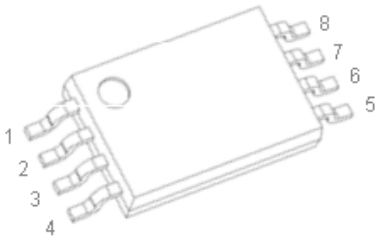
WG8212

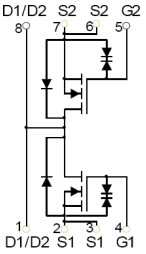
Features:

- ☐ Low Intrinsic Capacitances.
- ☐ Excellent Switching Characteristics.
- ☐ Extended Safe Operating Area.
- ☐ Unrivalled Gate Charge :Qg= 21 nC (Typ.).
- ☐ BVDSS=20V,ID= 20A
- ☐ RDS(on) : 10.4 mΩ (Max) @VG=10V
- ☐ 100% Avalanche Tested

TSSOP-8

RoHS COMPLIANT





Marking:8212

Absolute maximum ratings (Ta=25C° unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current	I_D	20	A
Pulsed Drain Current	I_{DM} *	30	A
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	62.5	℃/W
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-55~+150	℃
Lead Temperature for Soldering Purposes(1/8'' from case for 10 s)	T_L	260	℃

*Repetitive rating：Pluse width limited by junction temperature.

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Electrical characteristics (T_A=25 °C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	20			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =16V,V_{GS} = 0V			1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±4.5V, V_{DS} = 0V			±1	μA
		V_{GS} =±8V, V_{DS} = 0V			±10	μA
Gate threshold voltage (note 1)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.4	0.7	1.5	V
Drain-source on-resistance (note 1)	$R_{DS(on)}$	V_{GS} =10V, I_D =10A		9.9	10.4	mΩ
		V_{GS} =4.5V, I_D =8A		11	13	mΩ
		V_{GS} =3.8V, I_D =5A		11	18	mΩ
		V_{GS} =2.5V, I_D =3A		13	23	mΩ
Forward tranconductance (note 1)	g_{FS}	V_{DS} =5V, I_D =7A	9			S
Diode forward voltage(note 1)	V_{SD}	I_S=1A, V_{GS} = 0V			1	V
DYNAMIC PARAMETERS (note 2)						
Input Capacitance	C_{iss}	V_{DS} =10V,V_{GS} =0V,f =1MHz		1235		pF
Output Capacitance	C_{oss}			185		pF
Reverse Transfer Capacitance	C_{rss}			145		pF
Total gate charge	Q_g	V_{DS} =10V,V_{GS} =4.5V,I_D =7A		21		nC
Gate-source charge	Q_{gs}			0.8		nC
Gate-drain charge	Q_{gd}			3.2		nC
SWITCHING PARAMETERS(note 2)						
Turn-on delay time	$t_{d(on)}$	V_{GS}=5V,V_{DD}=10V, R_L=1.35Ω,R_{GEN}=3Ω		6		ns
Turn-on rise time	t_r			13		ns
Turn-off delay time	$t_{d(off)}$			52		ns
Turn-off fall time	t_f			16		ns

Notes :

1. Pulse Test : Pulse width≤300μs, duty cycle≤0.5%.
2. Guaranteed by design, not subject to production testing.

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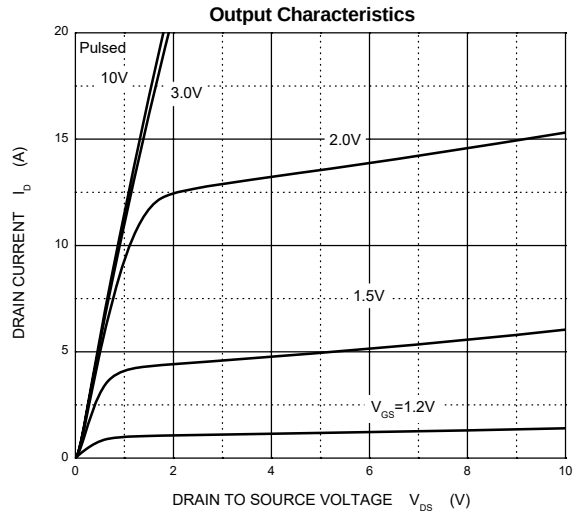
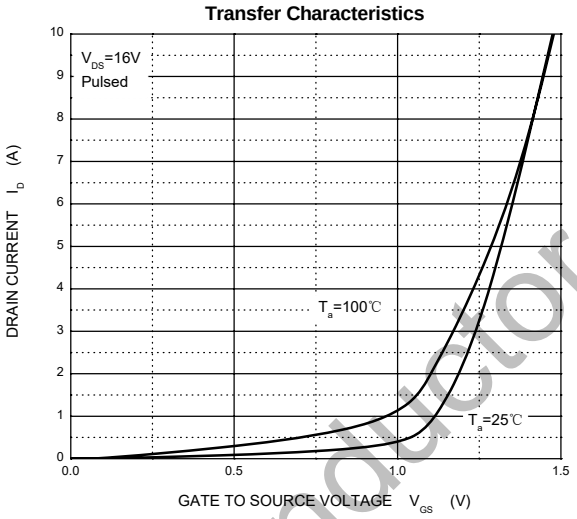
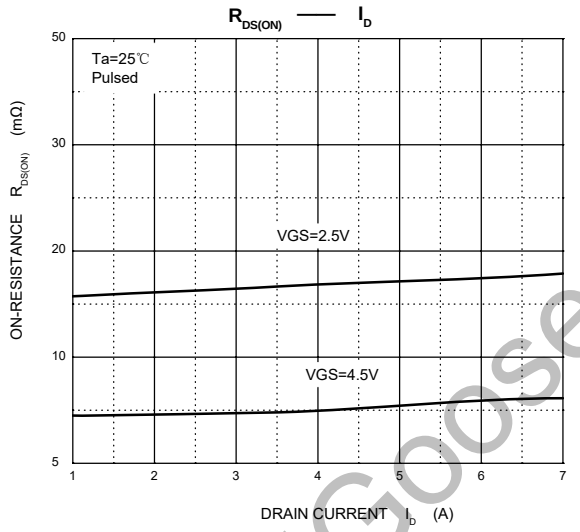
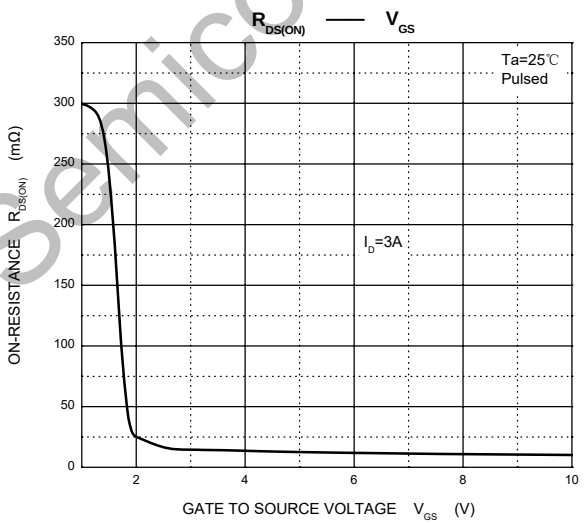
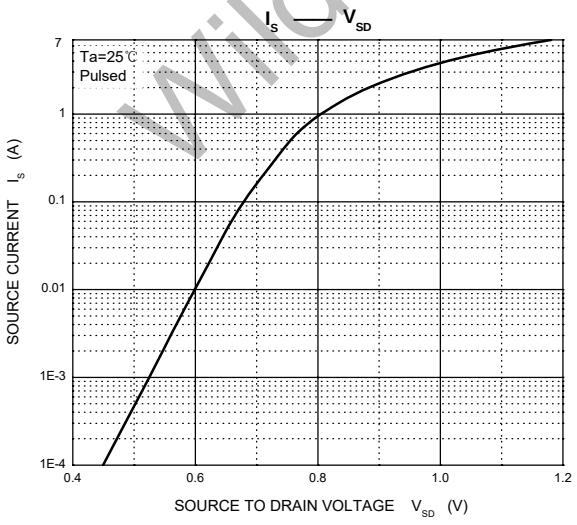
Typical Characteristics

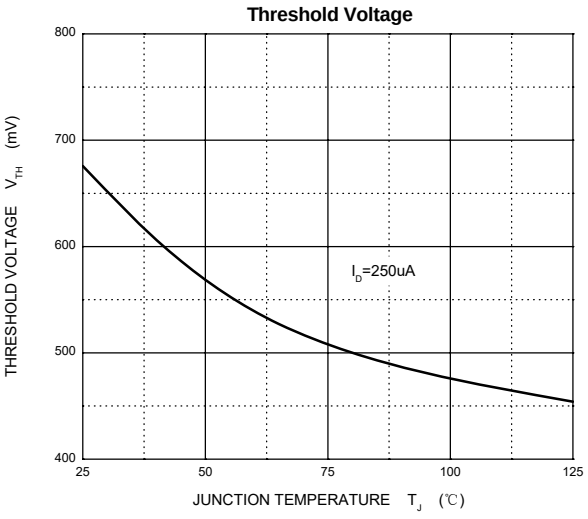












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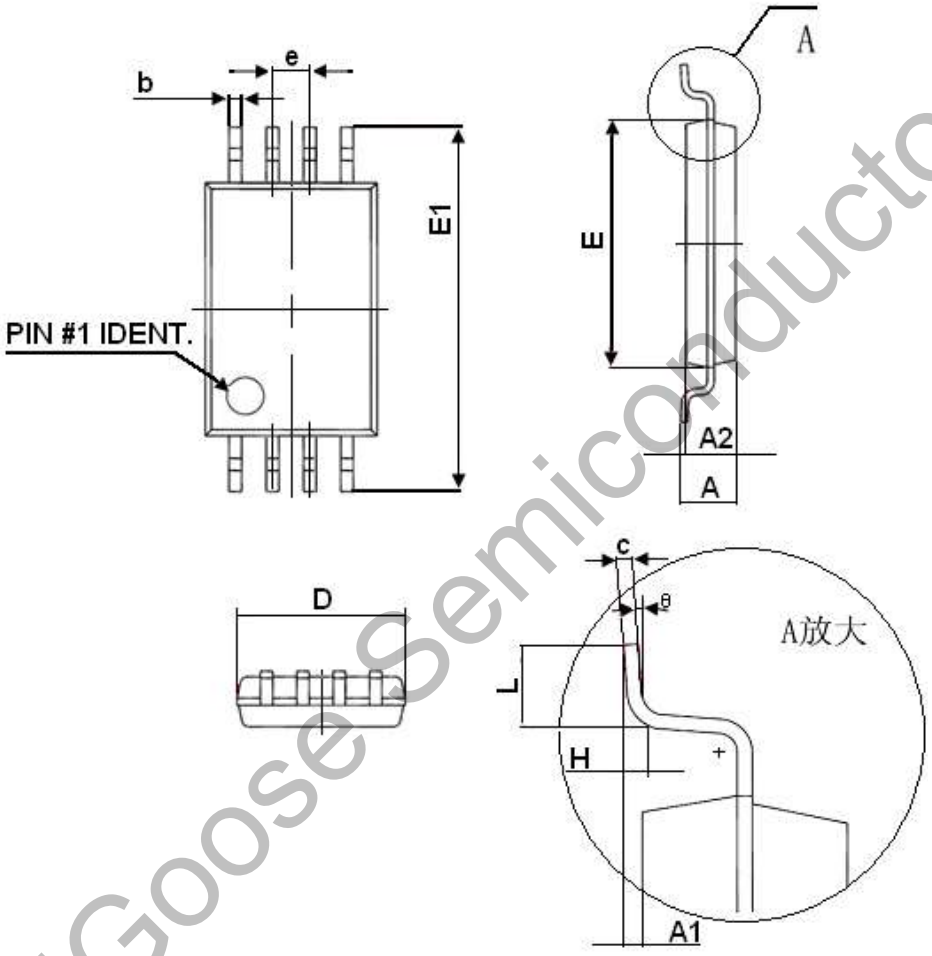
Package Dimension

TSSOP-8

Unit: mm



Symbol	Dimensions In Millimeters	
	Min	Max
D	2.900	3.100
E	4.300	4.500
b	0.190	0.300
c	0.090	0.200
E1	6.250	6.550
A		1.100
A2	0.800	1.000
A1	0.020	0.150
e	0.65(BSC)	
L	0.500	0.700
H	0.25(TYP)	
Θ	1°	7°

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