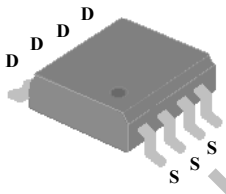
WG95V100

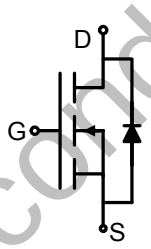
Application

- High power and current handing capability
- Lead free product is acquired
- Surface mount package
- Unrivalled Gate Charge :Qg=16nC (Typ.).
- BVDSS=100 V,I_D=15 A
- R_{DS}(on) : 95mΩ (Typ) @V_G=10V

SOP-8

RoHS COMPLIANT





1. Gate (G)
2. Drain (D)
3. Source (S)

Schematic diagram

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■ **Absolute Maximum Ratings** (T_A=25℃unless otherwise noted)

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	100	V
Gate-source Voltage		V_{GS}	±20	V
Drain Current	T_C=25℃	I_D	15	A
	T_C=100℃		10.5	
Pulsed Drain Current [A]		I_{DM}	60	A
Single Pulse Avalanche Energy		E_{AS}	9	mJ
Total Power Dissipation	T_C=25℃	P_D	34	W
	T_C=100℃		17	W
Thermal Resistance Junction-to-Case [B]		$R_{\theta JC}$	4.4	℃/ W
Junction and Storage Temperature Range		T_J ,T_{STG}	-55～+175	℃

■ Electrical Characteristics (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Conditions		Min	Typ	Max	Units
Static Parameter							
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}= 0V, I_D=250μA		100			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=100V,V_{GS}=0V	T_J=25℃			1	μA
			T_J=55℃			5	
Gate-Body Leakage Current	I_{GSS}	V_{GS}= ±20V, V_{DS}=0V				±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= V_{GS}, I_D=250μA		1.1	1.8	3.0	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}= 10V, I_D=8A			95	110	mΩ
		V_{GS}= 4.5V, I_D=8A			100	120	
Diode Forward Voltage	V_{SD}	I_S=15A,V_{GS}=0V			0.8	1.2	V
Maximum Body-Diode Continuous Current	I_S					15	A
Dynamic Parameters							
Input Capacitance	C_{iss}	V_{DS}=50V,V_{GS}=0V,f=1MHZ			800		pF
Output Capacitance	C_{oss}				39		
Reverse Transfer Capacitance	C_{rss}				32		
Switching Parameters							
Total Gate Charge	Q_g	V_{GS}=10V,V_{DS}=50V,I_D=10A			16		nC
Gate-Source Charge	Q_{gs}				2.5		
Gate-Drain Charge	Q_{gd}				2.6		
Turn-on Delay Time	$t_{D(on)}$	V_{GS}=10V,V_{DD}=50V,R_L=6.4Ω R_{GEN}=3Ω			5		ns
Turn-on Rise Time	t_r				40		
Turn-off Delay Time	$t_{D(off)}$				20		
Turn-off fall Time	t_f				7		

A. Pulse Test: Pulse Width≤300us,Duty cycle ≤2%.

B. $R_{\theta JA}$ is the sum of the junction-to-case and case-to-ambient thermal resistance, where the case thermal reference is defined as the solder mounting surface of the drain pins. $R_{\theta JC}$ is guaranteed by design, while $R_{\theta JA}$ is determined by the board design. The maximum rating presented here is based on mounting on a 1 in 2 pad of 2oz copper.

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■ Typical Performance Characteristics

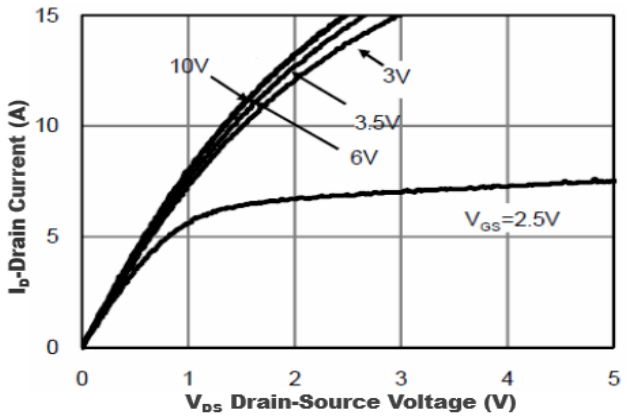


Figure1. Output Characteristics

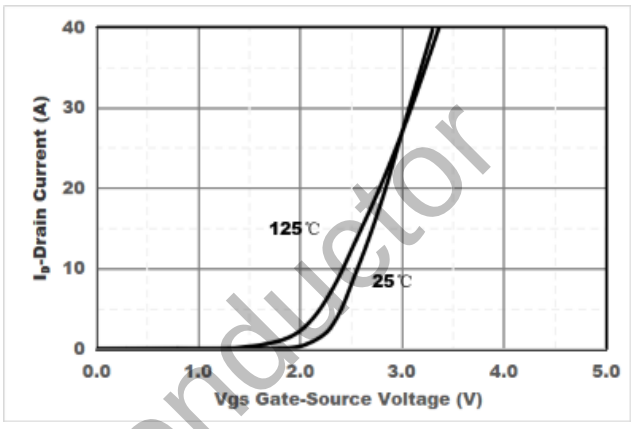


Figure2. Transfer Characteristics

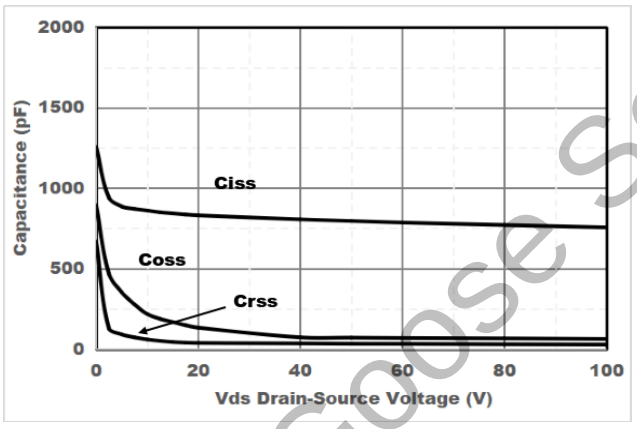


Figure3. Capacitance Characteristics

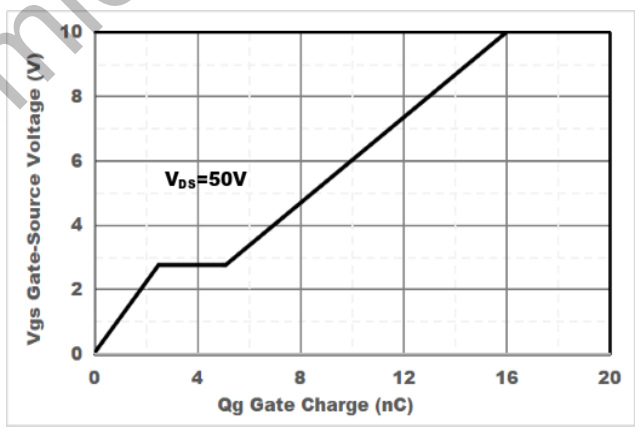


Figure4. Gate Charge

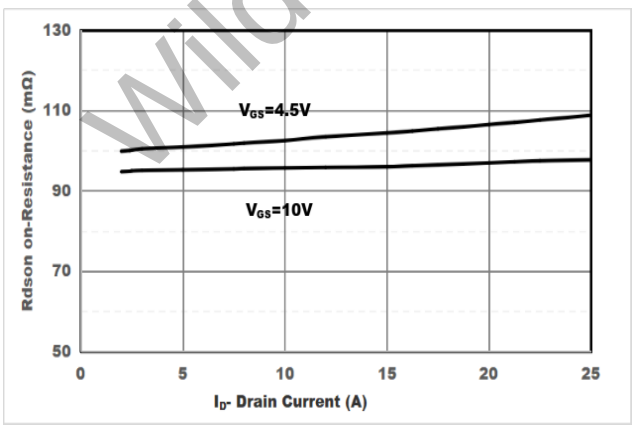


Figure5. Drain-Source on Resistance

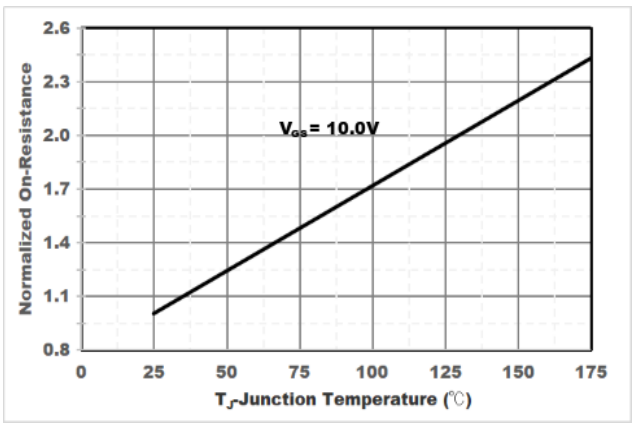


Figure6. Drain-Source on Resistance

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■ Typical Performance Characteristics

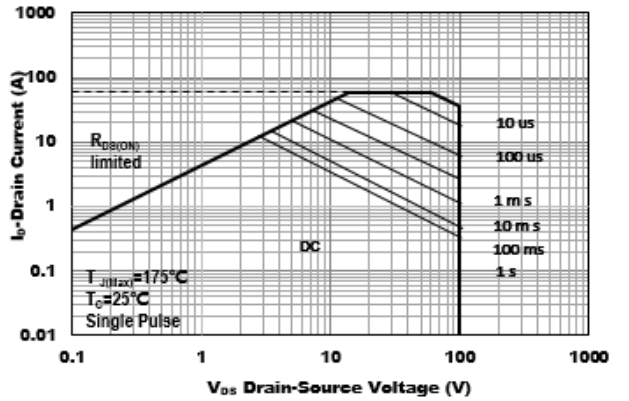


Figure7. Safe Operation Area

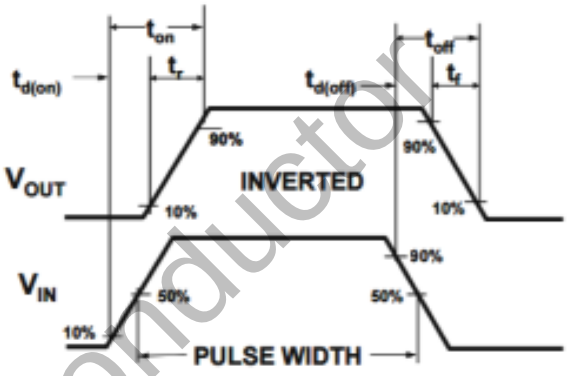
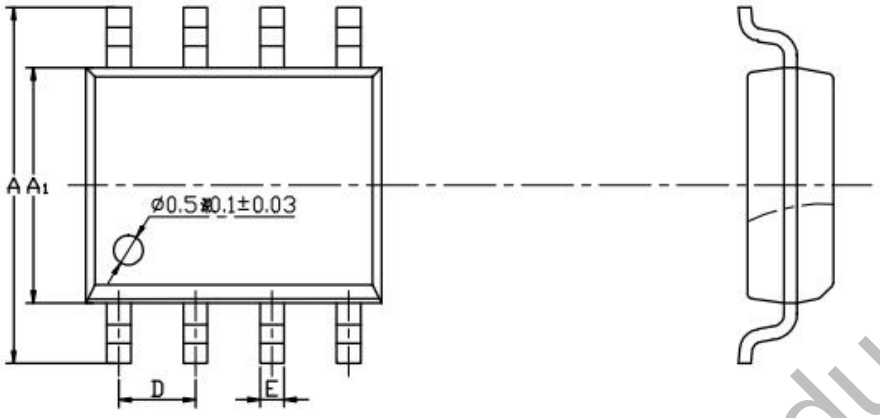
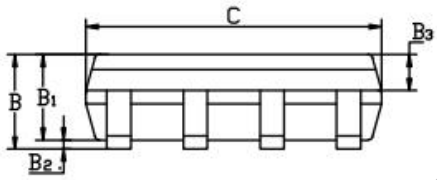


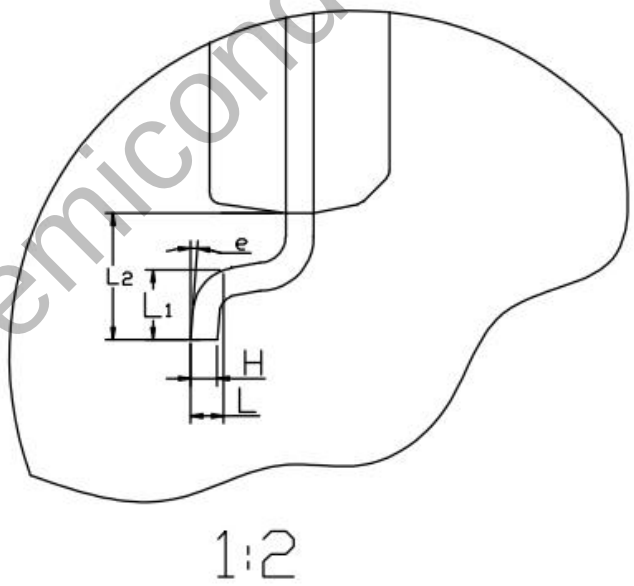
Figure8. Switching wave

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SOP-8 Package Information







尺寸数据：			单位：mm	
标注	Min	Nom	Max	备注
A	5.80	6.00	6.20	跨度
A1	3.70	3.90	4.10	
B	1.50	1.60	1.75	
B1	1.30	1.40	1.50	
B2	0.05	0.125	0.2	站高
B3	0.60	0.70	0.75	
C	4.75	4.85	5.05	
D	1.27BSC			
E	0.39	0.44	0.49	
H	0.10	0.20	0.25	
L	0.25BSC			
L1	0.40	0.6	0.8	
L2	0.95	1.05	1.20	脚长
e	0	4°	8°	

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