

## GS2N7002

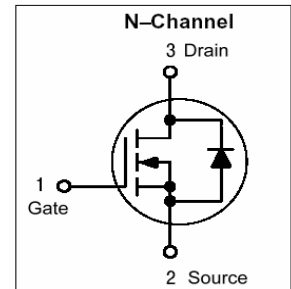
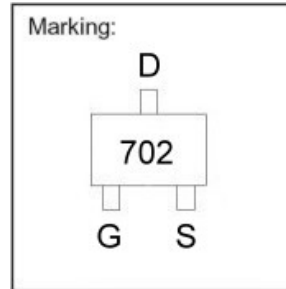
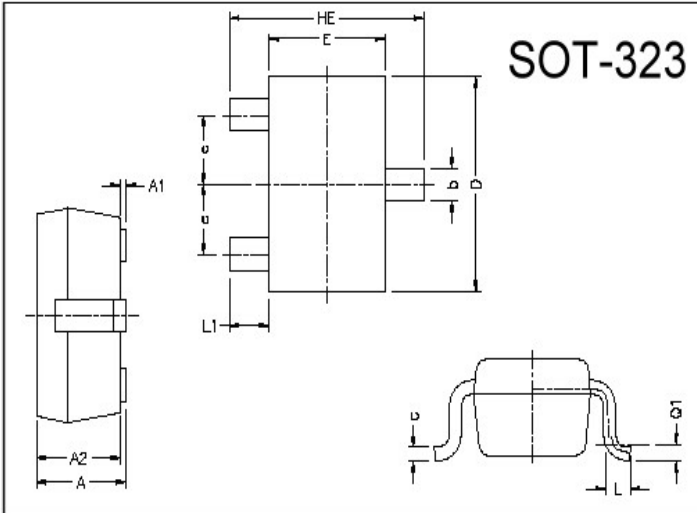
### N-CHANNEL ENHANCEMENT MODE POWER MOSFET

BV <sub>DSS</sub>	60V
R <sub>DS(ON)</sub>	4.5Ω
I <sub>D</sub>	500mA

#### Description

The GS2N7002 is universally used for all commercial-industrial surface mount applications.

#### Package Dimensions



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	0.8	1.10	L1	0.42	REF.
A1	0	0.10	L	0.15	0.35
A2	0.8	1.00	b	0.25	0.40
D	1.80	2.20	c	0.10	0.25
E	1.15	1.35	e	0.65	REF.
HE	1.80	2.40	Q1	0.15	BSC.

#### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Ratings	Unit
Operating Junction and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	-55 ~ +150	°C
Drain-Source Voltage	V <sub>DS</sub>	60	V
Gate-Source Voltage	V <sub>GS</sub>	±20	V
- Continuous	V <sub>GSM</sub>	±40	V
- Non-repetitive (tp ≤ 50us)			
Continuous Drain Current <sup>(1)</sup>	I <sub>D</sub>	500	mA
Pulsed Drain Current <sup>(2)</sup>	I <sub>DM</sub>	800	mA
Power Dissipation	P <sub>D</sub>	225	mW
Thermal Resistance, Junction-to-Ambient	R <sub>thJA</sub>	556	°C/W

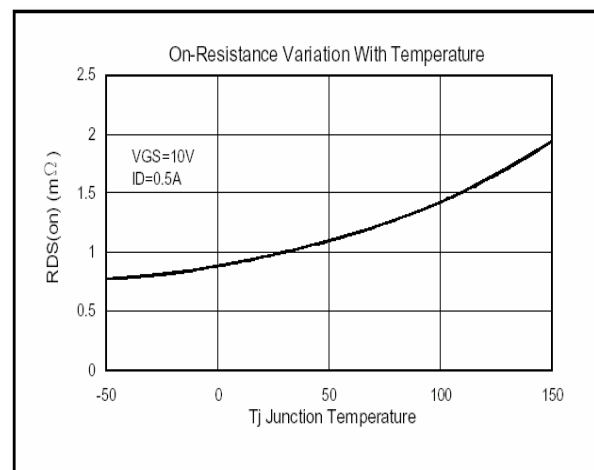
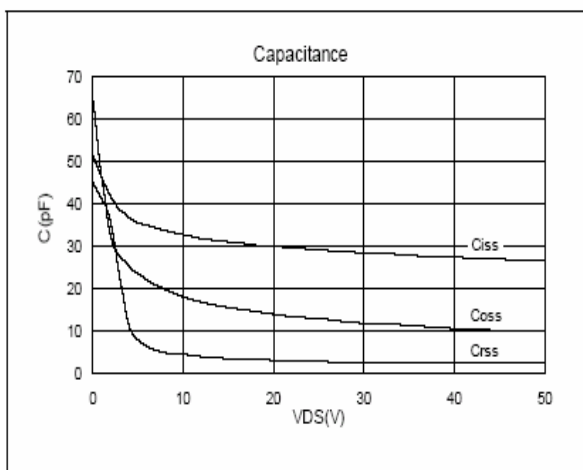
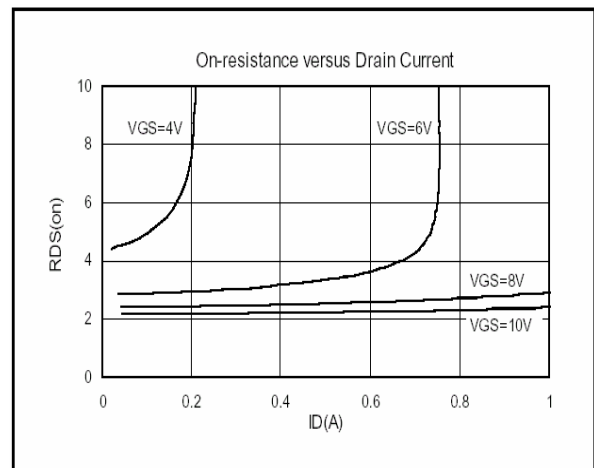
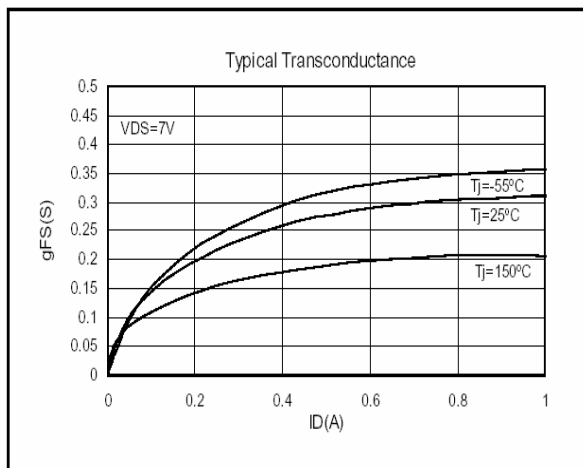
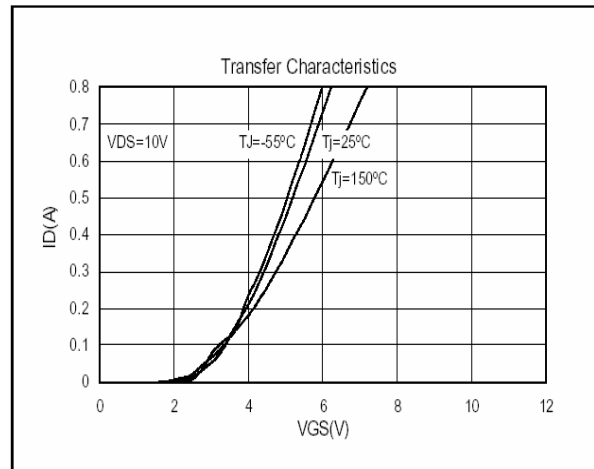
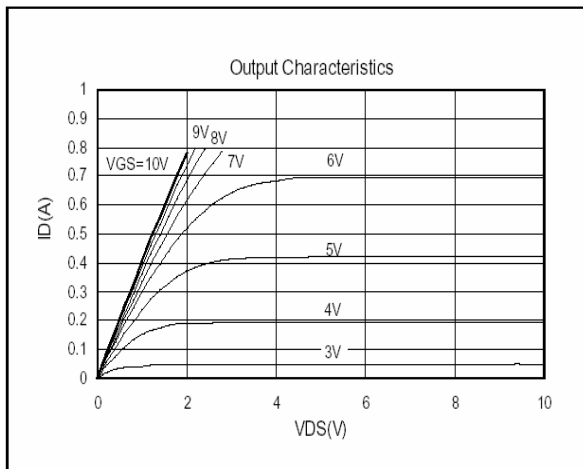
#### Electrical Characteristics (Tj = 25°C unless otherwise specified)

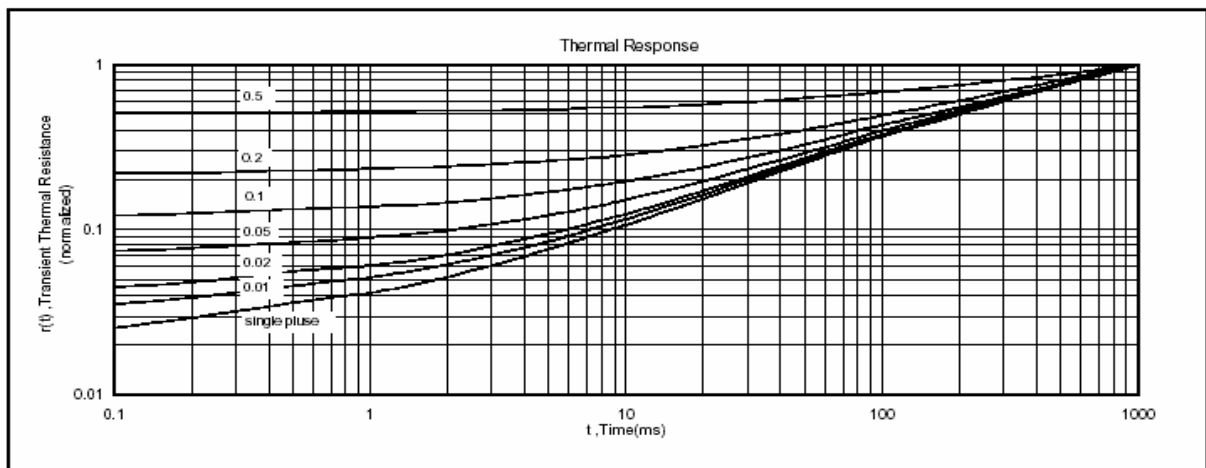
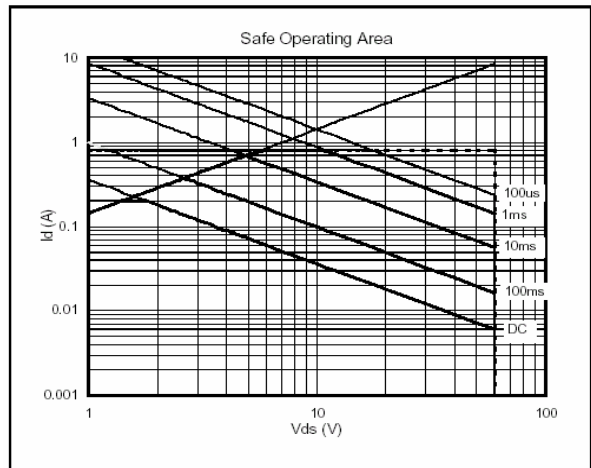
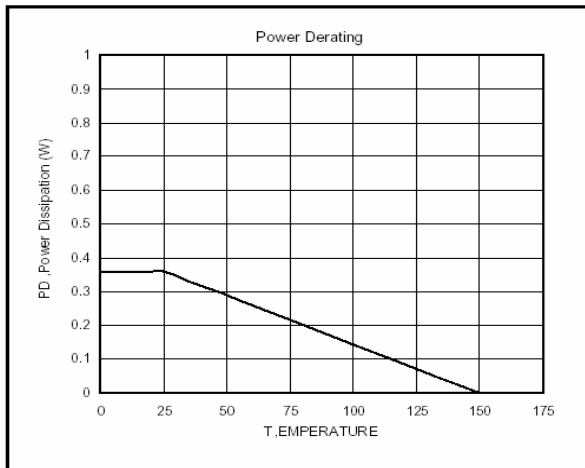
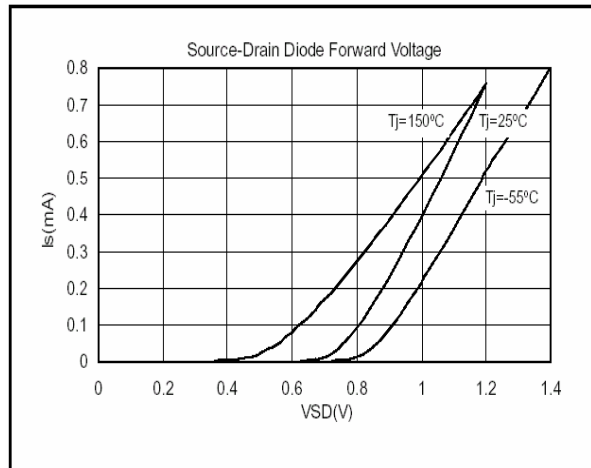
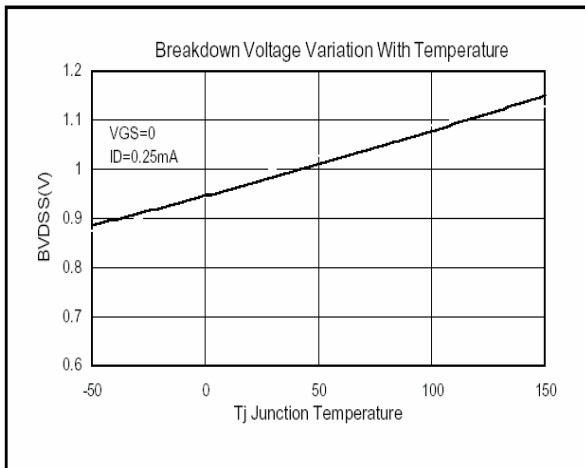
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Drain-Source Breakdown Voltage	BV <sub>DSS</sub>	60	-	-	V	V <sub>GS</sub> =0, I <sub>D</sub> =250uA
Gate Threshold Voltage	V <sub>GS(th)</sub>	1	-	2.5	V	V <sub>DS</sub> =2.5V, I <sub>D</sub> =0.25mA
Gate Body Leakage Current	I <sub>GSS</sub>	-	-	±100	nA	V <sub>GS</sub> =±20V, V <sub>DS</sub> =0
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	-	-	1	uA	V <sub>DS</sub> =60V, V <sub>GS</sub> =0
On-State Drain Current	I <sub>D(ON)</sub>	500	-	-	mA	V <sub>DS</sub> =7.5V, V <sub>GS</sub> =10V
Static Drain-Source on-State Resistance	R <sub>DS(ON)</sub>	-	-	5	Ω	I <sub>D</sub> =50mA, V <sub>GS</sub> =5V
		-	-	4.5		I <sub>D</sub> =500mA, V <sub>GS</sub> =10V
Forward Transconductance	G <sub>FS</sub>	80	-	-	mS	V <sub>DS</sub> >2 V <sub>DS(ON)</sub> , I <sub>D</sub> =200mA
Input Capacitance	C <sub>iss</sub>	-	-	50	pF	V <sub>DS</sub> =25V, V <sub>GS</sub> =0V, f=1MHz
Output Capacitance	C <sub>oss</sub>	-	-	25	pF	
Reverse Transfer Capacitance	C <sub>rss</sub>	-	-	5	pF	

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

(2) Pulse Width ≤ 300us, Duty cycle ≤ 2%.

## Characteristics Curve





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