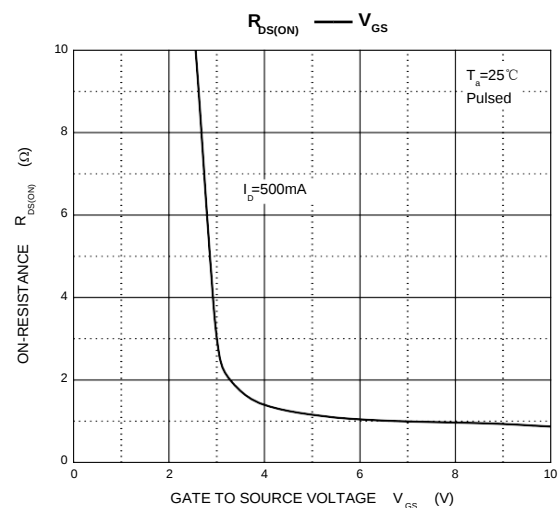
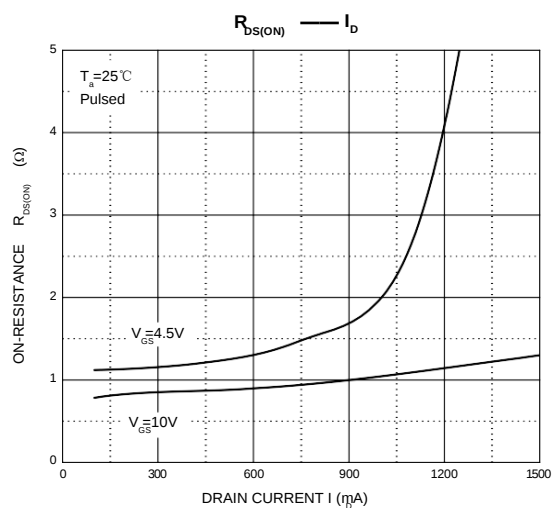
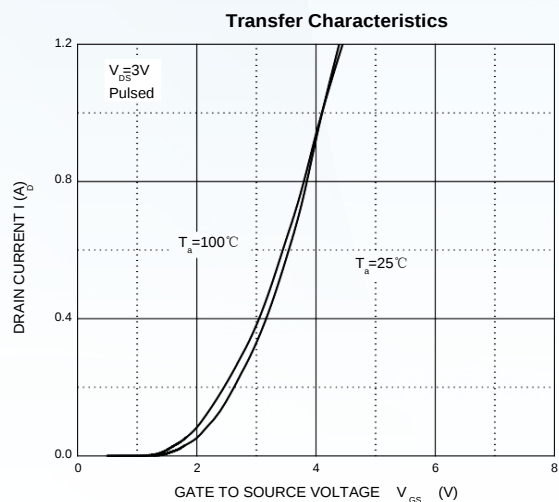
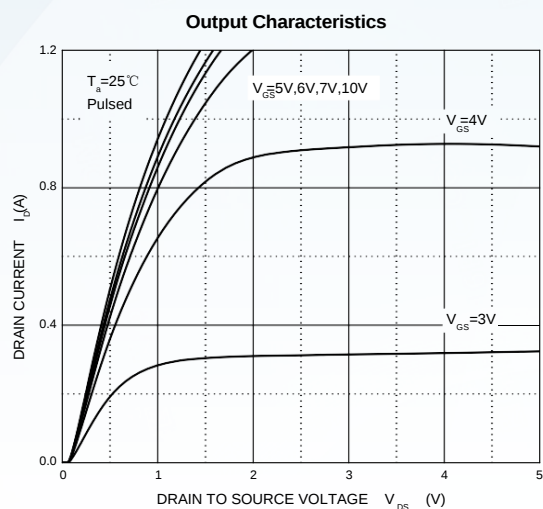
T_a=25 °C unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source Breakdown Voltage	V _{(BR) DSS}	V _{GS} = 0V, I _D =250μA	60			V
GateThreshold Voltage (note 2)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =1mA	1	1.3	2.5	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =48V,V _{GS} = 0V			1	μA
Gate-Source Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} = 0V			±10	μA
Drain-Source On-Resistance (note 2)	R _{DS(on)}	V _{GS} =4.5V, I _D =200mA		2.3	5.3	R
		V _{GS} =10V, I _D =500mA		1.5	5	R
DYNAMIC PARAMETERS (note 3)						
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 PARAMETERS(note 3)						
Turn-on Delay Time	t _{d(on)}	V _{GS} =10V,V _{DD} =50V, R _G =50Ω R _{GS} =50Ω, R _L =250Ω			10	ns
Turn-off Delay Time	t _{d(off)}				15	ns
Reverse Recovery Time	t _{rr}	V _{GS} =0V,I _S =300mA,V _R =25V, dI _S /dt=-100A/us		30		ns
Recovered Charge	Q _r	V _{GS} =0V,I _S =300mA,V _R =25V dI _S /dt=-100A/us		30		nC
DRAIN-SOURCE DIODE						
Diode Forward Voltage(note 2)	V _{SD}	I _S =300mA, V _{GS} = 0V			1.5	V
Continuous Diode Forward Current	I _S				0.2	A
Pulsed Diode Forward Current(note1)	I _{SM}				0.53	A

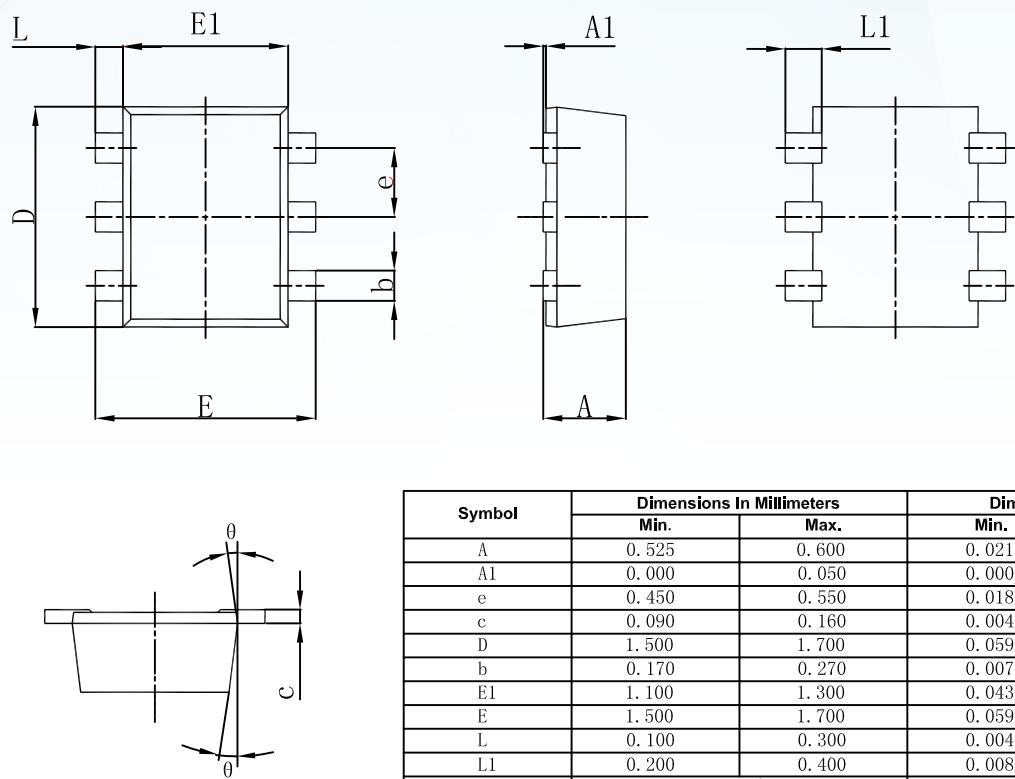
Notes :

1. Repetitive rating - Pulse width limited by junction temperature.
2. Pulse Test : Pulse width ≤ 300μs, duty cycle ≤ 2%.
3. Guaranteed by design, not subject to production testing.

Typical Characteristics

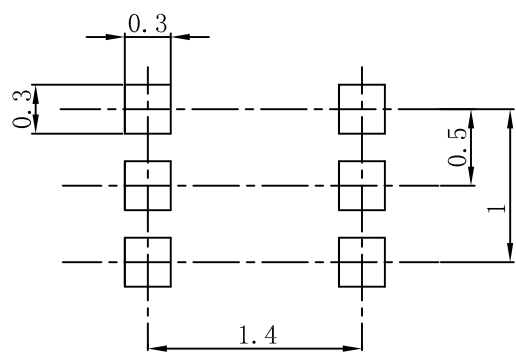


SOT-563 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
L1	0.200	0.400	0.008	0.016
θ	7 °REF.		7 °REF.	

SOT-563 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

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