★ Green Device Available
★ Super Low Gate Charge
★ Excellent CdV/dt effect decline
★ Advanced high cell density Trench technology

Product Summary

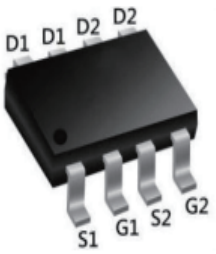
RoHS

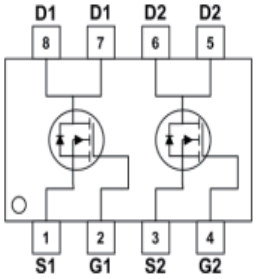
BVDSS	RDSON	ID
20V	20mΩ	6A

Description

the 9926A uses advanced trench technology and design to provide excellent RDS(ON) with low gate charge.it can be used in a wide variety of applications.

Dual SOP8 Pin Configuration





Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	**Drain-Source** Voltage	20	V
V_{GS}	**Gate-Source** Voltage	±12	V
I_D@T_A=25℃	**Continuous** Drain Current, V_{GS} @ 4.5V[1]	6	A
I_D@T_A=70℃	**Continuous** Drain Current, V_{GS} @ 4.5V[1]	4.8	A
I_{DM}	**Pulsed** Drain Current[2]	25	A
P_D@T_A=25℃	**Total Power Dissipation**[3]	1.65	W
T_{STG}	**Storage** Temperature Range	-55 to 150	℃
T_J	**Operating** Junction Temperature Range	-55 to 150	℃

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance Junction-Ambient [1]	---	78	℃/W
$R_{\theta JC}$	Thermal Resistance Junction-Case[1]	---	---	℃/W

Electrical Characteristics (T_J =25 °C unless otherwise specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
Off Characteristic						
$V_{(BR)DSS}$	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,	-	-	1	μA
I_{GSS}	Gate to Body Leakage Current	V_{DS}=0V, V_{GS} =±12V	-	-	±100	nA
On Characteristics						
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS}, I_D=250μA	0.4	0.7	1	V
$R_{DS(on)}$	Static Drain-Source on-Resistance note2	V_{GS}=4.5V, I_D=6A	-	20	28	mΩ
		V_{GS}=2.5V, I_D=5A	-	25.5	38	
Dynamic Characteristics						
C_{iss}	Input Capacitance	V_{DS}=10V, V_{GS}=0V, f=1.0MHz	-	358	-	pF
C_{oss}	Output Capacitance		-	69.3	-	
C_{rss}	Reverse Transfer Capacitance		-	58.5	-	
Q_g	Total Gate Charge	V_{DS}=10V, I_D=3A, V_{GS}=4.5V	-	5.6	-	nC
Q_{gs}	Gate-Source Charge		-	0.8	-	
Q_{gd}	Gate-Drain(“Miller”) Charge		-	1	-	
Switching Characteristics						
$t_{d(on)}$	Turn-on Delay Time	V_{DS}=10V, I_D=6A, R_{GEN}=3Ω, V_{GS}=4.5V	-	16	-	ns
t_r	Turn-on Rise Time		-	51	-	
$t_{d(off)}$	Turn-off Delay Time		-	21	-	
t_f	Turn-off Fall Time		-	19	-	
Drain-Source Diode Characteristics and Maximum Ratings						
I_S	Maximum Continuous Drain to Source Diode Forward Current		-	-	6	A
I_{SM}	Maximum Pulsed Drain to Source Diode Forward Current		-	-	24	A
V_{SD}	Drain to Source Diode Forward Voltage	V_{GS}=0V, I_S=6A	-	-	1.2	V

Notes:
1. Repetitive Rating: Pulse Width Limited by Maximum Junction Temperature
2. Pulse Test: Pulse Width≤300μs, Duty Cycle≤0.5%

Typical Electrical and Thermal Characteristics (Curves)

Figure1: Output Characteristics

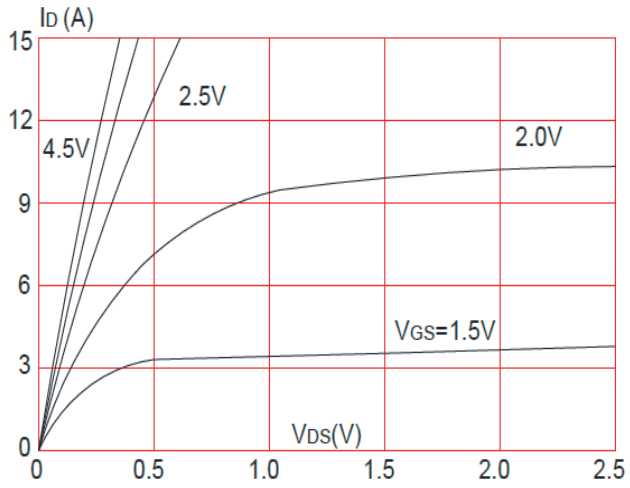


Figure 2: Typical Transfer Characteristics

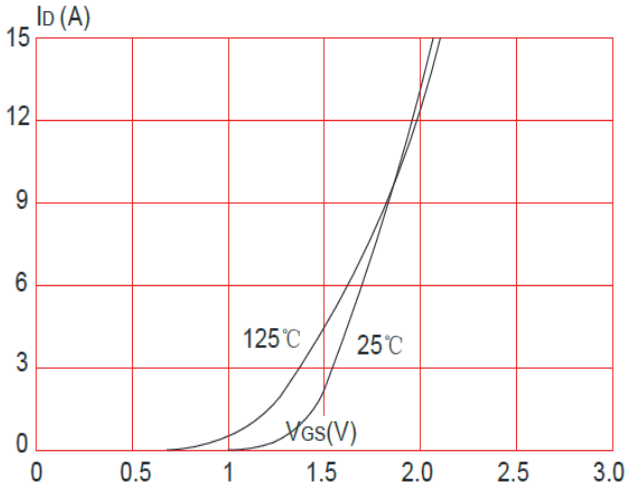


Figure 3:On-resistance vs. Drain Current

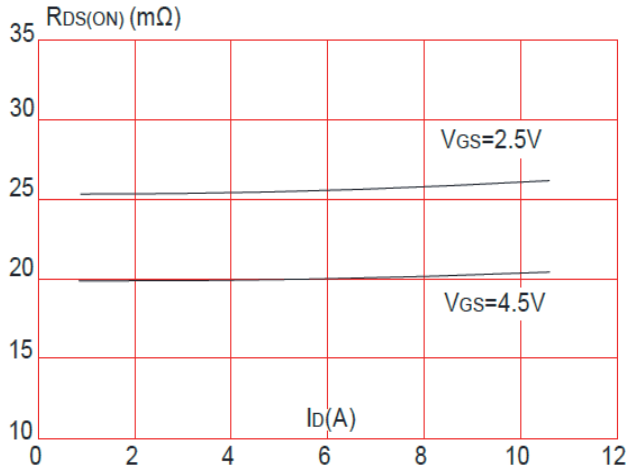


Figure 4: Body Diode Characteristics

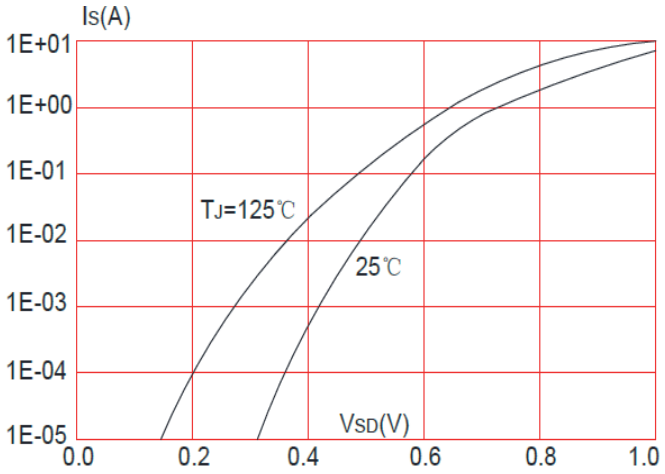


Figure 5: Gate Charge Characteristics

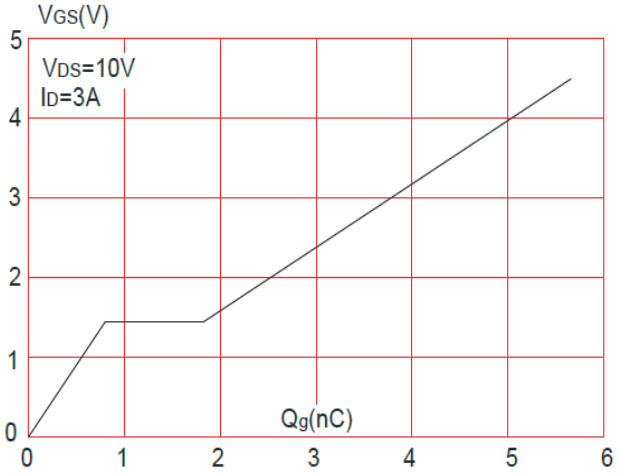
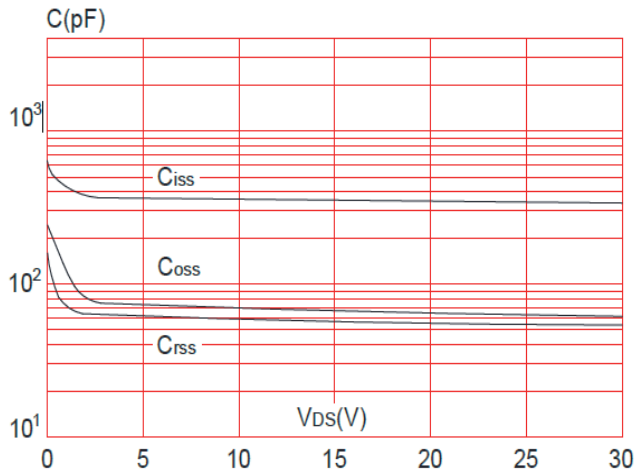


Figure 6: Capacitance Characteristics



Typical Performance Characteristics

Figure 7: Normalized Breakdown Voltage

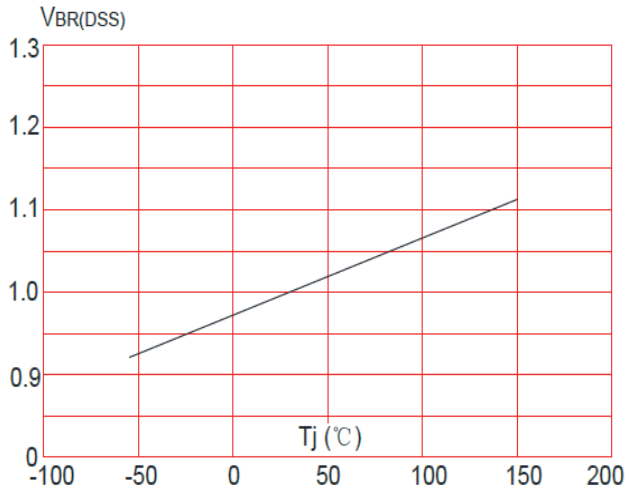


Figure 8: Normalized on Resistance vs.

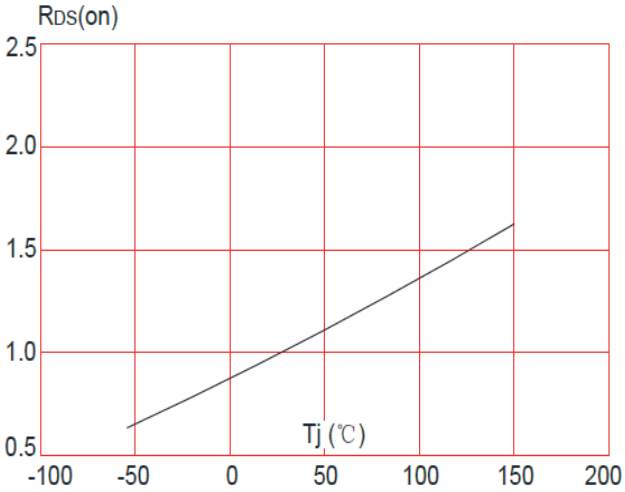


Figure 9: Maximum Safe Operating Area

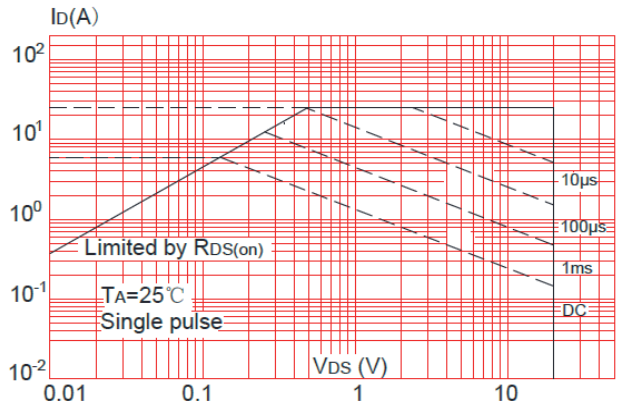


Figure 10: Maximum Continuous Drain Cu

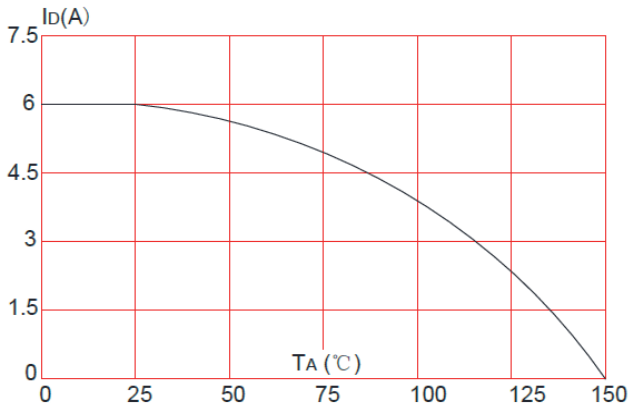
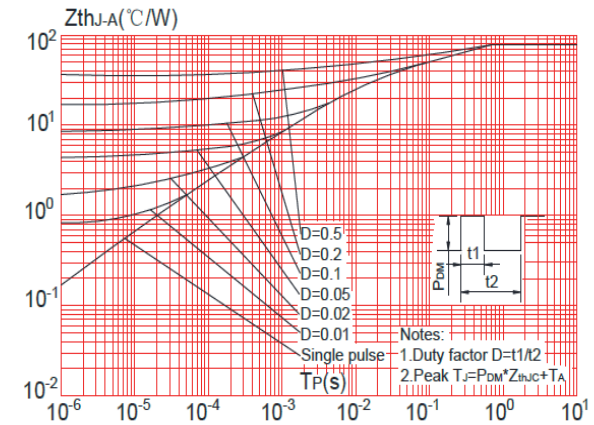
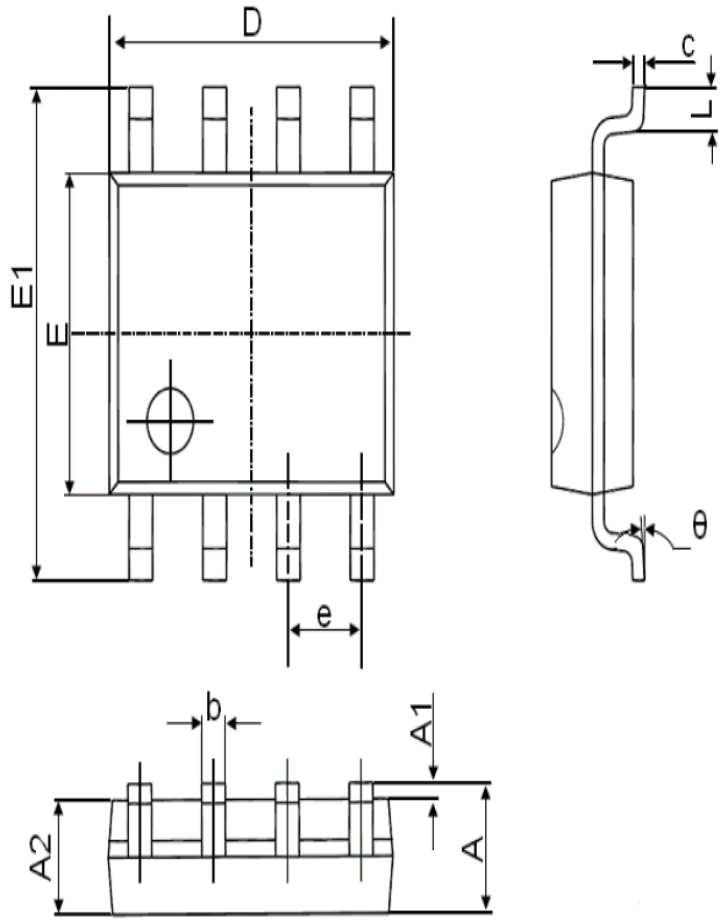


Figure 11:Maximum Effective Transient T



Package Mechanical Data-SOP-8



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.35	1.75	0.053	0.069
A1	0.1	0.25	0.004	0.01
A2	1.35	1.55	0.053	0.061
b	0.33	0.51	0.013	0.02
c	0.17	0.25	0.006	0.01
D	4.7	5.1	0.185	0.2
E	3.8	4	0.15	0.157
E1	5.8	6.2	0.228	0.244
e	1.270(BSC)		0.050(BSC)	
L	0.4	1.27	0.016	0.05
θ	0°	8°	0°	8°