



## Si7114ADN vs. Si7114DN

**Description:** N-Channel, 30 V (D-S) MOSFET

**Package:** PowerPAK® 1212-8

**Pin Out:** Identical

**Part Number Replacements:** Si7114ADN-T1-GE3 replaces Si7114DN-T1-E3  
Si7114ADN-T1-GE3 replaces Si7114DN-T1-GE3

ABSOLUTE MAXIMUM RATINGS (T <sub>A</sub> = 25 °C, unless otherwise noted)					
PARAMETER	SYMBOL	Si7114ADN	Si7114DN	UNIT	
Drain-Source Voltage	V <sub>DS</sub>	30	30	V	
Gate-Source Voltage	V <sub>GS</sub>	± 20	± 20		
Continuous Drain Current	I <sub>D</sub>	T <sub>A</sub> = 25 °C	18	18.3	A
		T <sub>A</sub> = 70 °C	16	14.7	
Pulsed Drain Current	I <sub>DM</sub>	60	60		
Continuous Source Current (MOSFET Diode Conduction)	I <sub>S</sub>	3.2	3.2		
Power Dissipation	P <sub>D</sub>	T <sub>A</sub> = 25 °C	3.7	3.8	W
		T <sub>A</sub> = 70 °C	2.4	2.0	
Operating Junction and Storage Temperature Range	T <sub>J</sub> and T <sub>stg</sub>	- 55 to 150	- 55 to 150	°C	
Maximum Junction-to-Ambient	R <sub>thJA</sub>	34	33	°C/W	

SPECIFICATIONS (T <sub>J</sub> = 25 °C, unless otherwise noted)								
PARAMETER	SYMBOL	Si7114ADN			Si7114DN			UNIT
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
<b>Static</b>								
Gate-Threshold Voltage	V <sub>GS(th)</sub>	1.0		2.5	1.0		3.0	V
Gate-Body Leakage	I <sub>GS</sub>			± 100			± 100	nA
Zero Gate Voltage Drain Current	I <sub>DSS</sub>			1			1	µA
On-State Drain Current	V <sub>GS</sub> = 10 V I <sub>D(on)</sub>	20			40			A
Drain-Source On-Resistance	V <sub>GS</sub> = 10 V R <sub>DS(on)</sub>		0.0062	0.0075		0.0062	0.0075	Ω
	V <sub>GS</sub> = 4.5 V		0.0081	0.0100		0.0081	0.0100	
Forward Transconductance	g <sub>fs</sub>		50			77		S
Diode Forward Voltage	V <sub>SD</sub>		0.8	1.2		0.7	1.2	V
<b>Dynamic</b>								
Total Gate Charge	Q <sub>g</sub>		10.2	20		12.5	19	nC
Gate-Source Charge	Q <sub>gs</sub>		3.9			6.3		
Gate-Drain Charge	Q <sub>gd</sub>		3.2			3.6		
Gate Resistance	R <sub>g</sub>	0.3	1.6	3.2	0.7	1.4	2.1	Ω

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.