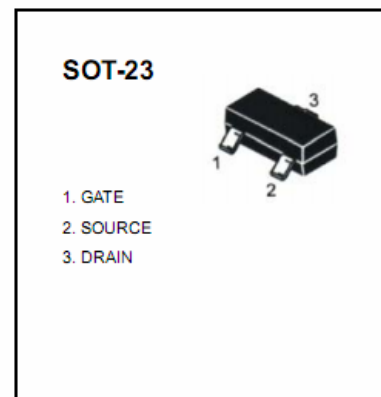
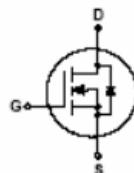


## SOT-23 Plastic-Encapsulate Transistors

MOSFET(N-Channel)

### FEATURES

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



MARKING:7002

### MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Symbol (符号)	Parameter (参数名称)	Value (额定值)	Units (单位)
V <sub>DS</sub>	Drain-Source voltage	60	V
I <sub>D</sub>	Drain current	115	mA
P <sub>D</sub>	Power Dissipation	225	mW
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55-150	°C

### ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =250uA	60			V
Gate-Threshold Voltage	V <sub>th(GS)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> =250 uA	1	1.7	2.5	V
Gate-body Leakage	I <sub>GSS</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =±20V			±100	nA
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =60V, V <sub>GS</sub> =0V			1	uA
On-state Drain Current	I <sub>D(ON)</sub>	V <sub>DS</sub> =7V, V <sub>GS</sub> =10V	500			mA
Drain-Source On-Resistance	r <sub>DS(ON)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =100mA		1	2	Ω
		V <sub>GS</sub> =4.5V, I <sub>D</sub> =50mA		1.1	3	Ω
Forward Trans conductance	g <sub>fs</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =200mA	80		500	ms
Drain-source on-voltage	V <sub>DS(ON)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =500mA	0.5		3.75	V
		V <sub>GS</sub> =5V, I <sub>D</sub> =50mA	0.05		0.375	V
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =115mA, V <sub>GS</sub> =0V	0.55		1.2	V
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =25V, V <sub>GS</sub> =0V, f=1MHz			50	pF
Output Capacitance	C <sub>oss</sub>				25	
Reverse Transfer Capacitance	C <sub>rss</sub>				5	

### SWITCHING TIME

Turn-on Time	t <sub>d(on)</sub>	V <sub>DD</sub> =25V, R <sub>L</sub> =50 Ω I <sub>D</sub> =500mA, V <sub>GEN</sub> =10V,			20	ns
Turn-off Time	t <sub>d(off)</sub>	R <sub>G</sub> =25 Ω			40	ns

## Typical Characteristics

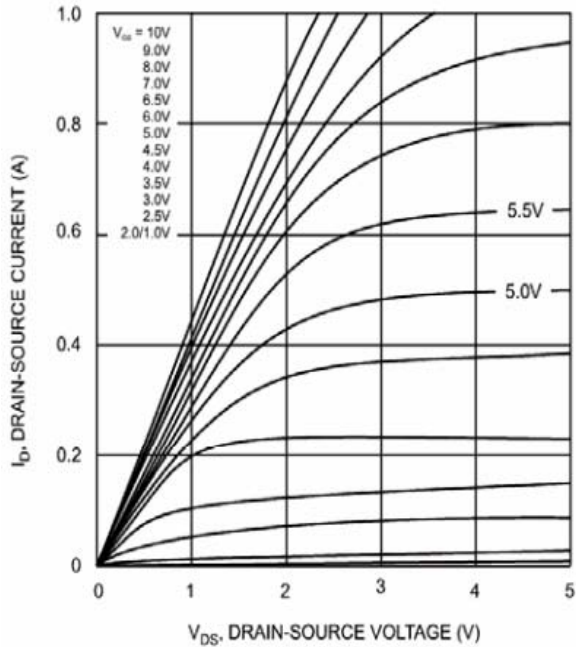


Fig. 1 On-Region Characteristics

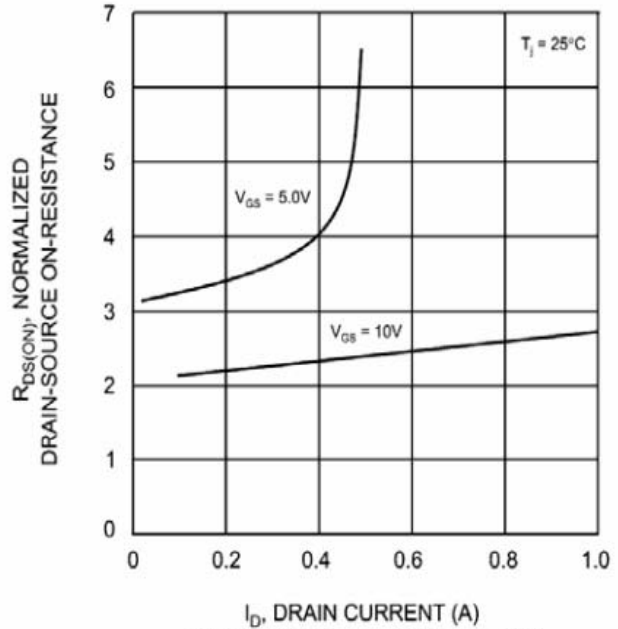


Fig. 2 On-Resistance vs Drain Current

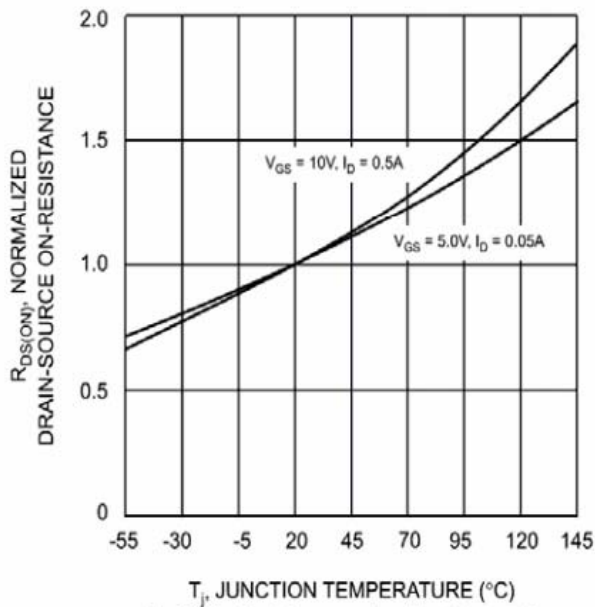


Fig. 3 On-Resistance vs Junction Temperature

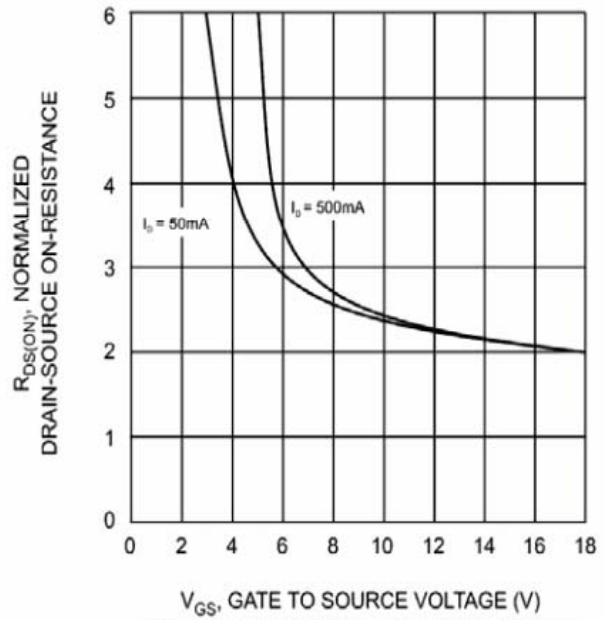


Fig. 4 On-Resistance vs. Gate-Source Voltage