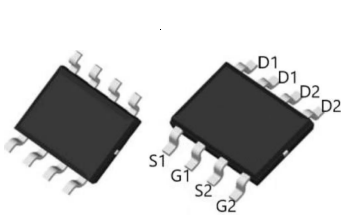


Features

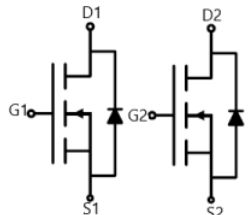
Low Gate Charge
100% UIS Tested, 100% DVDS Tested
High Power and current handling capability
Lead free product is acquired

Applications

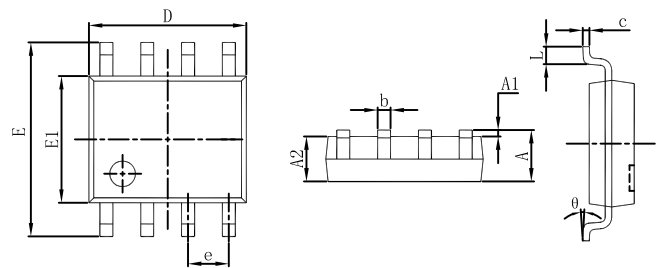
Load switch
PMW



SOP-8 top&bottom view



Schematic Diagram



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.007	0.010
D	4.800	5.000	0.189	0.197
e	1.270 (BSC)		0.050 (BSC)	
E	5.800	6.200	0.228	0.244
E1	3.800	4.000	0.150	0.157
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

Absolute Maximum Ratings (T_C=25°C unless otherwise noted)

Symbol	Parameter	Limit	Unit
V _{DS}	Drain-Source Voltage (V _{GS} =0V)	20	V
V _{GS}	Gate-Source Voltage (V _{DS} =0V)	±12	V
I _D	Drain Current-Continuous(T _A =25°C)	6	A
	Drain Current-Continuous(T _A =100°C)	3.8	A
I _{DM} (pulse)	Drain Current-Continuous@ Current-Pulsed (Note 1)	24	A
P _D	Maximum Power Dissipation(T _A =25°C)	0.9	W
	Maximum Power Dissipation(T _A =100°C)	0.3	W
E _{AS}	Avalanche energy (Note 2)	256	mJ
T _J , T _{STG}	Operating Junction and Storage Temperature Range	-55 To 150	°C

9926A

Electrical Characteristics ($T_J=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
On/Off States						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V I _D =250μA	20			V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =20V, V _{GS} =0V T _J =25℃			1	μA
		V _{DS} =20V, V _{GS} =0V T _J =125℃			100	μA
I _{GSS}	Gate-Body Leakage Current	V _{GS} =±12V, V _{DS} =0V			±100	nA
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =250μA	0.5		1	V
g _{FS}	Forward Transconductance	V _{DS} =5V, I _D =1.5A		6.5		S
R _{DS(ON)}	Drain-Source On-State Resistance	V _{GS} =4.5V, I _D =3A T _J =25℃		20	25	mΩ
		V _{GS} =2.5V, I _D =3A T _J =25℃		27	32	mΩ
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{DS} =10V,V _{GS} =0V, f=1.0MHz		568		pF
C _{oss}	Output Capacitance			68		pF
C _{rss}	Reverse Transfer Capacitance			60		pF
R _g	Gate resistance	V _{GS} =0V, V _{DS} =0V, f=1.0MHz		9		Ω
Switching Parameters						
t _{d(on)}	Turn-on Delay Time	V _{GS} =4.5V, V _{DS} =10V, R _L =6.7Ω, R _{GEN} =3Ω		14		nS
t _r	Turn-on Rise Time			8		nS
t _{d(off)}	Turn-Off Delay Time			44		nS
t _f	Turn-Off Fall Time			15		nS
Q _g	Total Gate Charge	V _{GS} =4.5V, V _{DS} =10V, I _D =1.5A		55		nC
Q _{gs}	Gate-Source Charge			8.7		nC
Q _{gd}	Gate-Drain Charge			13.5		nC
Source-Drain Diode Characteristics						
I _{SD}	Source-Drain Current (Body Diode)				6	A
V _{SD}	Forward on Voltage (Note 3)	V _{GS} =0V, I _S =1.5A			1.2	V
t _{rr}	Reverse Recovery Time	I _F =1.5A, dI/dt=500A/μs		44		ns
Q _{rr}	Reverse Recovery Charge	I _F =1.5A, dI/dt=500A/μs		49		nC

Notes 1.Repetitive Rating: Pulse width limited by maximum junction temperature.

Notes 2.EAS condition: $T_J=25^{\circ}\text{C}, V_{DS}=20V, V_G=10V, R_g=25\Omega, L=0.5\text{mH}$.

Notes 3.Repetitive Rating: Pulse width limited by maximum junction temperature.

Thermal Characteristic

Symbol	Parameter	Typ	Max	Unit
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient		144	$^{\circ}\text{C/W}$

RATING AND CHARACTERISTIC CURVES (9926A)

Figure 1. Output Characteristics

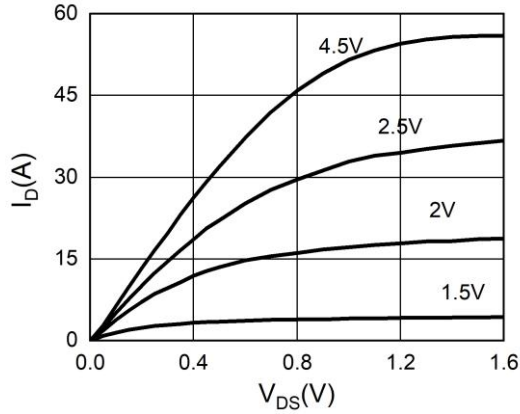


Figure 2. Transfer Characteristics

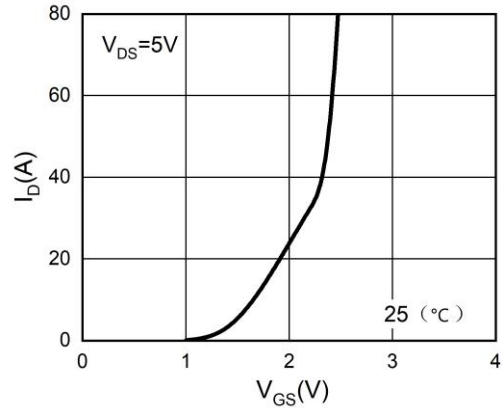


Figure 3. Power Dissipation

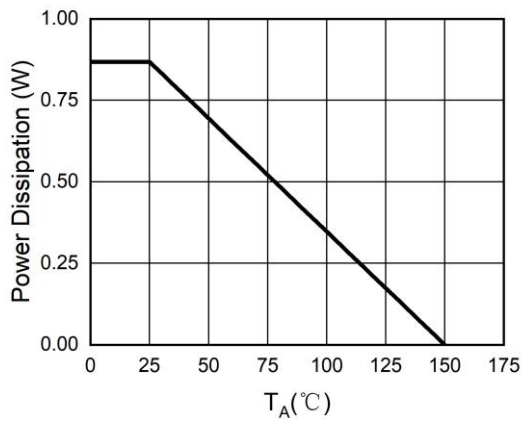


Figure 4. Drain Current

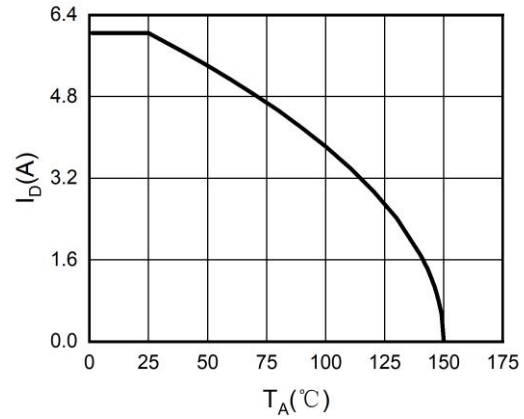


Figure 5. BV_{DSS} vs Junction Temperature

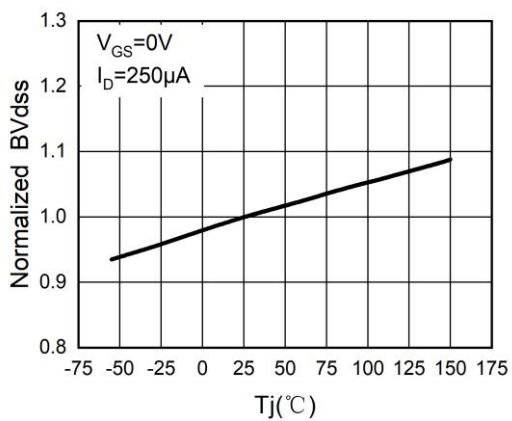
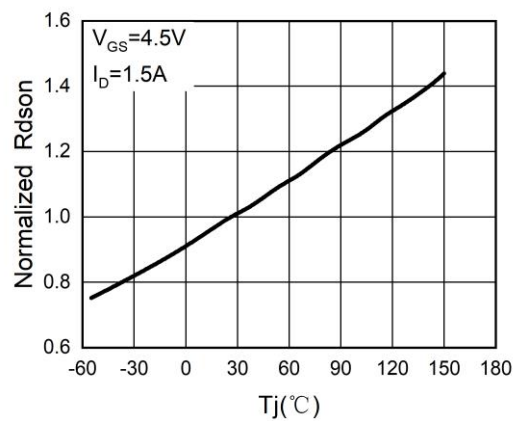


Figure 6. $R_{DS(ON)}$ vs Junction Temperature



RATING AND CHARACTERISTIC CURVES (9926A)

Figure 7. Gate Charge Waveforms

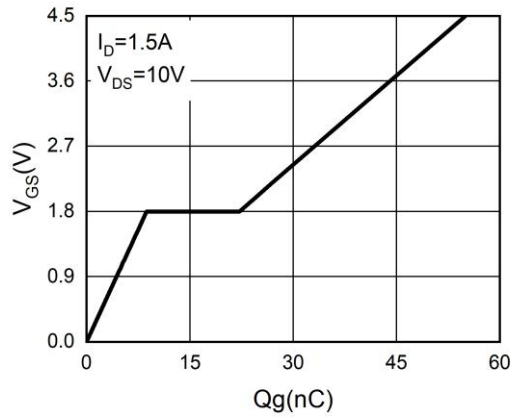


Figure 8. Capacitance

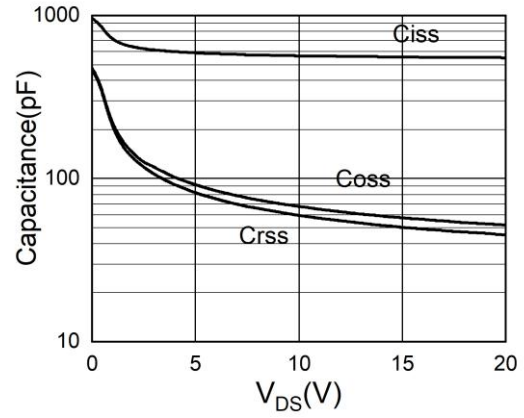


Figure 9. Body-Diode Characteristics

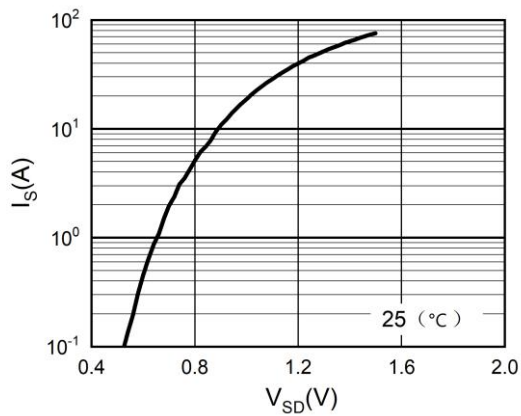


Figure 10. Maximum Safe Operating Area

