

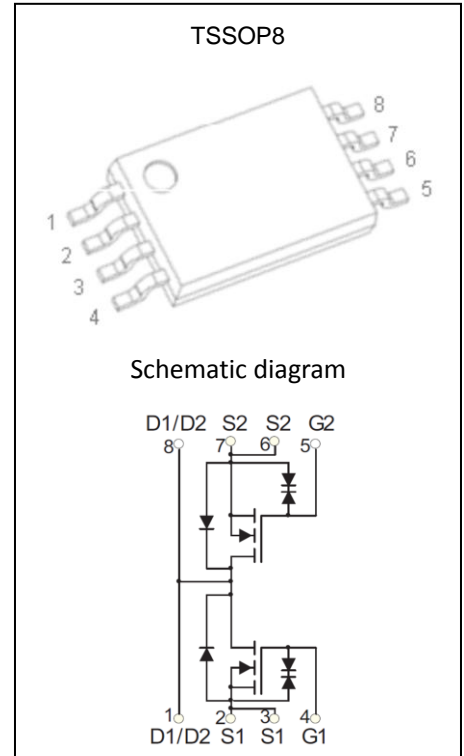
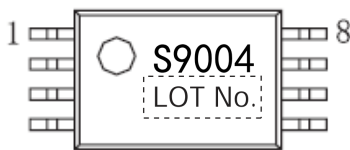
Product Summary

V _{(BR)DSS}	R _{DS(on)TYP}	I _D
20V	7.5mΩ@4.5V	10A
	8.0mΩ@4.0V	
	8.4mΩ@3.8V	
	8.9mΩ@3.1V	
	9.7mΩ@2.5V	

DESCRIPTION

The GP9004S uses advanced trench technology to provide excellent R_{DS(ON)} and low gate charge. It is ESD protected. This device is suitable for use as a uni-directional or bi-directional load switch, facilitated by its common-drain configuration.

MARKING:



ABSOLUTE MAXIMUM RATINGS (T_a=25°C 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	10	A
Pulsed Drain Current	I _{DM}	50	A
Power Dissipation	P _D	2	W
Thermal Resistance from Junction to Ambient	R _{θJA}	62.5	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55~ +150	°C
Lead Temperature for Soldering Purposes(1/8" from case for 10s)	T _L	260	°C

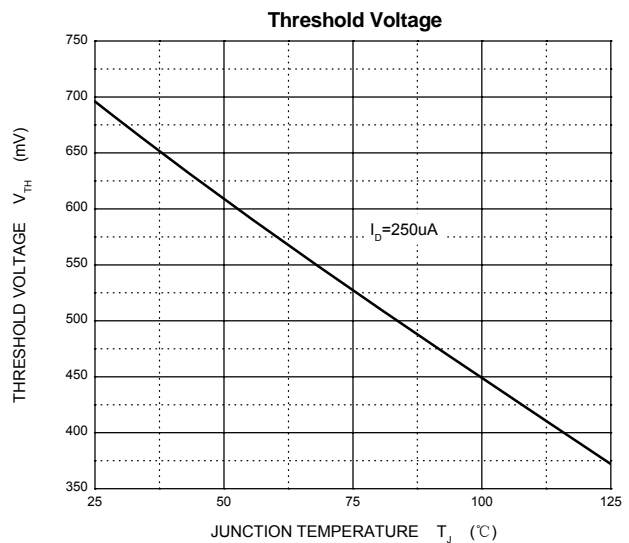
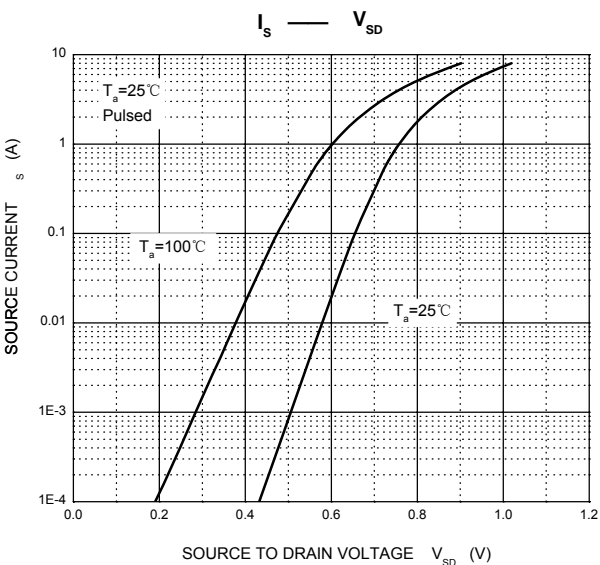
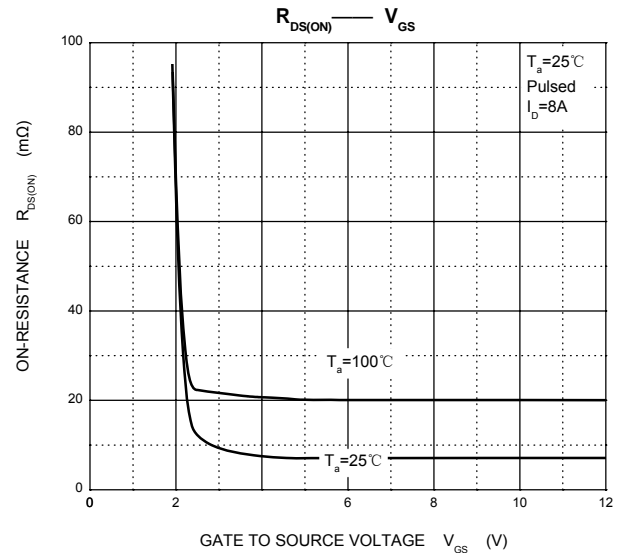
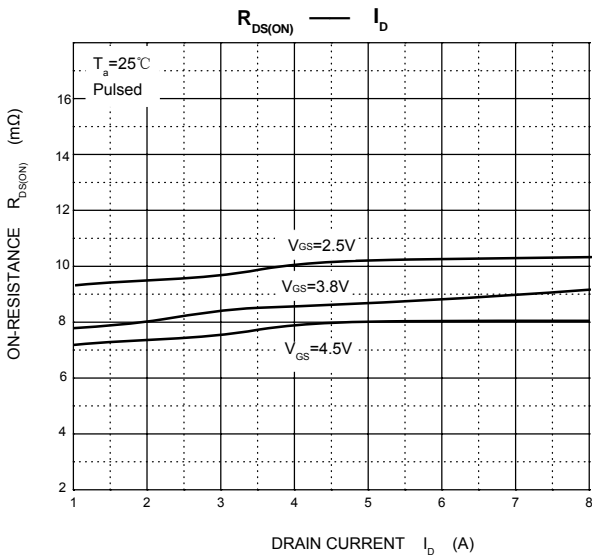
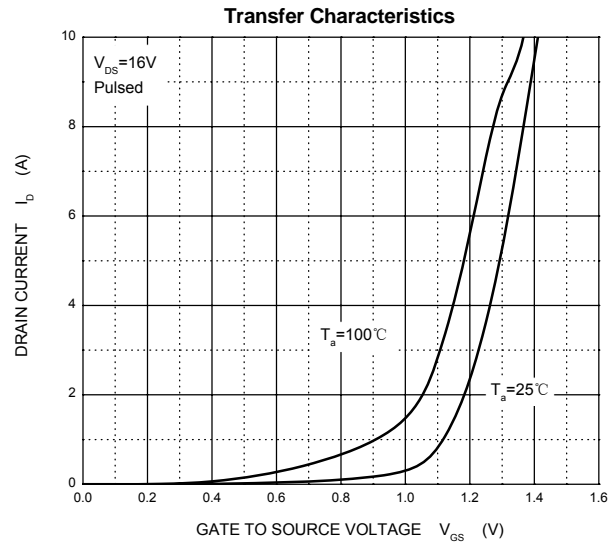
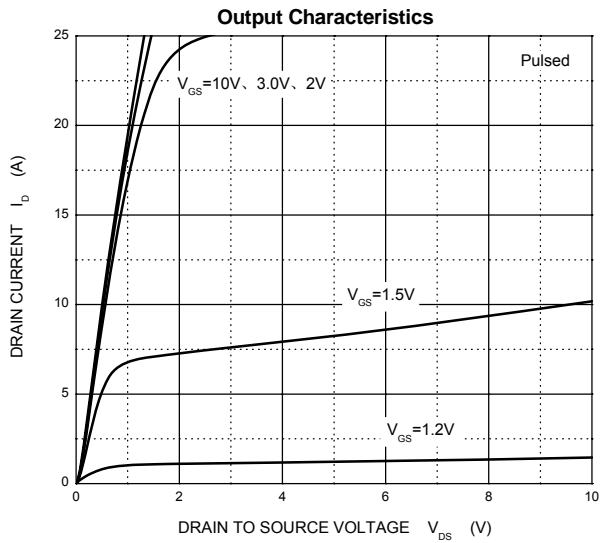
MOSFET ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
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	
		V _{GS} =±8V, V _{DS} = 0V			±10	
Gate threshold voltage ⁽¹⁾	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.5	0.7	0.9	V
Drain-source on-resistance ⁽¹⁾	R _{DS(on)}	V _{GS} =4.5V, I _D =3A	6.0	7.5	9.0	mΩ
		V _{GS} =4.0V, I _D =3A	7.0	8.0	9.5	
		V _{GS} =3.8V, I _D =3A	7.5	8.4	9.8	
		V _{GS} =3.1V, I _D =3A	8.0	8.9	10	
		V _{GS} =2.5V, I _D =3A	9.0	9.7	12	
Forward tranconductance ⁽¹⁾	g _{FS}	V _{DS} =5V, I _D =7A	8	23		S
Diode Forward voltage ⁽¹⁾	V _{DS}	V _{GS} =0V, I _S =1A			1	V
Dynamic characteristics⁽²⁾						
Input Capacitance	C _{iss}	V _{DS} =10V, V _{GS} =0V, f =1MHz		1040		pF
Output Capacitance	C _{oss}			225		
Reverse Transfer Capacitance	C _{rss}			195		
Total gate charge	Q _g	V _{DS} =10V, V _{GS} =4.5V, I _D =7A		13		nC
Gate-source charge	Q _{gs}			2.8		
Gate-drain charge	Q _{gd}			5.6		
Switching Characteristics⁽²⁾						
Turn-on delay time	t _{d(on)}	V _{GS} =5V, V _{DD} =10V, R _L =1.35Ω, R _{GEN} =3Ω		28		ns
Turn-on rise time	t _r			64		
Turn-off delay time	t _{d(off)}			90		
Turn-off fall time	t _f			9058		
Drain-Source Diode Charac teristics						
Diode Forward Current	I _S				6.0	A

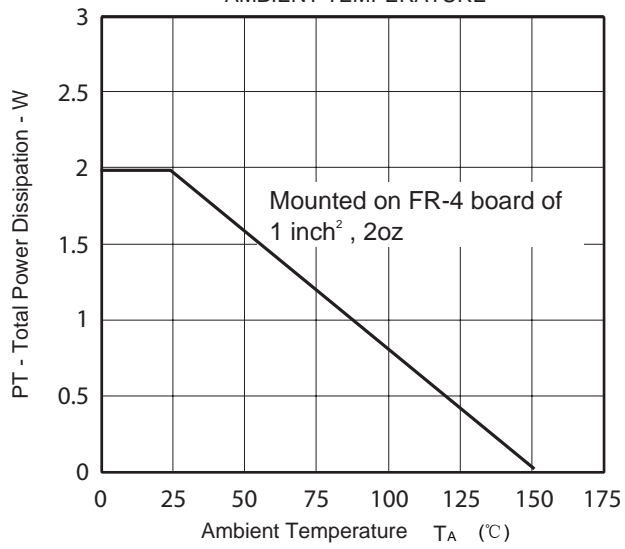
Notes :

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

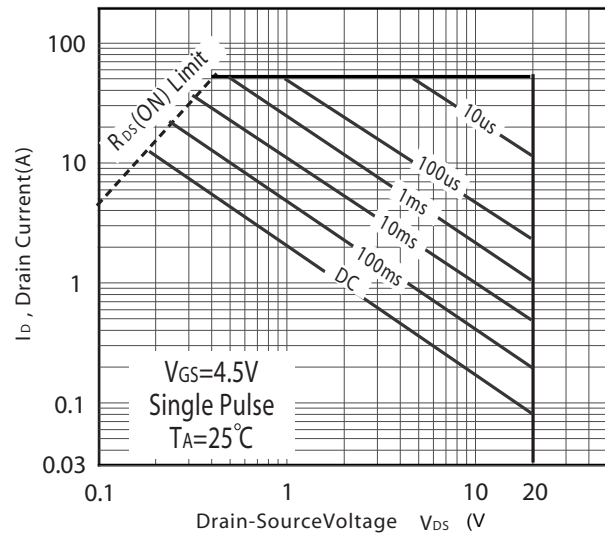
Typical Electrical and Thermal Characteristics



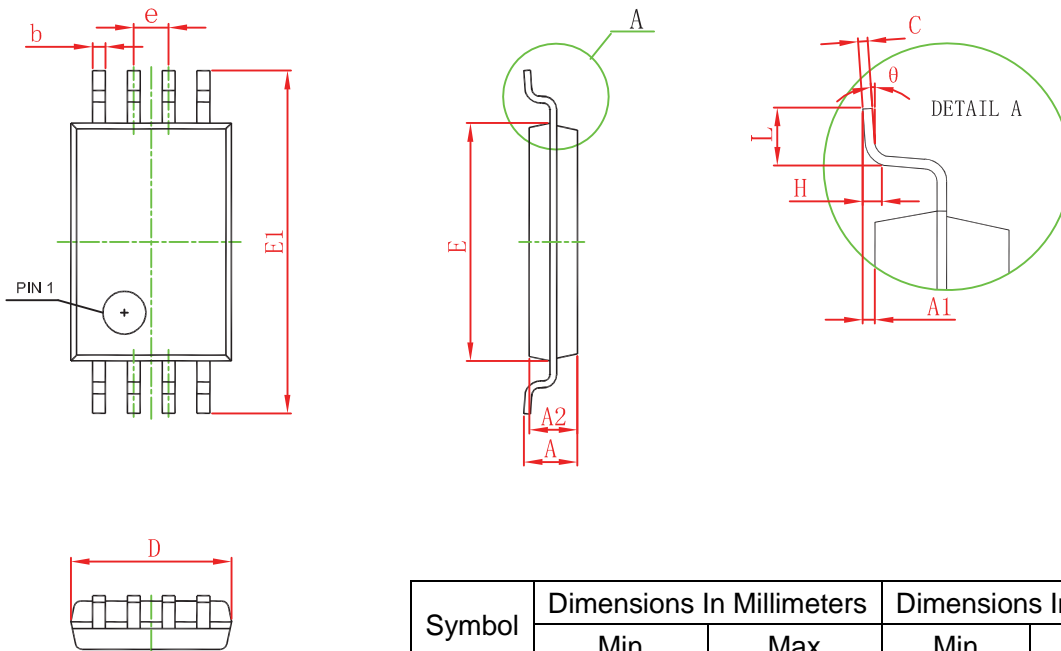
TOTAL POWER DISSIPATION vs.
AMBIENT TEMPERATURE



Maximum Safe Operating Area



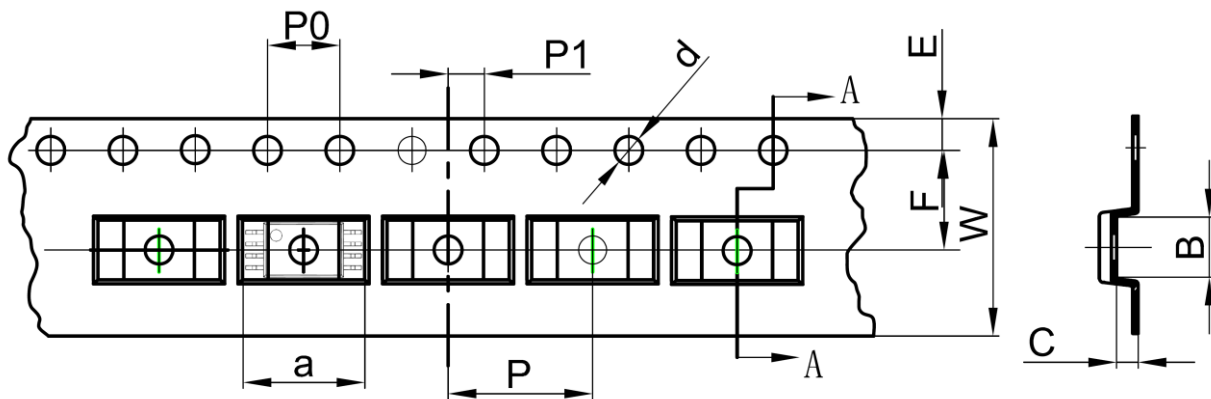
TSSOP8 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
D	2.900	3.100	0.114	0.122
E	4.300	4.500	0.169	0.177
b	0.190	0.300	0.007	0.012
c	0.090	0.200	0.004	0.008
E1	6.250	6.550	0.246	0.258
A		1.200		0.047
A2	0.800	1.000	0.031	0.039
A1	0.050	0.150	0.002	0.006
e	0.65(BSC)		0.026(BSC)	
L	0.500	0.700	0.020	0.028
H	0.25(TYP)		0.01(TYP)	
θ	1°	7°	1°	7°

TSSOP8 Tape and Reel

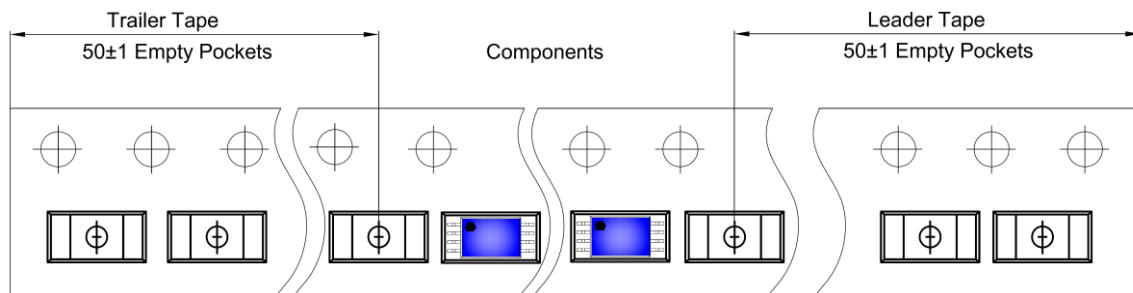
TSSOP8 Embossed Carrier Tape



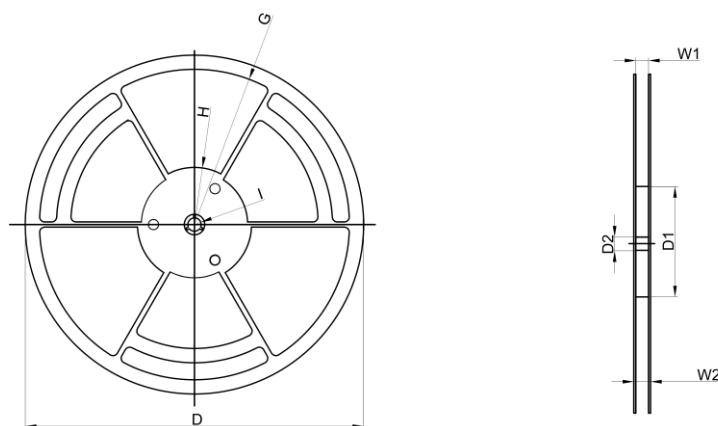
Dimensions are in millimeter

Pkg type	a	B	C	d	E	F	P0	P	P1	W
TSSOP8	6.76	3.30	1.20	Φ1.50	1.75	5.50	4.00	8.00	2.00	12.00

TSSOP8 Tape Leader and Trailer



TSSOP8 Reel



Dimensions are in millimeter

Reel Option	D	D1	D2	G	H	I	W1	W2
13`Dia	Φ330.00	100.00	13.00	R151.00	R56.00	R6.50	12.40	17.60

Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000pcs	13 inch	30,000pcs	336x336x48	24,000pcs	445x355x365	

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)