



2N7002AK 0.3A 60V N-CHANNEL MOSFET

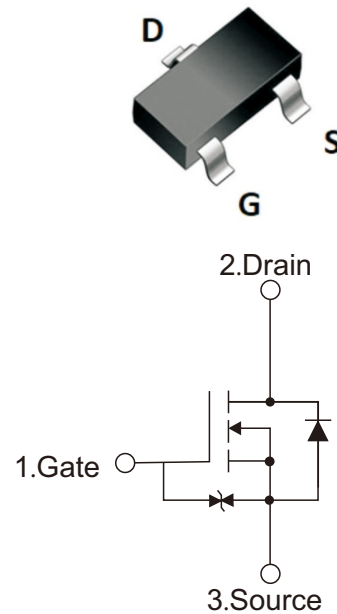
Features

- Fast Switching Capability
- Avalanche Energy Tested
- Low On Resistance
- Low Input Capacitance
- Small Surface Mount Package

Applications

- Motor Control
- Power Management Functions

SOT-23



Absolute Maximum Ratings (TA=25°C, unless otherwise specified)

Parameter	Symbols	Ratings	Units
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	0.3	A
Operation Junction Temperature And Storage Temperature	T_j, T_{stg}	-55 ~ +150	°C

Parameter		Symbols	Test Conditions	Min	Typ	Units	Units
Off Characteristics							
Drain-Source Breakdown Voltage		B _{VDSS}	V _{GS} = 0V, I _D = 10uA	60			V
Drain-Source Leakage Current		I _{DSS}	V _{DS} = 60V, V _{GS} = 0V			1	uA
Gate- Source Leakage Current	Forward	I _{GSS}	V _{GS} = 20V, V _{DS} = 0V			10	uA
	Reverse		V _{GS} = -20V, V _{DS} = 0V			-10	
On Characteristics							
Gate Threshold Voltage		V _{GS(TH)}	V _{DS} = V _{GS} , I _D = 250uA	1.0	1.5	2.5	V
Static Drain-Source On-State Resistance		R _{DS(ON)}	V _{GS} = 10V, I _D = 0.3A		1.6	2.5	Ω
			V _{GS} = 4.5V, I _D = 0.2A		1.9	3.0	Ω
HBM		ESD	V _{DS} = 10V, I _D = 0.115A	2.0			KV



Dynamic Characteristics

Input Capacitance	C _{ISS}	V _{DS} = 25V, V _{GS} = 0V, f = 1.0MHz		23		pF
Output Capacitance	C _{OSS}			3.4		pF
Reverse Transfer Capacitance	C _{RSS}			1.4		pF
Switching Characteristics						
Turn-On Delay Time	t _{D(ON)}	V _{DD} = 30V, I _D = 3A, R _L = 150Ω V _{GEN} = 10, R _{GEN} = 25Ω		10		ns
Turn-Off Delay Time	t _{D(OFF)}			33		ns

Typical Characteristics

Fig.1 Typical Output Characteristic

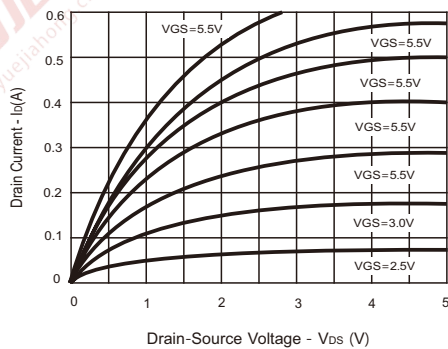


Fig.2 Typical Transfer Characteristics

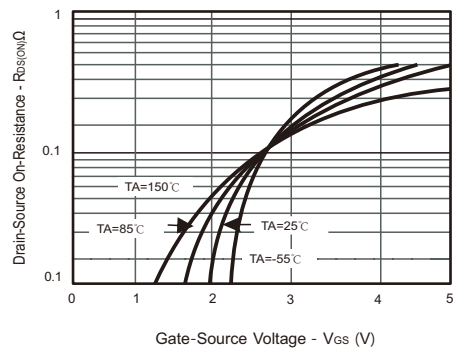


Fig.3 On-Resistance vs. Drain Current & Gate Voltage

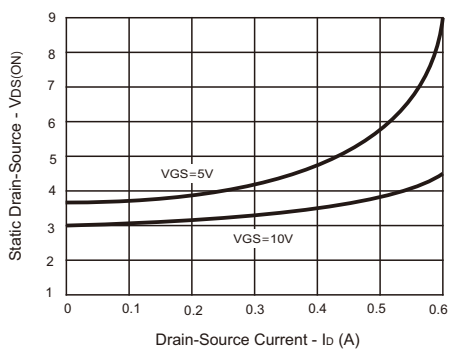


Fig.4 Normalized Static Drain-Source On-Resistance

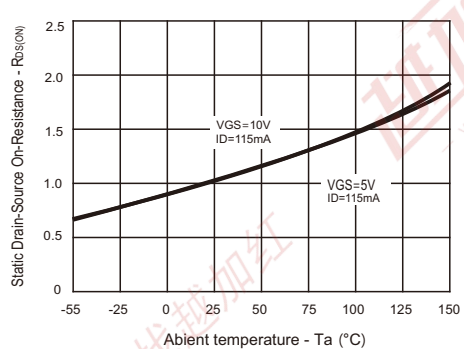




Fig.5 Gate Threshold Variation vs.Ambient Temperature

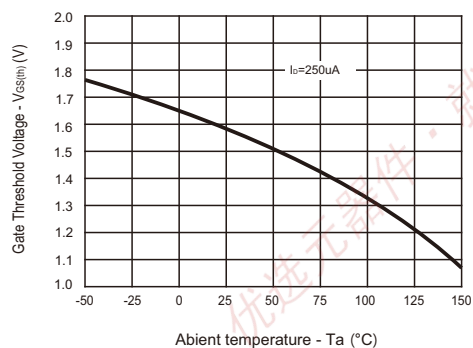


Fig.6 Typical Total Capacitance

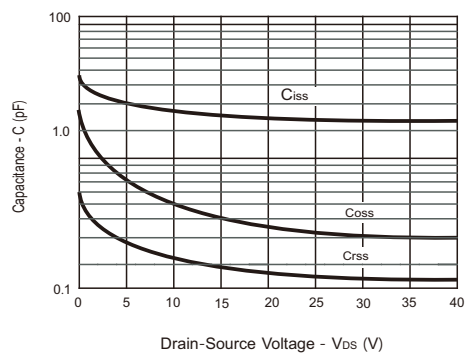
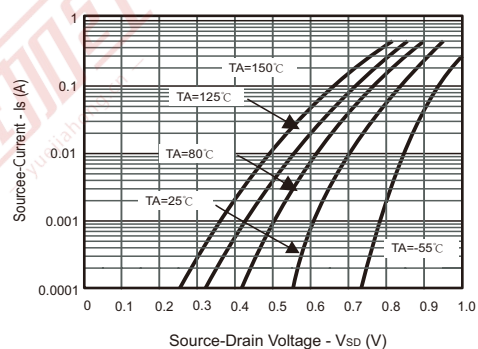
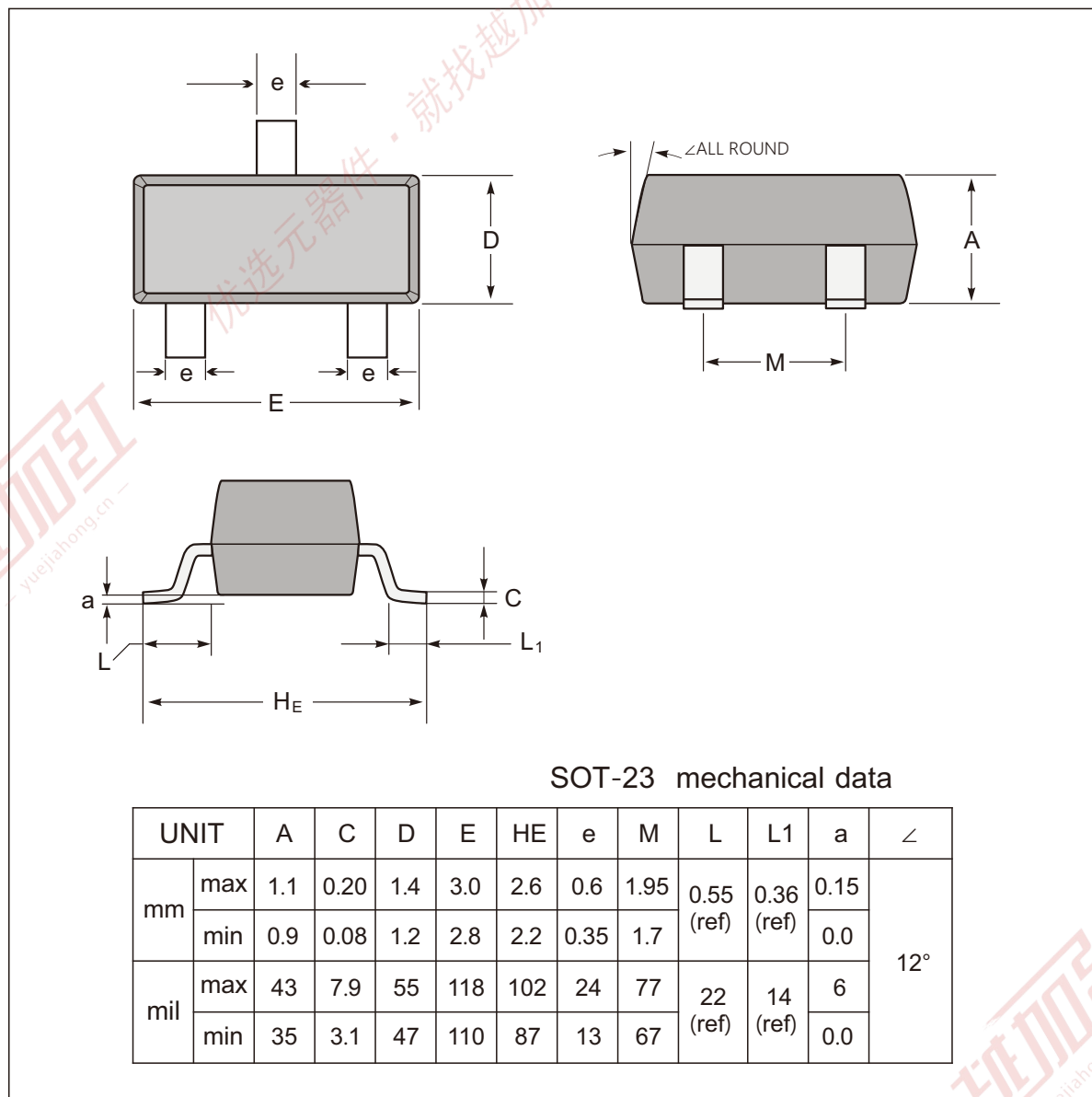


Fig.7 Reverse Dain Current vs.Source-Drain Voltage

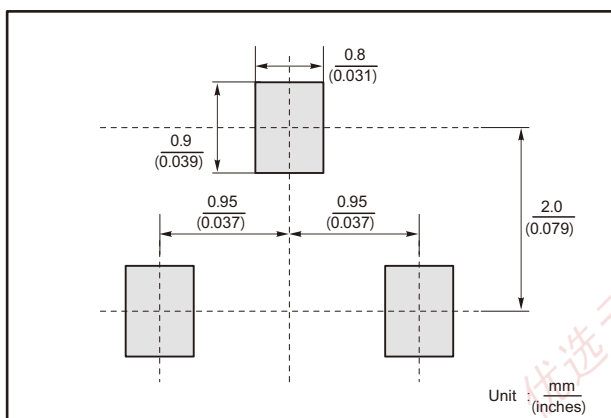




SOT-23 Package Outline Dimensions



The recommended mounting pad size



Marking

Type number	Marking code
2N7002AK	72AK



Important Notice and Disclaimer

Jingdao Microelectronics reserves the right to make changes to this document and its products and specifications at any without notice.

Customers should obtain and confirm the latest product information and specifications before final, purchase or use.

Jingdao Microelectronics makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, not does Jingdao Microelectronics assume any liability for application assistance or customer product design.

Jingdao Microelectronics does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Jingdao Microelectronics.

Jingdao Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of Jingdao Microelectronics.

单击下面可查看定价，库存，交付和生命周期等信息

[>>JINGDAO\(晶导微\)](#)