

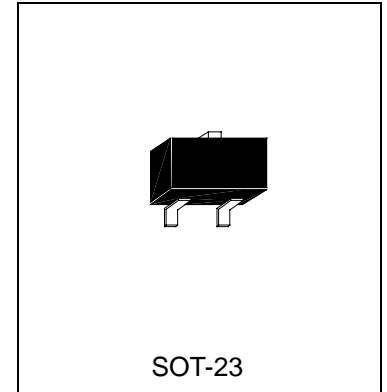


H2N7002

N-CHANNEL TRANSISTOR

Description

N-channel enhancement-mode MOS transistor.



Absolute Maximum Ratings

Drain-Source Voltage.....	60 V
Drain-Gate Voltage (RGS=1MΩ)	60 V
Gate-Source Voltage	+/-40 V
Continuous Drain Current (Ta=25°C)(1)	200 mA
Continuous Drain Current (Ta=100°C)(1)	115 mA
Pulsed Drain Current (Ta=25°C)(2).....	800 mA
Total Power Dissipation (Tc=25°C).....	200 mW
Derate above 25°C	0.16 Mw / °C
Storage Temperature.....	-55 to 150 °C
Operating Junction Temperature	-55 to 150 °C
Lead Temperature, for 10 second Soldering.....	260 °C

Thermal Characteristics

Thermal Resistance, Junction-to-Ambient 625 °C / W

Characteristics (Ta=25°C)

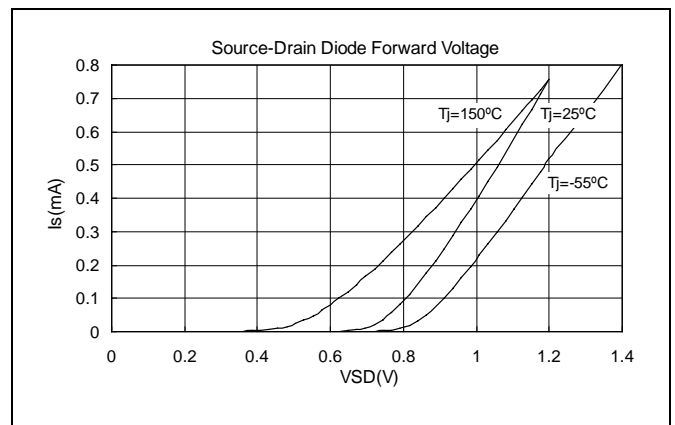
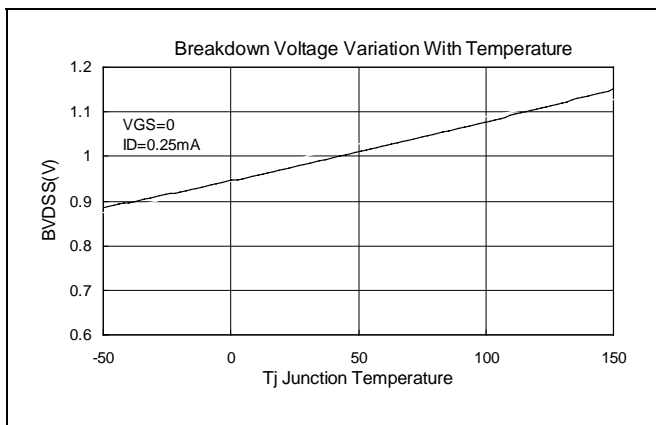
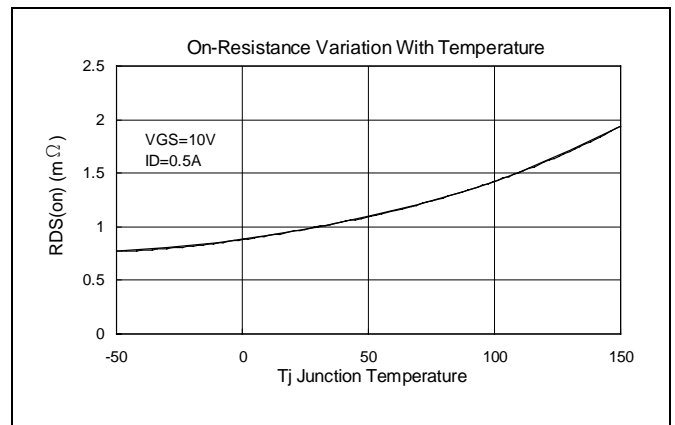
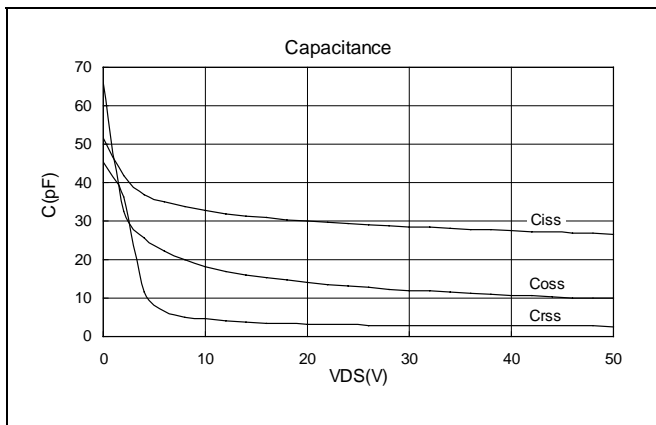
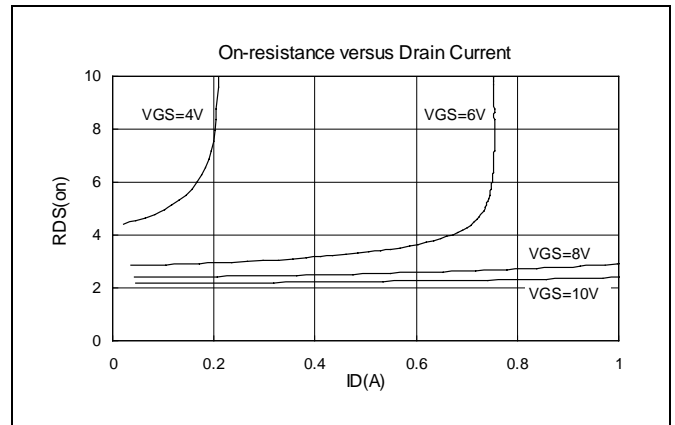
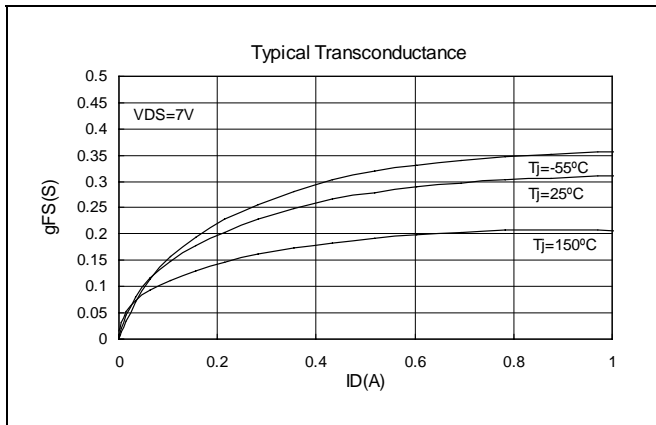
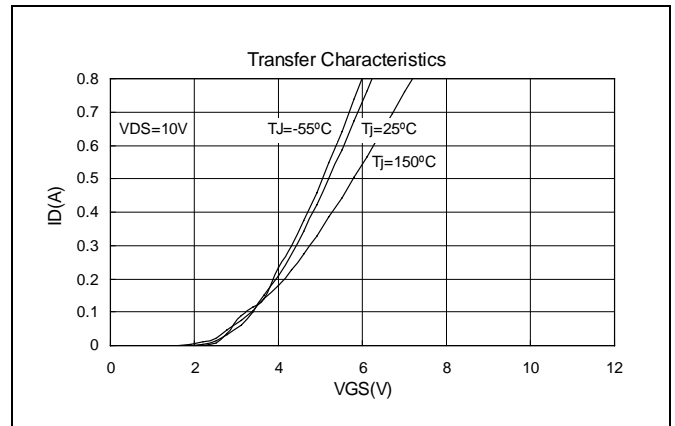
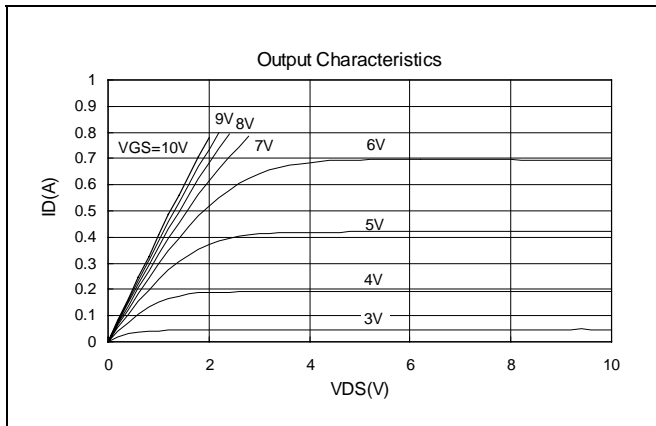
Parameter	Symbol	Test Conditions	Min	Typ.	Max	Unit
Drain-Source Breakdown Voltage	BVDSS	VGS=0, ID=10uA	60	-	-	V
Gate Threshold Voltage	VGS(th)	VDS=2.5V, ID=0.25mA	1	-	2.5	V
Gate Source Leakage Current, Forward	IGSS/F	VGS=+20V, VDS=0	-	-	100	nA
Gate Source leakage Current, Reverse	IGSS/R	VGS=-20V, VDS=0	-	-	100	nA
Zero Gate Voltage Drain Current	IDSS	VDS=60V, VGS=0	-	-	1	uA
On-State Drain Current	ID(ON)	VDS>2VDS(ON), VGS=10V	500	-	-	mA
Static Drain-Source On-State Voltage	VDS(ON)	ID=50mA, VGS=5V	-	-	0.375	V
		ID=500mA, VGS=10V	-	-	3.75	V
Static Drain-Source On-State Resistance	RDS(ON)	ID=50mA, VGS=5V	-	-	7.5	Ω
		ID=500mA, VGS=10V	-	-	7.5	Ω
Forward Transconductance	G _{FS}	VDS>2VDS(ON), ID=200mA	80	-	-	mS
Input Capacitance	Ciss	VDS=25V, VGS=0, f=1MHz	-	-	50	pF
Output Capacitance	Coss		-	-	25	pF
Reverse Transfer Capacitance	Crss		-	-	5	pF

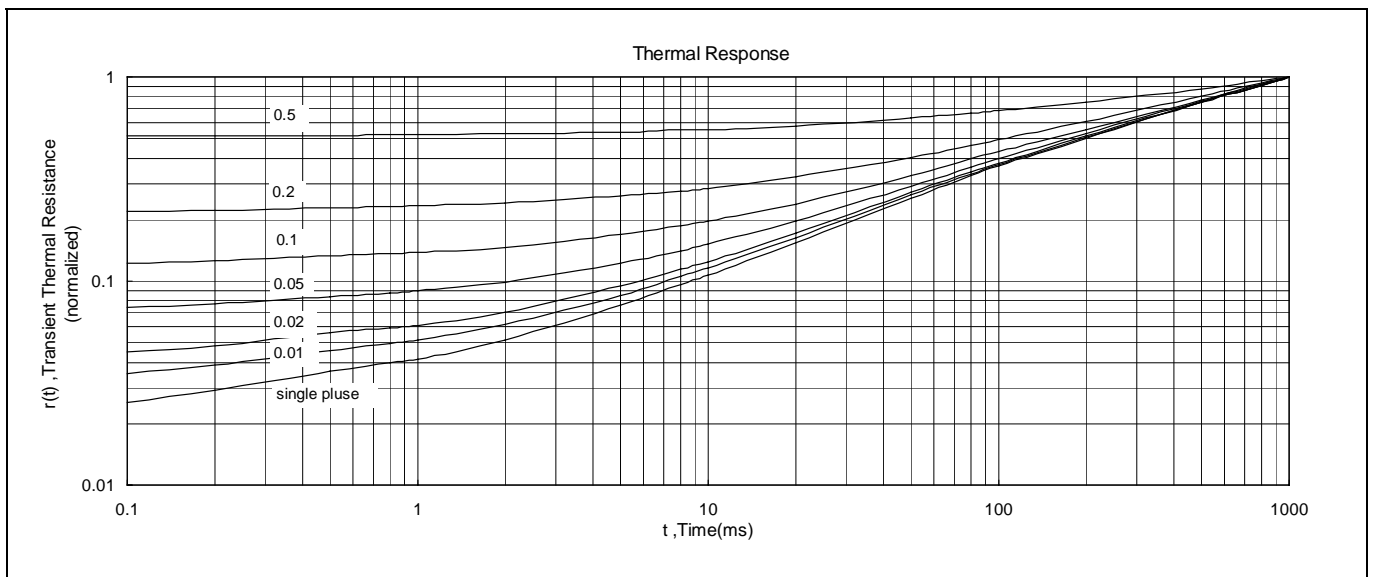
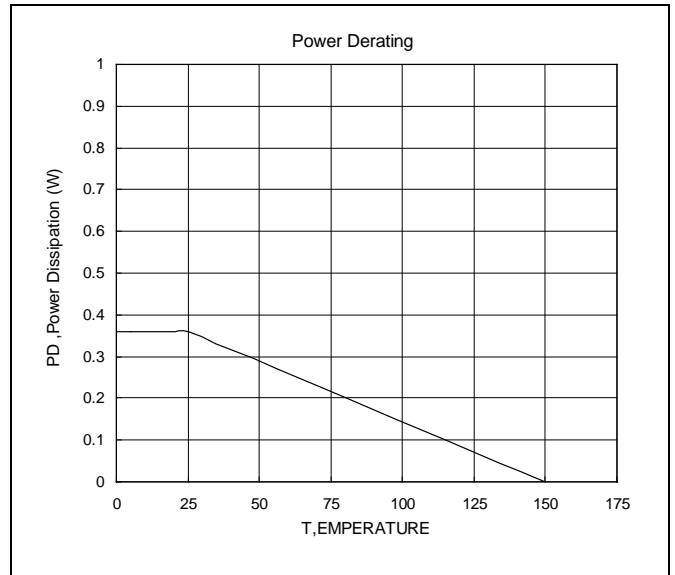
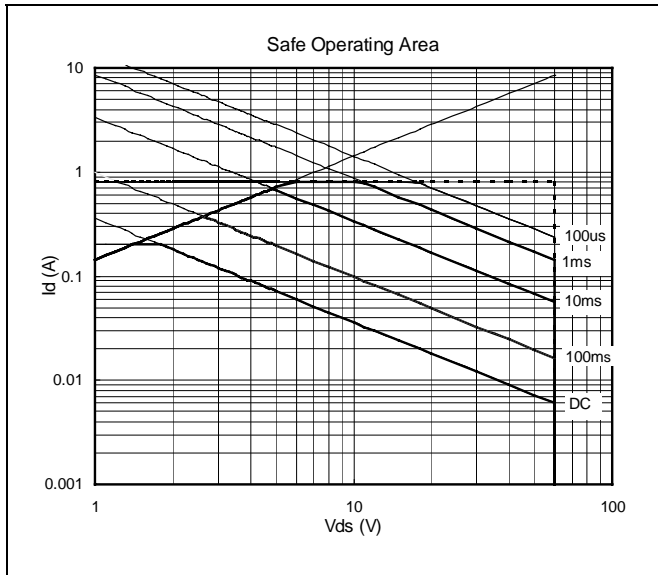
(1)The Power Dissipation of the package may result in a continuous drain current.

(2)Pulse Width≤300us, Duty cycle≥2%.



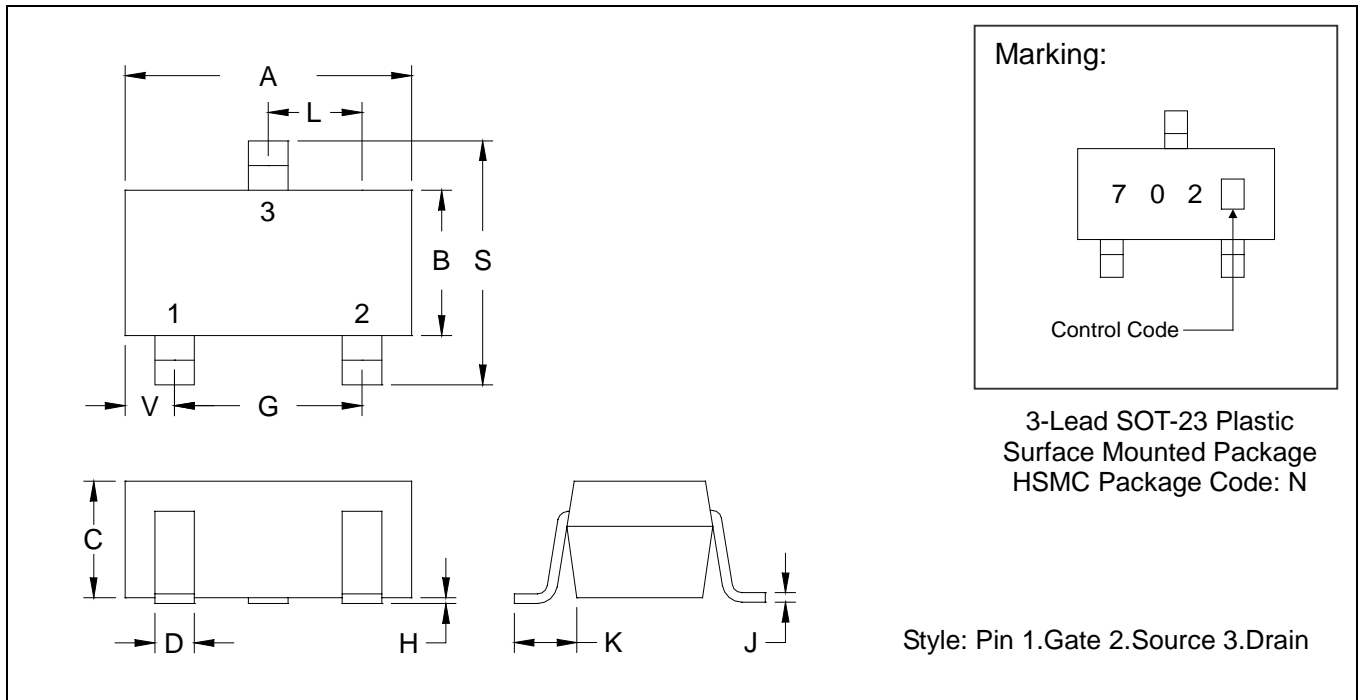
Characteristics Curve







SOT-23 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0034	0.0070	0.085	0.177
B	0.0472	0.0630	1.20	1.60	K	0.0128	0.0266	0.32	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1083	2.10	2.75
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0005	0.0040	0.013	0.10					

- Notes:**
- 1.Dimension and tolerance based on our Spec. dated Sep. 07,1997.
 - 2.Controlling dimension: millimeters.
 - 3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 - 4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

Material:

- Lead: 42 Alloy; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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