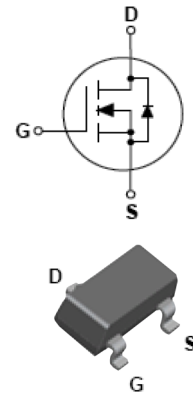
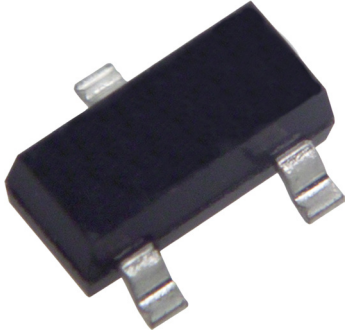


Small Signal MOSFET Transistor **multicomp**PRO



SOT-23
Marking
7002

Features:

- High Density Cell Design For Low $R_{DS(ON)}$
- Voltage Controlled Small Switch
- Rugged and Reliable
- High Saturation Current Capability

Applications:

- N-channel enhancement mode effect transistor
- Switching application.

Maximum Ratings:

$T_A = 25^{\circ}\text{C}$ unless otherwise specified.

Parameter	Symbol	Value	Units
Drain-Source voltage	V_{DS}	60	V
Drain-Gate voltage($R_{GS} \leq 1\text{M}\Omega$)	V_{DGR}	60	V
Gate -Source voltage - continuous Non Repetitive ($t_p < 50\mu\text{s}$)	V_{GSS}	± 20 ± 40	V
Maximum drain current - Continuous - Pulsed	I_D	115 800	mA
Power dissipation	P_D	200	mW
Thermal resistance, junction-to-ambient	$R_{\theta JA}$	625	$^{\circ}\text{C}/\text{W}$
Junction and storage temperature	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$

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Electrical Characteristics:

T_A = 25°C unless otherwise specified.

Parameter	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Drain-Source breakdown voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =250μA	60	70	-	V
Gate Threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	1	-	2	
Gate-body leakage Forward Reverse	I _{GSS}	V _{DS} =0V, V _{GS} =20V	-	-	1	μA
		V _{DS} =0V, V _{GS} =-20V	-	-	-1	
Zero gate voltage drain current	I _{DSS}	V _{DS} =60V, V _{GS} =0V	-	-	1	μA
		V _{DS} =60V, V _{GS} =0V, T _J =125°C	-	-	500	
Drain-Source on-voltage	V _{DS(ON)}	V _{GS} =10V, I _D =500mA	-	0.6	3.75	V
		V _{GS} =5V, I _D =50mA	-	0.09	1.5	
Forward trans conductance	g _{FS}	V _{DS} =10, I _D =200mA	80	-	-	mS
Static drain-Source on-resistance	R _{DS(ON)}	V _{GS} =5V, I _D =50mA	-	3.2	7.5	Ω
		V _{GS} =10V, I _D =500mA, T _J =100°C	-	4.4	13.5	
Drain-Source diode forward voltage	V _{SD}	V _{GS} =0V, I _S =115mA	-	0.88	1.5	V
Input capacitance	C _{ISS}	V _{DS} =25V, V _{GS} =0V, f=1MHz	-	20	50	pF
Output capacitance	C _{OSS}		-	11	25	
Reverse transfer capacitance	C _{RSS}		-	4	5	
Turn-On delay time	t _{D(ON)}	V _{DD} =30V, I _D = 0.2A, R _L = 150Ω, V _{GS} = 10V, R _{GEN} = 25Ω	-	-	20	ns
Turn-Off delay time	t _{D(OFF)}		-	-	20	ns

Typical Characteristics:

T_a=25°C unless otherwise specified.

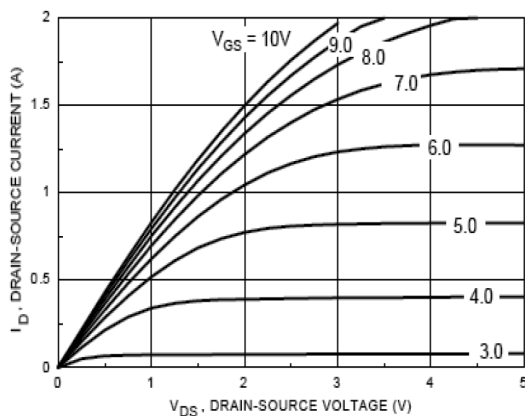


Figure 1. On-Region Characteristics

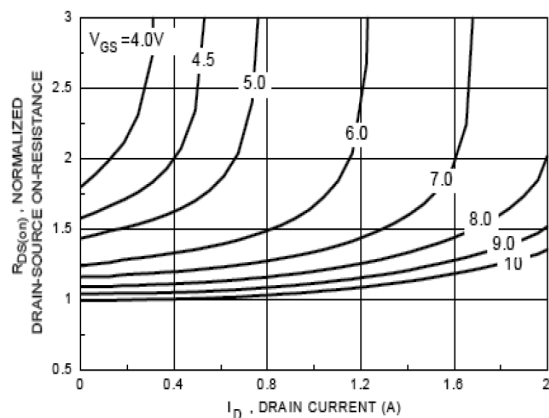


Figure 2. On-Resistance Variation with Gate Voltage and Drain Current

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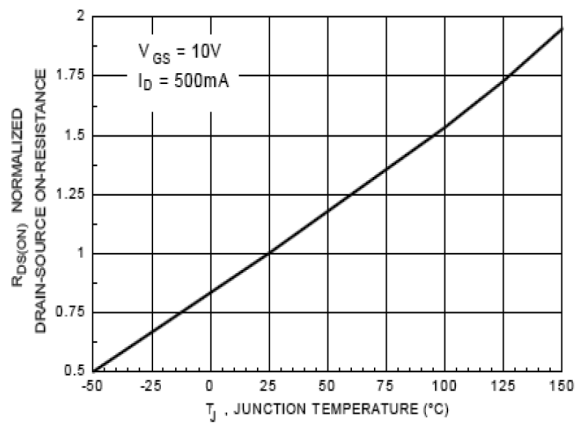


Figure 3. On-Resistance Variation with Temperature

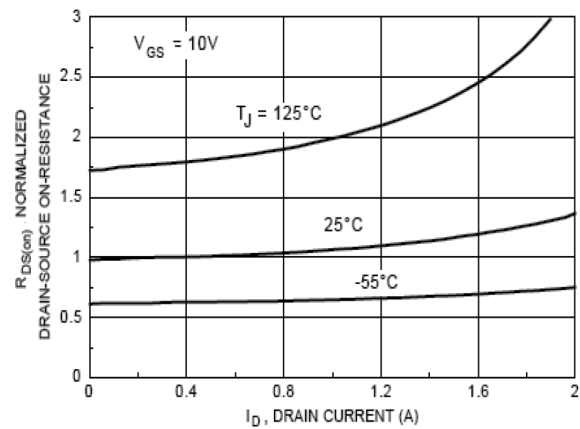


Figure 4. On-Resistance Variation with Drain Current and Temperature

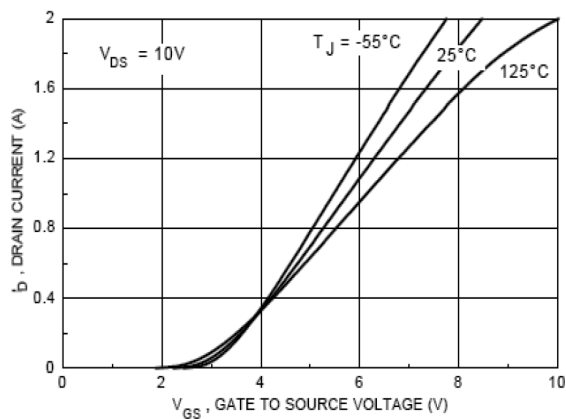


Figure 5. Transfer Characteristics

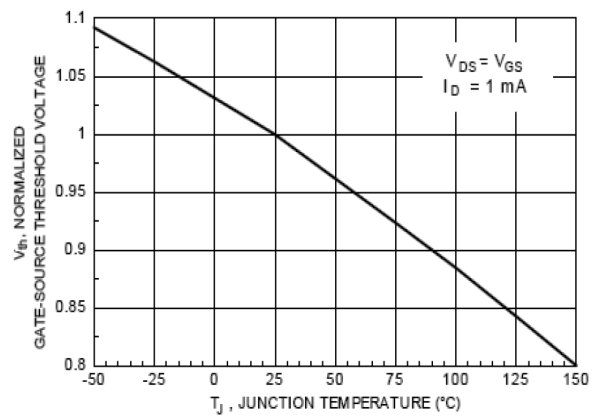


Figure 6. Gate Threshold Variation with Temperature

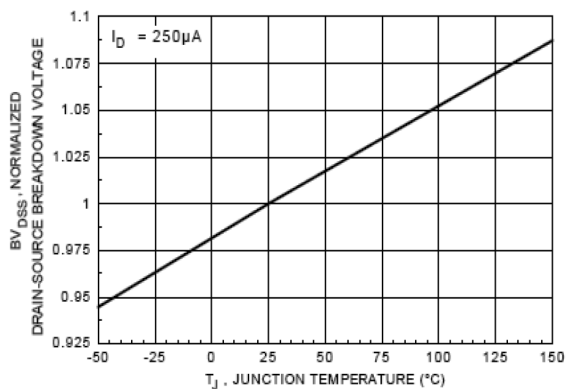


Figure 7. Breakdown Voltage Variation with Temperature

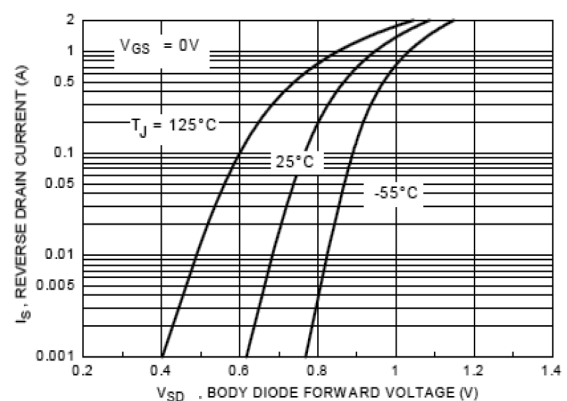


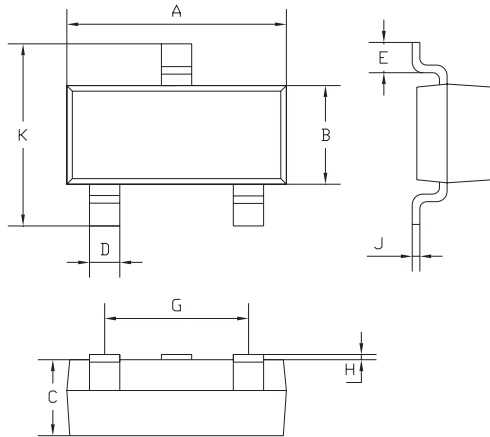
Figure 8. Body Diode Forward Voltage Variation with Temperature

Small Signal MOSFET Transistor

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Package Outline:

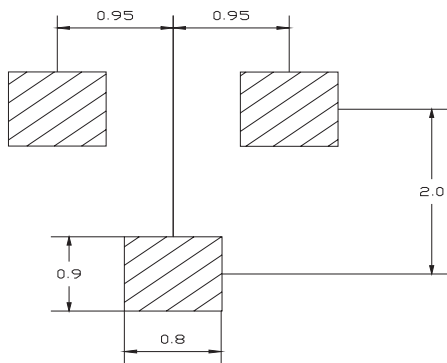
Plastic surface mounted package



SOT-23		
Dim.	Min.	Max.
A	2.7	3.1
B	1.1	1.5
C	0.9	1.1
D	0.3	0.5
E	0.35	0.48
G	1.8	2
H	0.02	0.1
J	0.05	0.15
K	2.2	2.6

Dimensions : Millimetres

Soldering Footprint:



Package Information:

Device	Package	Shipping
2N7002-7-F	SOT-23	3,000 / Tape & Reel

Part Number Table

Description	Part Number
Small Signal MOSFET Transistor	2N7002-7-F

Dimensions : Millimetres

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