



Si9934BDY vs. Si9934DY

Description: Dual P-Channel, 2.5 V (G-S) MOSFET**Package:** SO-8**Pin Out:** Identical**Part Number Replacements:**

Si9934BDY-T1-E3 Replaces Si9934DY-T1-E3

Si9934BDY-T1 Replaces Si9934DY-T1

ABSOLUTE MAXIMUM RATINGS $T_A = 25\text{ }^\circ\text{C}$, unless otherwise noted					
Parameter		Symbol	Si9934BDY	Si9934DY	Unit
Drain-Source Voltage		V_{DS}	- 12	- 12	V
Gate-Source Voltage		V_{GS}	± 8	± 8	
Continuous Drain Current	$T_A = 25\text{ }^\circ\text{C}$	I_D	- 6.4	- 5.0	A
	$T_A = 70\text{ }^\circ\text{C}$		- 5.1	- 4.0	
Pulsed Drain Current		I_{DM}	- 20	- 20	
Continuous Source Current (MOSFET Diode Conduction)		I_S	- 1.7	- 1.7	
Power Dissipation	$T_A = 25\text{ }^\circ\text{C}$	P_D	2.0	2.0	W
	$T_A = 70\text{ }^\circ\text{C}$		1.3	1.3	
Operating Junction and Storage Temperature Range		T_J and T_{stg}	- 55 to 150	- 55 to 150	$^\circ\text{C}$
Maximum Junction-to-Ambient		R_{thJA}	62.5	62.5	$^\circ\text{C/W}$

SPECIFICATIONS T _J = 25 °C, unless otherwise noted									
Parameter		Symbol	Si9934BDY			Si9934DY			Unit
			Min	Typ	Max	Min	Typ	Max	
Static									
Gate-Threshold Voltage		V _{GS(th)}	- 0.6		- 1.4	- 0.6		NS	V
Gate-Body Leakage		I _{GSS}			± 100			± 100	nA
Zero Gate Voltage Drain Current		I _{DSS}			- 1			- 1	µA
On-State Drain Current	V _{GS} = - 4.5 V	I _{D(on)}	- 20			- 20			A
	V _{GS} = - 2.5 V		NS			- 6			
Drain-Source On-Resistance	V _{GS} = - 4.5 V	r _{DS(on)}		0.028	0.035		0.039	0.05	Ω
	V _{GS} = - 2.5 V			0.044	0.056		0.0514	0.074	
Forward Transconductance		g _{fs}		17			16		S
Diode Forward Voltage		V _{SD}		- 0.8	- 1.2		- 0.75	- 1.2	V
Dynamic									
Total Gate Charge		Q _g		13	20		21	40	nC
Gate-Source Charge		Q _{gs}		2.6			3		
Gate-Drain Charge		Q _{gd}		4.0			6		
Gate Resistance		R _g		9			NS		Ω
Switching									
Turn-On Time	t _{d(on)}			19	30		20	40	ns
	t _r			35	55		40	80	
Turn-Off Time	t _{d(off)}			80	120		100	200	
	t _f			50	75		60	120	
Source-Drain Reverse Recovery Time		t _{rr}		40	80		67	100	

NS denotes not specified.

Specification comparisons are supplied as a courtesy to compare two devices and do not constitute a commercial product datasheet or any guarantee of identical performance. Designers should refer to the appropriate datasheets of the same number for guaranteed specification limits.

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