

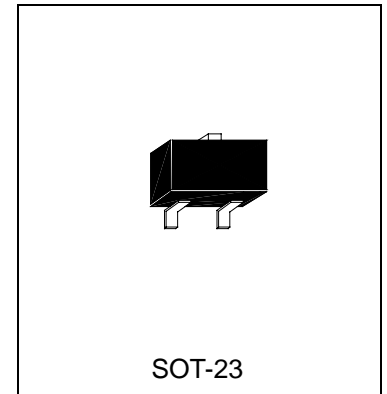


H2N7002

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)

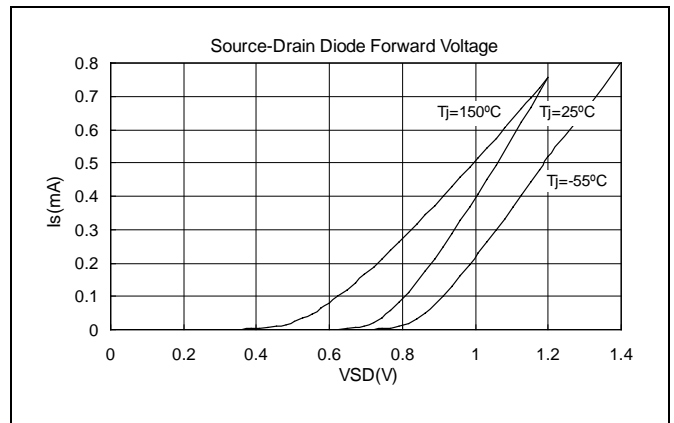
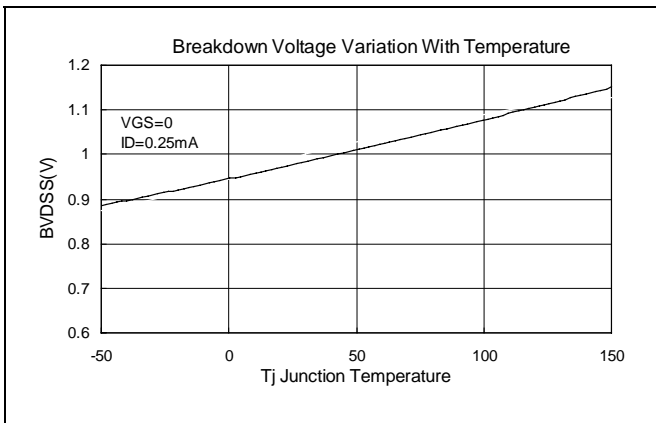
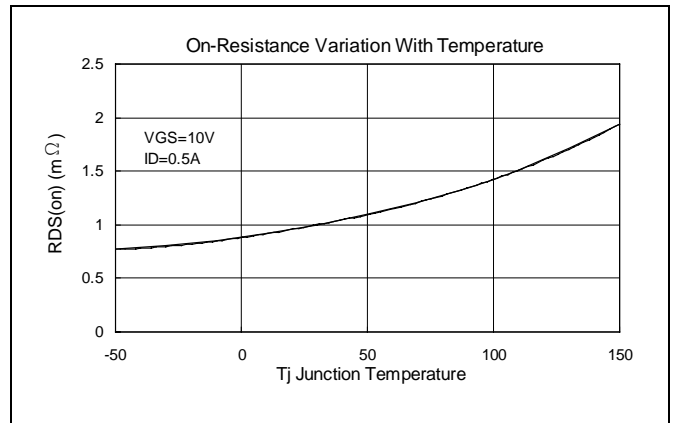
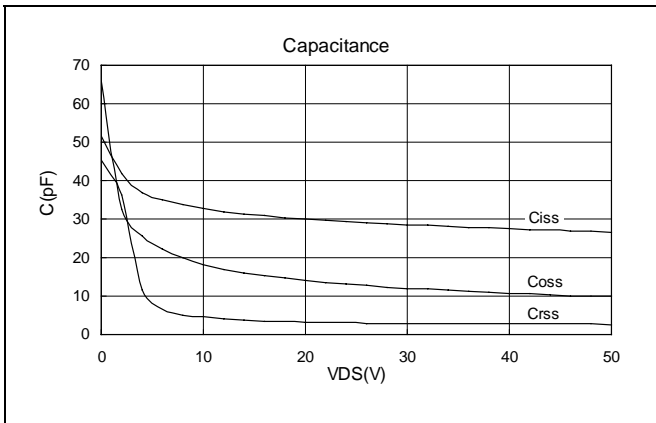
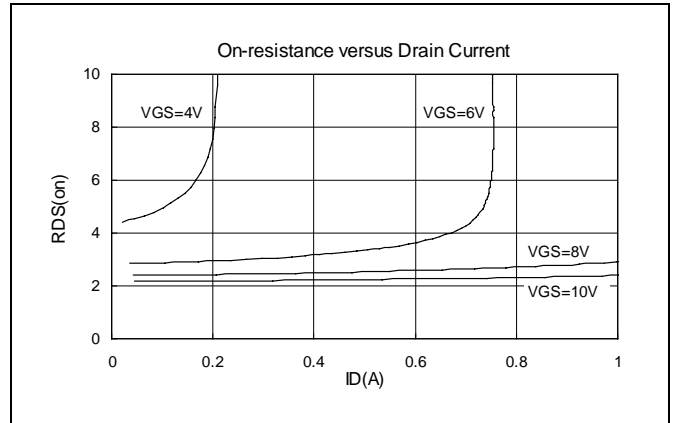
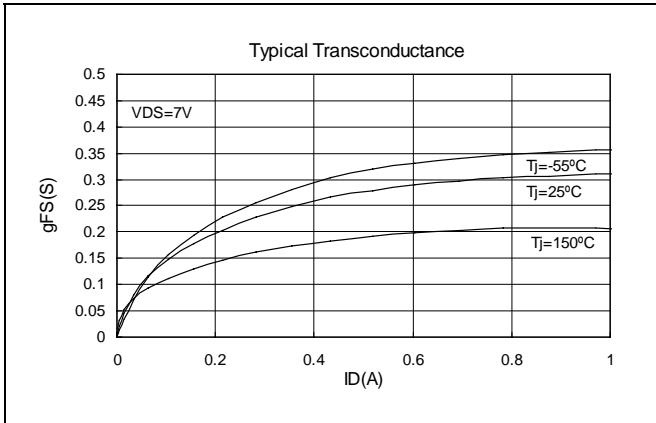
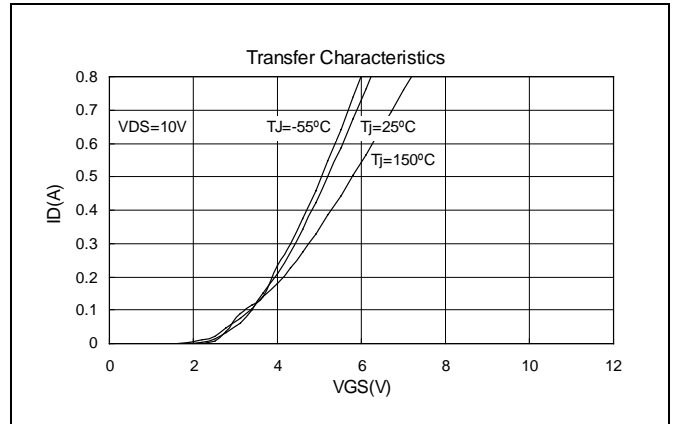
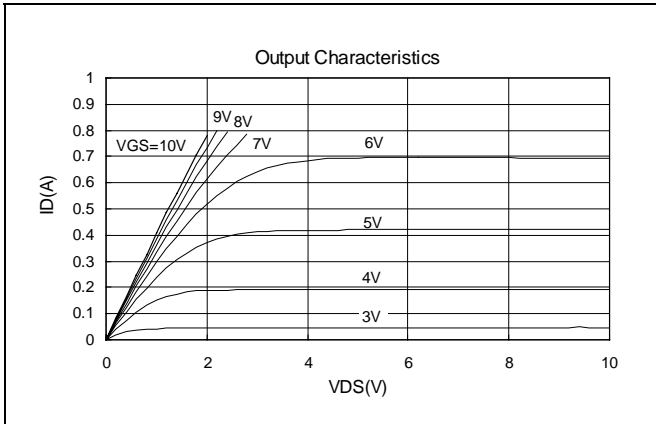
Parameter	Symbol	Test Conditions	Min	Typ.	Max	Unit
Drain-Source Breakdown Voltage	BVDSS	VGS=0, ID=10uA	60	-	-	V
Gate Threshold Voltage	VGS(th)	VDS=2.5V, ID=0.25mA	1	-	2.5	V
Gate Source Leakage Current, Forward	IGSS/F	VGS=+20V, VDS=0	-	-	100	nA
Gate Source leakage Current, Reverse	IGSS/R	VGS=-20V, VDS=0	-	-	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	GFES	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

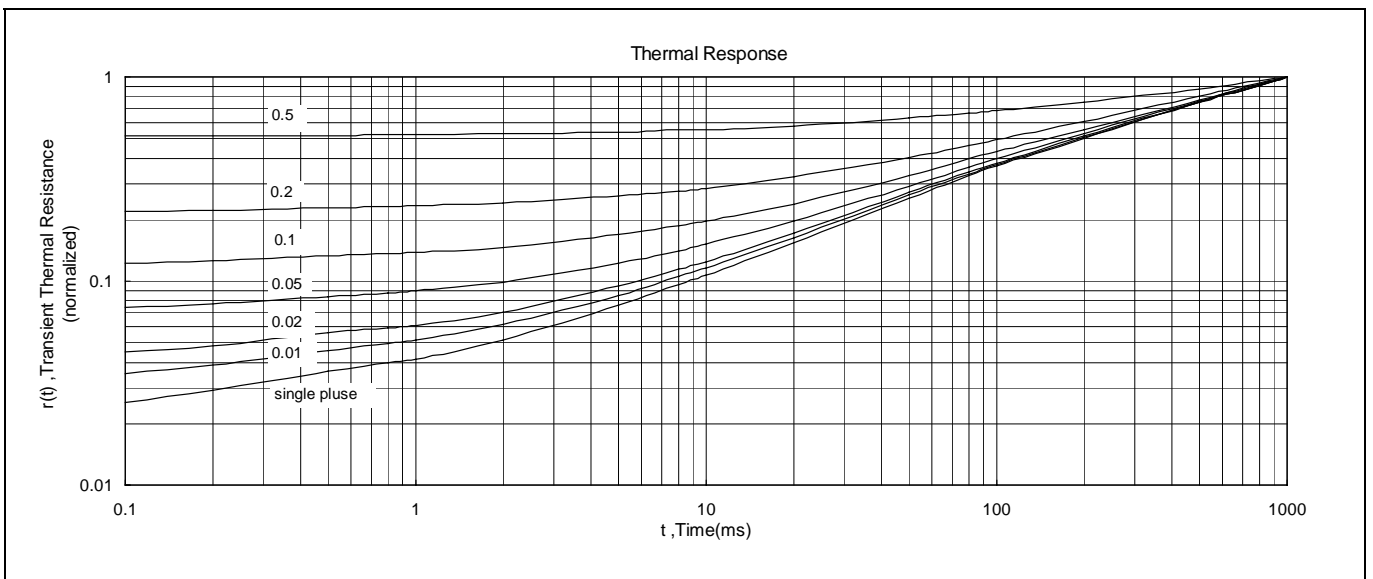
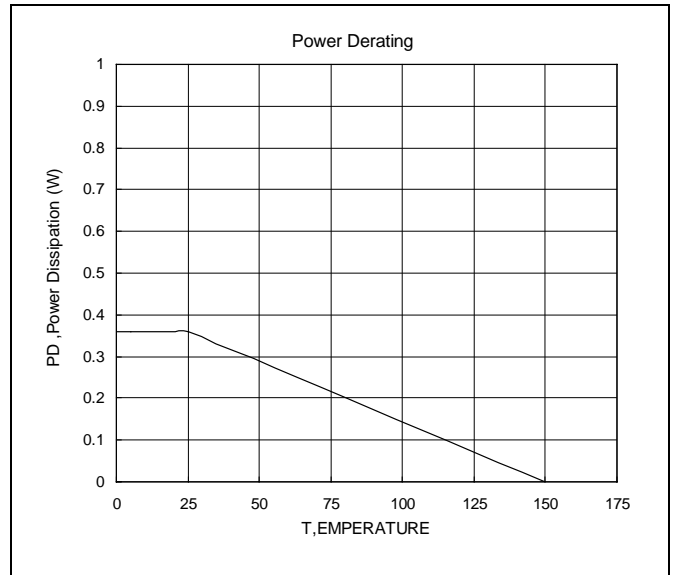
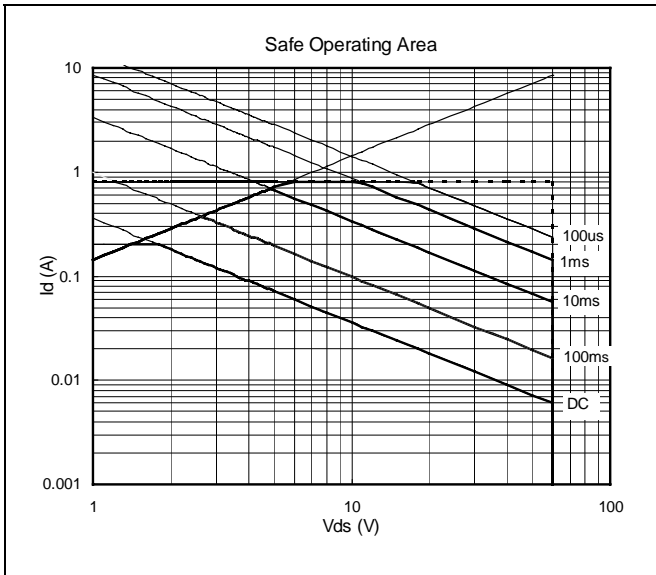
(1)The Power Dissipation of the package may result in a continuous drain current.

(2)Pulse Width≤300us, Duty cycle≥2%.



Characteristics Curve







SOT-23 Dimension

Marking:

Control Code

3-Lead SOT-23 Plastic Surface Mounted Package
 HSMC Package Code: N

Style: Pin 1.Gate 2.Source 3.Drain

*: 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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