



## Si6926ADQ vs. Si6926DQ

**Description:** Dual N-Channel, 2.5 V (G-S) MOSFET

**Package:** TSSOP-8

**Pin Out:** Identical

**Part Number Replacements:**

Si6926ADQ-T1 Replaces Si6926DQ-T1

Si6926ADQ-T1-E3 (Lead (Pb)-free version) Replaces Si6926DQ-T1-E3 (Lead (Pb)-free version)

<b>ABSOLUTE MAXIMUM RATINGS</b> $T_A = 25\text{ }^\circ\text{C}$ , unless otherwise noted					
Parameter	Symbol	Si6926ADQ	Si6926DQ	Unit	
Drain-Source Voltage	$V_{DS}$	20	20	V	
Gate-Source Voltage	$V_{GS}$	$\pm 8$	$\pm 8$		
Continuous Drain Current	$T_A = 25\text{ }^\circ\text{C}$	$I_D$	4.5	4.0	A
	$T_A = 70\text{ }^\circ\text{C}$		3.6	3.2	
Pulsed Drain Current	$I_{DM}$	20	20		
Continuous Source Current (MOSFET Diode Conduction)	$I_S$	0.83	1.25		
Power Dissipation	$T_A = 25\text{ }^\circ\text{C}$	$P_D$	1.0	1.0	W
	$T_A = 70\text{ }^\circ\text{C}$		0.64	0.64	
Operating Junction and Storage Temperature Range	$T_J$ and $T_{stg}$	- 55 to 150	- 55 to 150	$^\circ\text{C}$	
Maximum Junction-to-Ambient	$R_{thJA}$	125	125	$^\circ\text{C}/\text{W}$	

<b>SPECIFICATIONS</b> $T_J = 25\text{ }^\circ\text{C}$ , unless otherwise noted								
Parameter	Symbol	Si6926ADQ			Si6926DQ			Unit
		Min	Typ	Max	Min	Typ	Max	
<b>Static</b>								
Gate-Threshold Voltage	$V_{GS(th)}$	0.4		1.0	0.5			V
Gate-Body Leakage	$I_{GSS}$			$\pm 100$			$\pm 100$	nA
Zero Gate Voltage Drain Current	$I_{DSS}$			1			1	$\mu\text{A}$
On-State Drain Current	$V_{GS} = 5\text{ V}$ $I_{D(on)}$	10			10			A
Drain-Source On-Resistance	$V_{GS} = 4.5\text{ V}$ $r_{DS(on)}$		0.024	0.030		0.028	0.035	$\Omega$
	$V_{GS} = 3.0\text{ V}$		0.026	0.033		0.031	0.040	
	$V_{GS} = 2.5\text{ V}$		0.029	0.035		0.033	0.045	
	$V_{GS} = 1.8\text{ V}$		0.035	0.043		NS	NS	
Forward Transconductance	$g_{fs}$		26			18		S
Diode Forward Voltage	$V_{SD}$		0.6	1.1		0.7	1.2	V
<b>Dynamic</b>								
Total Gate Charge	$Q_g$		7.5	10.5		12	20	nC
Gate-Source Charge	$Q_{gs}$		1.2			1.4		
Gate-Drain Charge	$Q_{gd}$		1.2			3.2		
Gate Resistance	$R_g$		1.9			NS		$\Omega$
<b>Switching</b>								
Turn-On Time	$t_{d(on)}$		6	12		10	20	ns
	$t_r$		16	25		30	50	
Turn-Off Time	$t_{d(off)}$		46	70		60	80	
	$t_f$		9	15		15	30	
Source-Drain Reverse Recovery Time	$t_{rr}$		20	40		50	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.