Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
20V	17mΩ@4.5V	7.6A
	24mΩ@2.5V	

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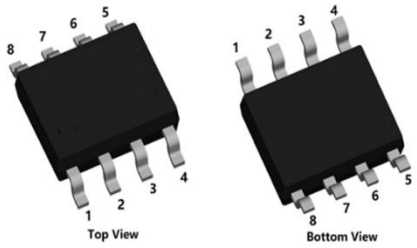
Feature

- Fast Switching
- Low Gate Charge and Rdson
- 100% Single Pulse avalanche energy Test

Applications

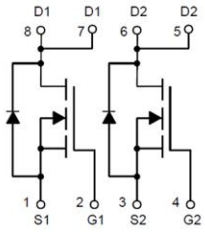
- Power Switching Application
- Hard switched and high frequency circuits
- Uninterruptible Power Supply

Package

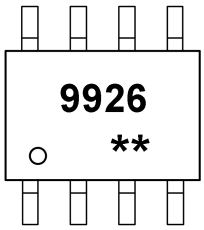


SOP-8L

Circuit Diagram



Marking



9926 :Device Code
** :Week Code

Order Information

Device	Package	Unit/Tape
SP9926ADP8	SOP-8L	4000

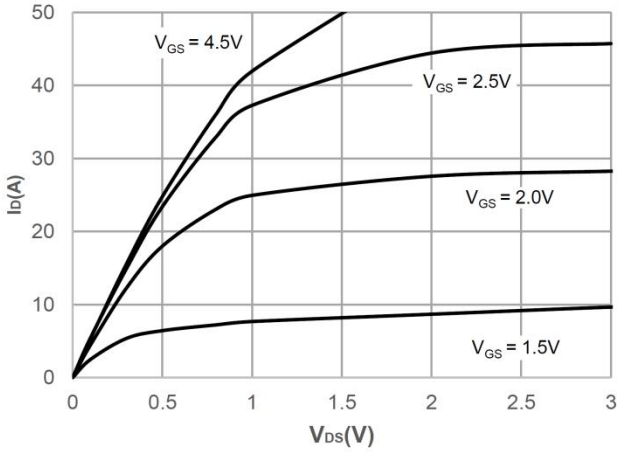
Absolute maximum ratings (Ta=25℃,unless otherwise noted)

Parameter	Symbol	Rating	Units
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current	I_D	7.6	A
Pulsed Drain Current	I_{DM}	30.4	A
Power Dissipation	P_D	2	W
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	62.5	℃/W
Storage Temperature Range	T_{STG}	-55 to 150	℃
Operating Junction Temperature Range	T_J	-55 to 150	℃

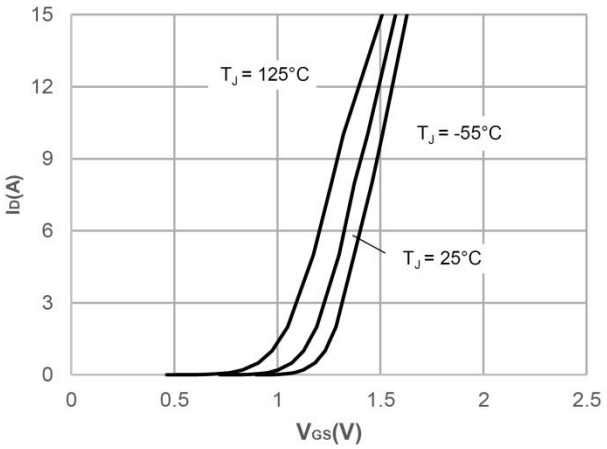
Electrical characteristics (Ta=25℃, unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	VGS=0V , ID=250uA	20	-	-	V
Drain-Source Leakage Current	I_{DSS}	VDS=16V , VGS=0V	-	-	1	uA
Gate-Source Leakage Current	I_{GSS}	VGS=±12V , VDS=0V	-	-	±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	VGS=VDS , ID =250uA	0.45	0.7	1.2	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	VGS=4.5V , ID=6A	-	17	24	mΩ
		VGS=2.5V , ID=5A	-	24	32	
Dynamic characteristics						
Input Capacitance	C_{iss}	VDS=15V , VGS=0V , f=1MHz	-	800	-	pF
Output Capacitance	C_{oss}		-	155	-	
Reverse Transfer Capacitance	C_{rss}		-	125	-	
Total Gate Charge	Q_g	VDS=10V , VGS=4.5V , ID=3A	-	11	-	nC
Gate-Source Charge	Q_{gs}		-	2.3	-	
Gate-Drain Charge	Q_{gd}		-	2.5	-	
Switching Characteristics						
Turn-On Delay Time	$T_{d(on)}$	VDD=10V ,VGS=4.5V , RG=3Ω, ID=3A	-	5	-	nS
Rise Time	T_r		-	18	-	
Turn-Off Delay Time	$T_{d(off)}$		-	24	-	
Fall Time	T_f		-	8	-	
Diode Characteristics						
Diode Forward Voltage	V_{SD}	VGS=0V , IS=1A	-	-	1.2	V
Maximum Body-Diode Continuous Current	I_S		-	-	7.6	A
Reverse Recovery Time	T_{rr}	I_S=3A, di/dt=100A/us, TJ=25℃	-	7	-	nS
Reverse Recovery Charge	Q_{rr}		-	2	-	nC

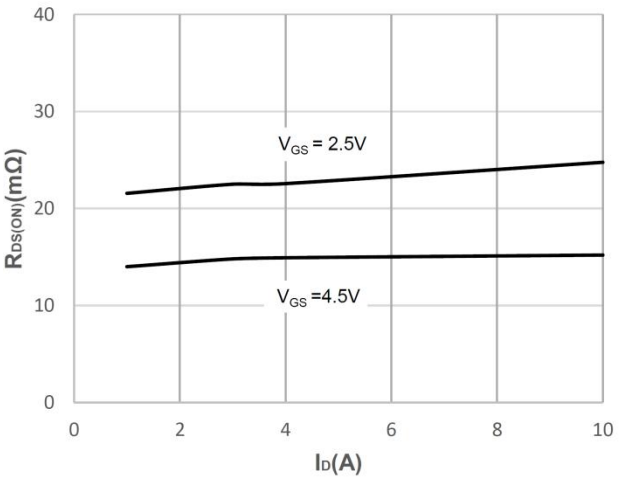
Typical Characteristics



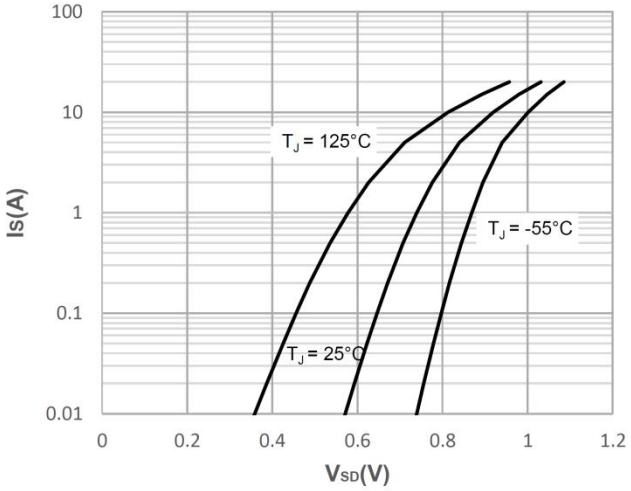
Output Characteristics



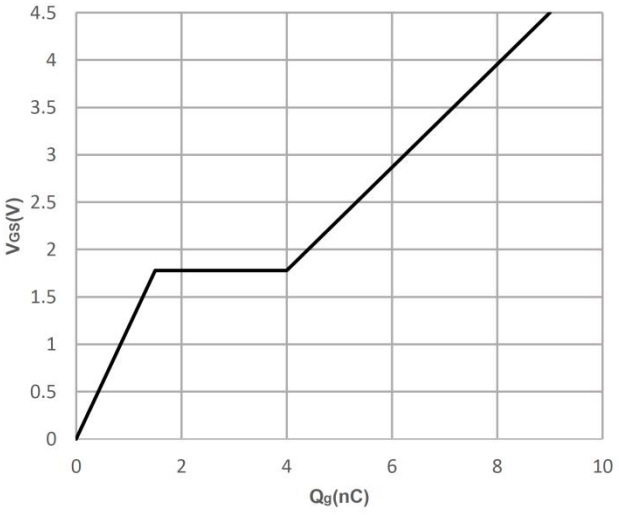
Typical Transfer Characteristics



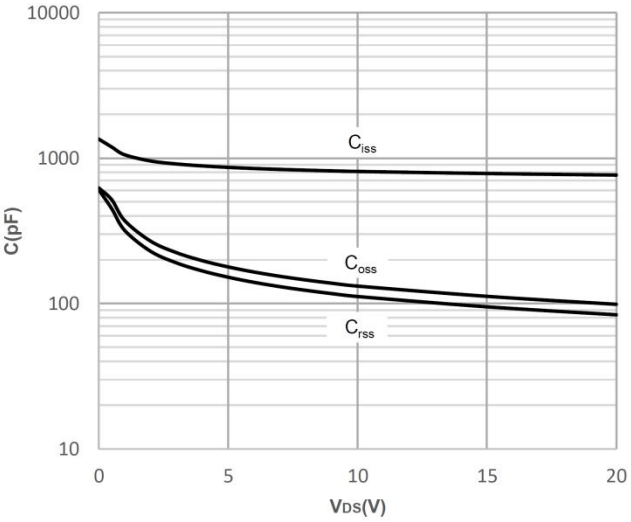
On-resistance vs. Drain Current



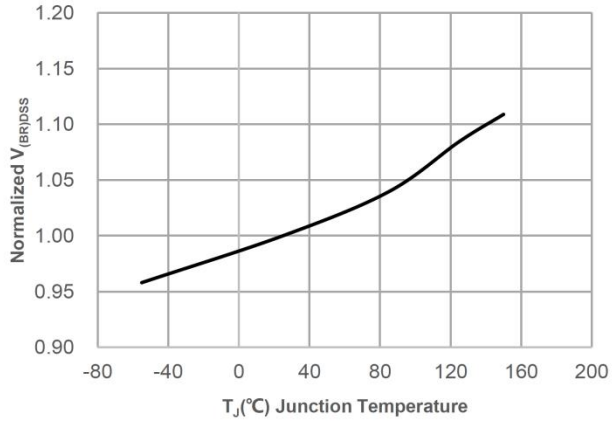
Body Diode Characteristics



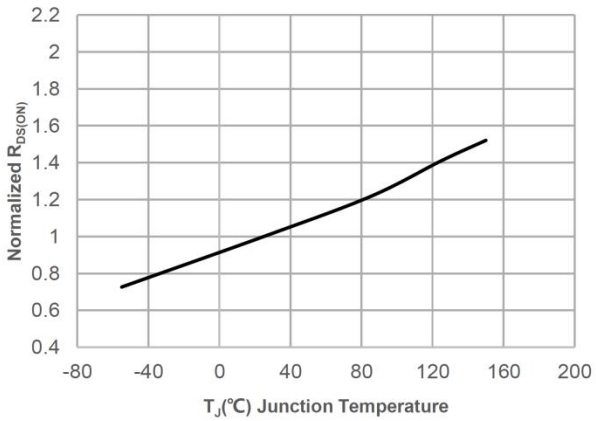
Gate Charge Characteristics



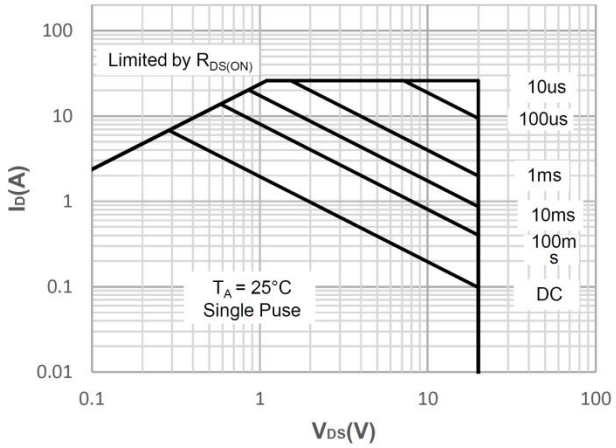
Capacitance Characteristics



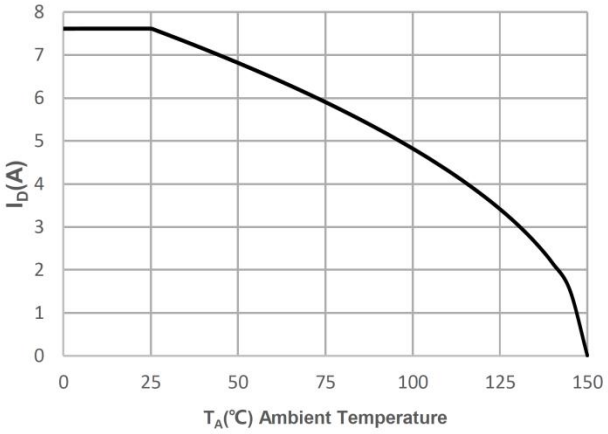
Normalized Breakdown voltage vs. Junction



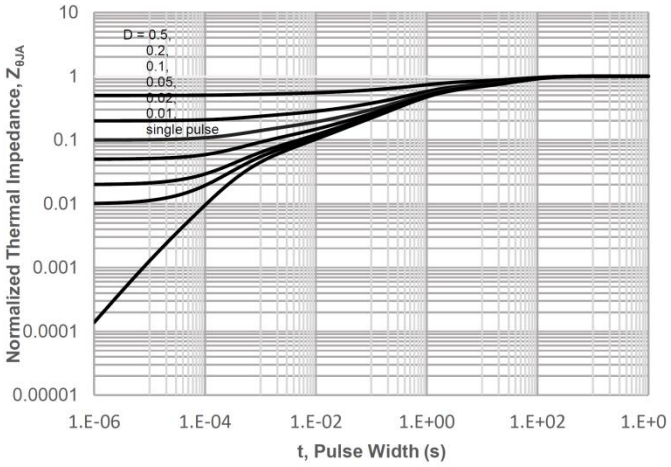
Normalized on Resistance vs.



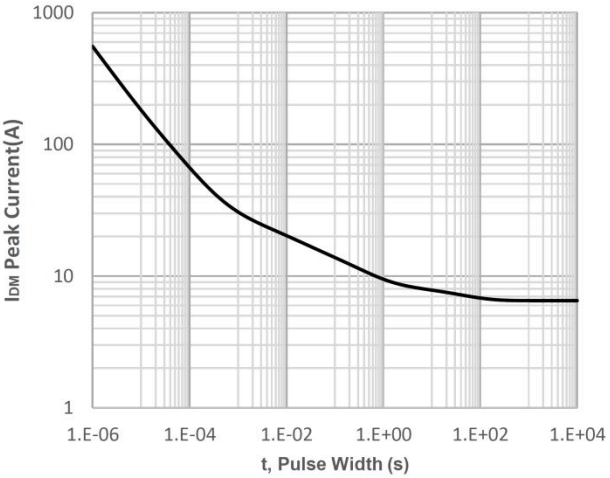
Maximum Safe Operating Area



Maximum Continuous Drian Current vs. Ambient Temperature

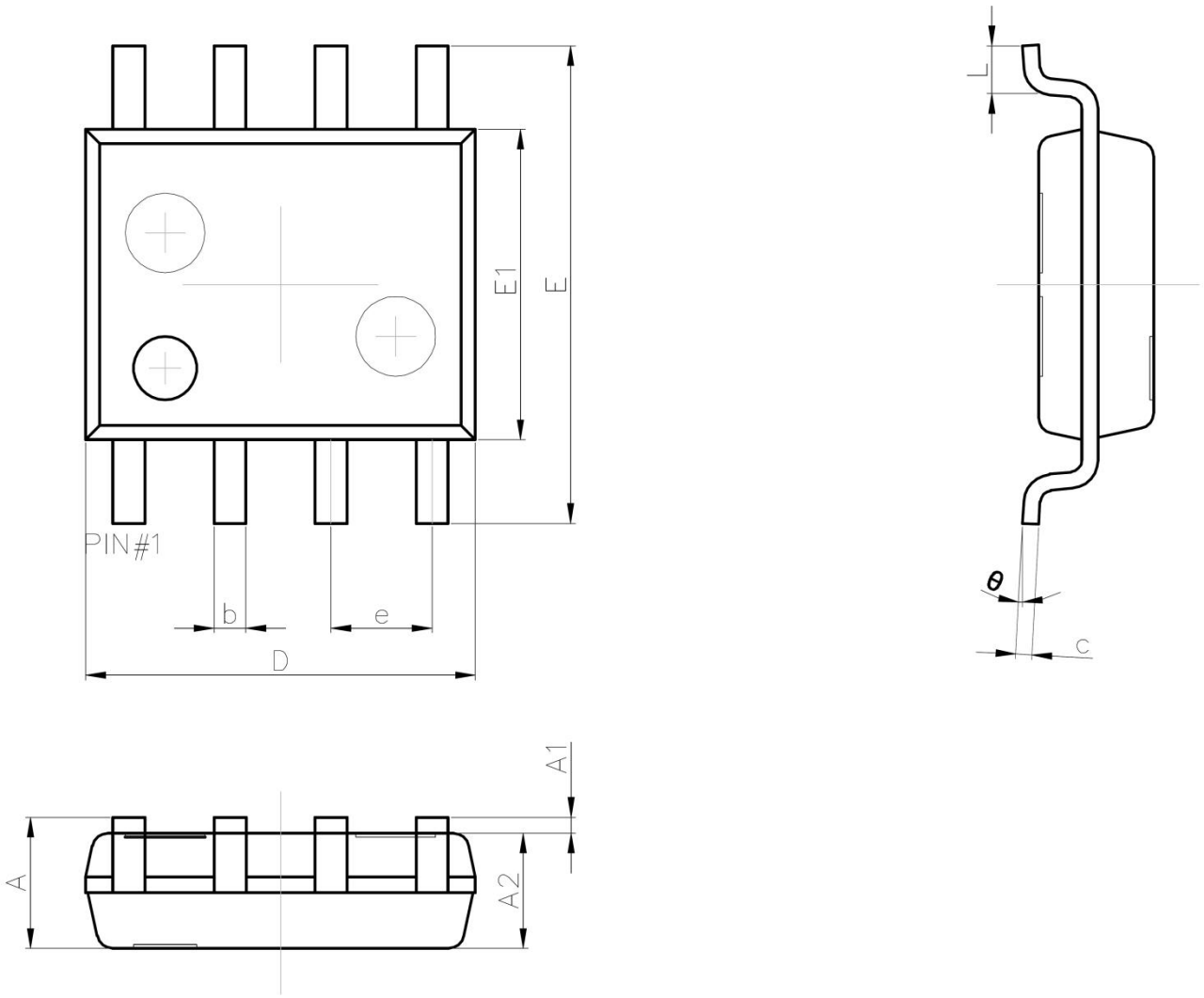


Normalized Maximum Transient Thermal Impedance



Peak Current Capacity

SOP-8L Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	1.35	1.75
A1	0.10	0.25
A2	1.35	1.55
b	0.33	0.51
c	0.17	0.25
D	4.80	5.00
e	1.27 REF.	
E	5.80	6.20
E1	3.80	4.00
L	0.40	1.27
θ	0°	8°