

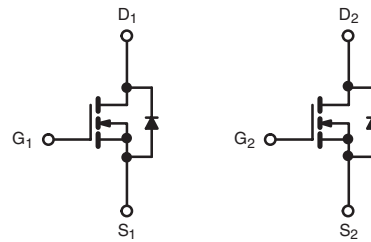
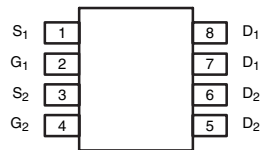
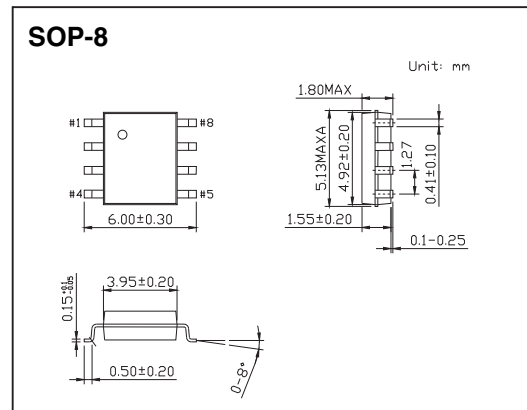
Dual N-Channel MOSFET

SI9926BDY

Features

$R_{DS(on)} = 0.027 \Omega @ V_{GS} = 4.5 V$

$R_{DS(on)} = 0.036 \Omega @ V_{GS} = 2.5 V.$

Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	10 sec	Steady State	Unit
Drain-Source Voltage	V_{DS}	20		V
Gate-Source Voltage	V_{GS}	± 10		V
Continuous Drain Current	I_D	8.2	6.2	A
Pulsed Drain Current	I_{DM}	30		A
Maximum Power Dissipation @ $T_A = 25^\circ C$ @ $T_A = 70^\circ C$	P_D	2.0	1.14	W
		1.3	0.72	W
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	110		$^\circ C/W$
Junction temperature and Storage temperature	T_j, T_{stg}	-55 to +150		$^\circ C$

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Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	V _{GS} = 0 V, I _D = 250 μA	20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 20V, V _{GS} = 0V			1	μA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	0.5		1.5	V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±8V			±100	nA
Drain-Source On-State Resistance *	R _{DS(on)}	V _{GS} = 4.5V, I _D = 8.5A		0.020	0.027	Ω
		V _{GS} = 2.5V, I _D = 3.3A		0.029	0.036	
On-State Drain Current *	I _{D(on)}	V _{DS} = 5V, V _{GS} = 4.5V	30			A
Forward Transconductance *	g _{fs}	V _{DS} = 15V, I _D = 8.2A		29		S
Total Gate Charge	Q _g	V _{DS} = 10V, V _{GS} = 4.5V, I _D = 8.2A		11	20	nC
Gate-Source Charge	Q _{gs}			2.5		
Gate-Drain Charge	Q _{gd}			3.2		
Turn-On Delay Time	t _{d(on)}	V _{DD} = 10V, I _D = 1A, V _{GS} = 4.5V, R _G = 6 Ω, R _L = 10 Ω		36	57	ns
Rise Time	t _r			52	78	
Turn-Off Delay Time	t _{d(off)}			32	50	
Fall Time	t _f			15	25	
Maximum Continuous Drain-Source Diode Forward Current	I _S				0.95	A
Diode Forward Voltage *	V _{SD}	I _S = 1.7A, V _{GS} = 0 V		0.8	1.2	V

* Pulse test; pulse width 300 μs, duty cycle 2%.

Marking

Marking	9926B
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