

Product Summary

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

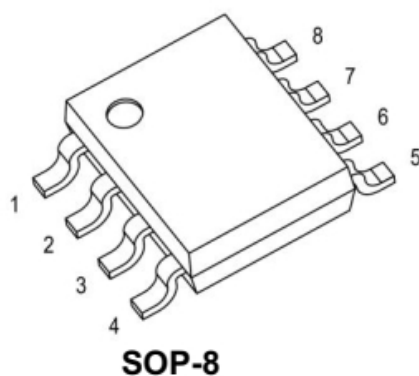
Feature

- TrenchFET Power MOSFET
- Excellent $R_{DS(on)}$ and Low Gate Charge

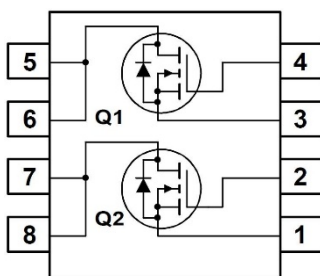
Applications

- Advanced trench process technology
- High density cell design for ultra-low on-resistance
- High power and current handing capability
- Ideal for Lion battery pack applications

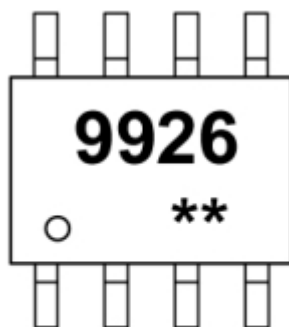
Package



Circuit diagram



Marking



9926 =Device Code
****** =Date Code

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	7.6	A
Pulsed Drain Current ¹⁾	I _{DM}	38	A
Power Dissipation	P _D	2	W
Thermal Resistance from Junction to Ambient ²⁾	R _{θJA}	62.5	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55~ +150	°C

Electrical characteristics

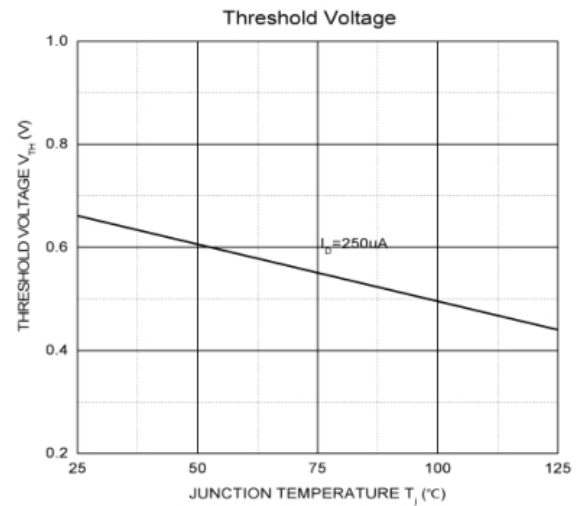
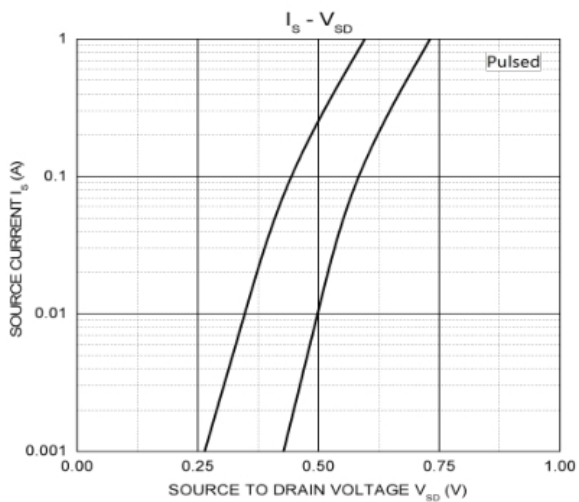
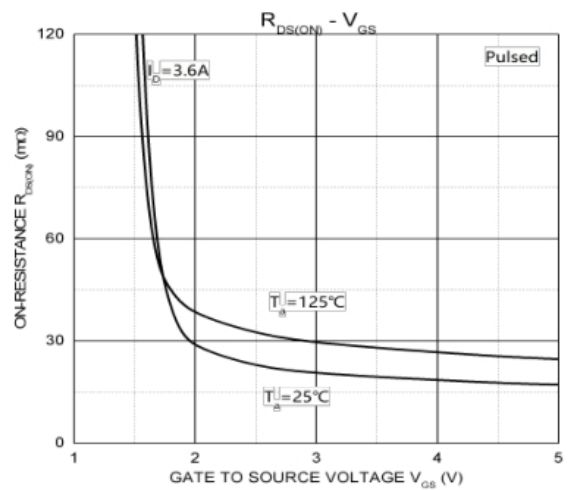
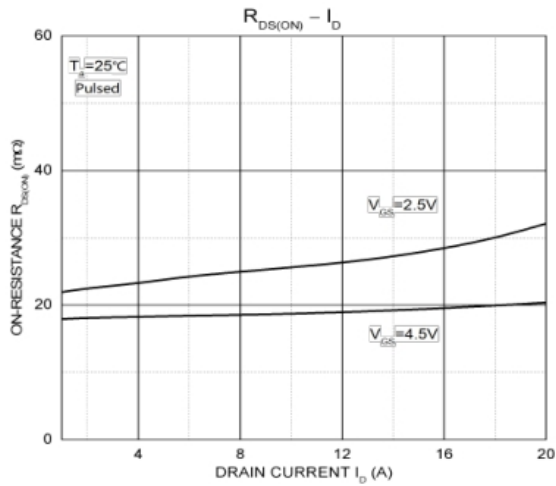
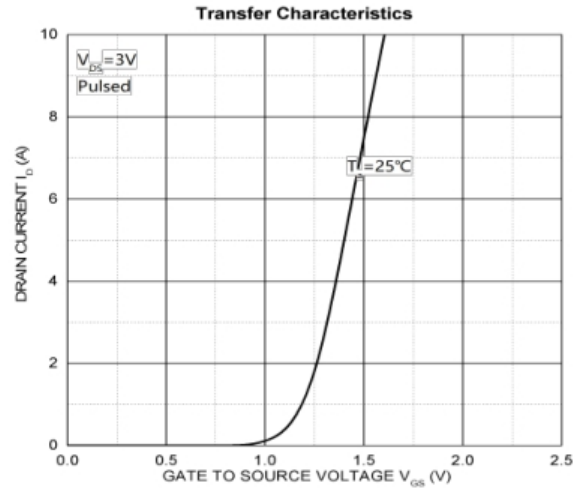
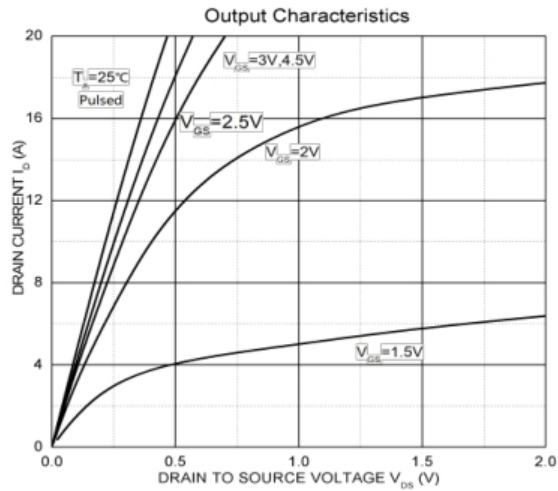
($T_A=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	BV (BR)DSS	V _{GS} = 0V, I _D =250μA	20			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =20V, V _{GS} = 0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} =±12V, V _{DS} = 0V			±100	μA
Gate threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.45	0.7	1.2	V
Drain-source on-resistance	R _{DS(on)}	V _{GS} =4.5V, I _D =6A		17	24	mΩ
		V _{GS} =2.5V, I _D =5A		24	32	
Dynamic Characteristics						
Input capacitance	C _{iSS}	V _{DS} =8V, V _{GS} =0V, f=1MHz		800		pF
Output capacitance	C _{OSS}			155		
Reverse transfer capacitance	C _{rSS}			125		
Switching Characteristics						
Turn-on Delay Time	T _{d(on)}	V _{DD} =10V, V _{GS} =4V, I _D =1A, R _{GEN} =10Ω		18		nS
Turn-on Rise Time	T _r			5		
Turn-Off Delay Time	T _{d(off)}			43		
Turn-Off Fall Time	t _f			20		
Total Gate Charge	Q _g	V _{DS} =10V, V _{GS} =4.5V, I _D =4A		11		nC
Gate-Source Charge	Q _{gs}			2.3		
Gate-Drain Charge	Q _{gd}			2.5		
Source-Drain Diode Characteristics						
Body Diode Voltage ³⁾	V _{SD}	I _S =1.7A, V _{GS} = 0V			1.2	V

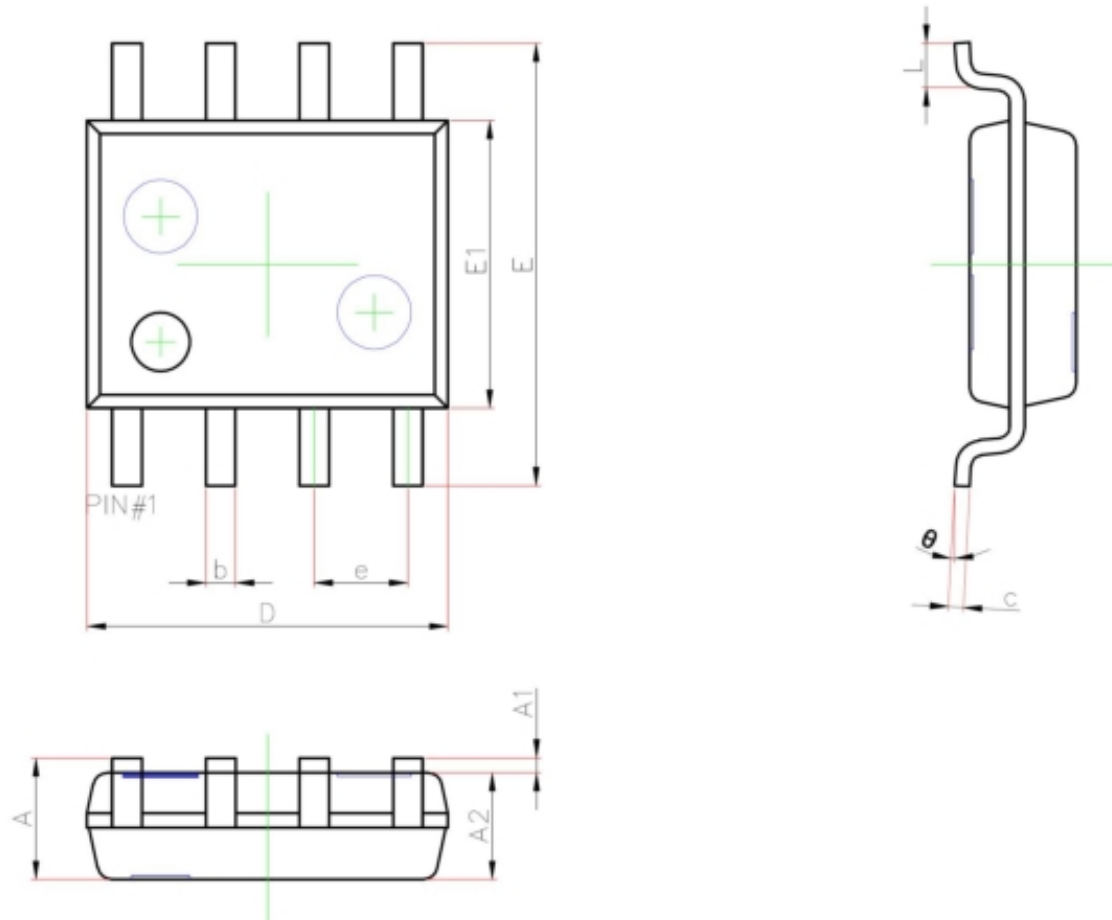
Notes:

1. Repetitive rating: Pulse width limited by junction temperature.
2. Surface mounted on FR4 board, $t \leq 10s$.
3. Pulse Test: Pulse Width $\leq 80\mu s$, Duty Cycle $\leq 0.5\%$.
4. Guaranteed by design, not subject to producing.

Typical Characteristics



SOP-8 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°