Si6925ADQ vs. Si6925DQ

Description: **Dual N-Channel, 2.5 V (G-S) MOSFET**
Package: **TSSOP-8**
Pin Out: **Identical**

Part Number Replacements:
Si6925ADQ-T1 Replaces Si6925DQ-T1
Si6925ADQ-T1-E3 (Lead (Pb)-free version) Replaces Si6925DQ-T1-E3 (Lead (Pb)-free version)

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

Parameter		Symbol	Si6925ADQ	Si6925DQ	Unit
Drain-Source Voltage		V_{DS}	20	20	V
Gate-Source Voltage		V_{GS}	± 12	± 12	
Continuous Drain Current	T_A = 25 °C	I_D	3.9	3.4	A
	T_A = 70 °C		3.1	2.7	
Pulsed Drain Current		I_{DM}	30	23	
Continuous Source Current (MOSFET Diode Conduction)		I_S	1.0	1.25	
Power Dissipation	T_A = 25 °C	P_D	1.13	1.0	W
	T_A = 70 °C		0.72	0.64	
Operating Junction and Storage Temperature Range		T_j and T_{stg}	- 55 to 150	- 55 to 150	°C
Maximum Junction-to-Ambient		R_{thJA}	110	125	°C/W

SPECIFICATIONS T_J = 25 °C, unless otherwise noted

Parameter		Symbol	Si6925ADQ			Si6925DQ			Unit
			Min	Typ	Max	Min	Typ	Max	
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	0.6		1.8	0.5			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	$I_{D(on)}$	10			10			A
Drain-Source On-Resistance	V_{GS} = 4.5 V	$r_{DS(on)}$		0.035	0.045		0.038	0.05	Ω
	V_{GS} = 3.0 V			0.042	0.055		0.044	0.07	
	V_{GS} = 2.5 V			0.050	0.065		0.048	0.08	
Forward Transconductance		g_{fs}		14			18		S
Diode Forward Voltage		V_{SD}		0.75	1.1		0.7	1.2	V
Dynamic									
Total Gate Charge		Q_g		4.0	6		7.5	15	nC
Gate-Source Charge		Q_{gs}		0.9			1.2		
Gate-Drain Charge		Q_{gd}		1.0			1.8		
Gate Resistance		R_g		1.9			NS		Ω
Switching									
Turn-On Time		$t_{d(on)}$		40	60		10	20	ns
		t_r		50	75		25	50	
Turn-Off Time		$t_{d(off)}$		20	30		40	60	
		t_f		10	20		10	20	
Source-Drain Reverse Recovery Time		t_{rr}		20	40		50	60	

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.