Si4925BDY vs. Si4925DY

Description: **Dual P-Channel, 30 V (D-S) MOSFET**
Package: **SOIC-8**
Pin Out: **Identical**

Part Number Replacements:

Si4925BDY Replaces Si4925DY
Si4925BDY-E3 (Lead (Pb)-free version) Replaces Si4925DY
Si4925BDY-T1 Replaces Si4925DY-T1
Si4925BDY-T1-E3 (Lead (Pb)-free version) Replaces Si4925DY-T1

ABSOLUTE MAXIMUM RATINGS T_A = 25 °C, unless otherwise noted

Parameter		Symbol	Si4925BDY	Si4925DY	Unit
Drain-Source Voltage		V_{DS}	- 30	- 30	V
Gate-Source Voltage		V_{GS}	± 20	± 20	
Continuous Drain Current	T_A = 25 °C	I_D	- 7.1	- 6.3	A
	T_A = 70 °C		- 5.7	- 5.0	
Pulsed Drain Current		I_{DM}	- 40	- 40	
Continuous Source Current (MOSFET Diode Conduction)		I_S	- 1.7	- 1.7	
Power Dissipation	T_A = 25 °C	P_D	2.0	2.0	W
	T_A = 70 °C		1.3	1.3	
Operating Junction and Storage Temperature Range		T_j and T_{stg}	- 55 to 150	- 55 to 150	°C
Maximum Junction-to-Ambient		R_{thJA}	62.5	62.5	°C/W

SPECIFICATIONS T_J = 25 °C, unless otherwise noted

Parameter		Symbol	Si4925BDY			Si4925DY			Unit
			Min	Typ	Max	Min	Typ	Max	
Static									
Gate-Threshold Voltage		$V_{G(th)}$	- 1.0		- 3.0	- 1.0			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} = - 10 V	$I_{D(on)}$	- 50			- 20			A
Drain-Source On-Resistance	V_{GS} = - 10 V	$r_{DS(on)}$		0.020	0.025		0.024	0.032	Ω
	V_{GS} = - 4.5 V			0.033	0.041		0.036	0.045	
Forward Transconductance		g_{fs}		20			14		S
Diode Forward Voltage		V_{SD}		- 0.8	- 1.2		- 0.8	- 1.2	V
Dynamic									
Total Gate Charge		Q_g		33	50		27	50	nC
Gate-Source Charge		Q_{gs}		5.4			6		
Gate-Drain Charge		Q_{gd}		8.9			4.5		
Switching									
Turn-On Time		$t_{d(on)}$		9	15		16	20	ns
		t_r		12	20		10	20	
Turn-Off Time		$t_{d(off)}$		60	90		55	80	
		t_f		34	50		20	40	
Source-Drain Reverse Recovery Time		t_{rr}		30	60		40	90	

NS denotes parameter 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.