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November 2014



KA324 / KA324A / KA2902 Quad Operational Amplifier

Features

- Internally Frequency Compensated for Unity Gain

KA324 / KA324A / KA2902 — Quad Operational Amplifier

Block Diagram

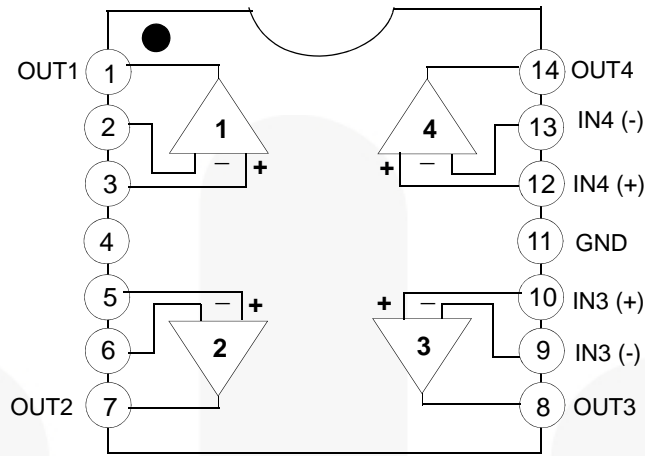


Figure 1. Block Diagram

Schematic Diagram

(One Section Only)



Figure 2. Schematic Diagram

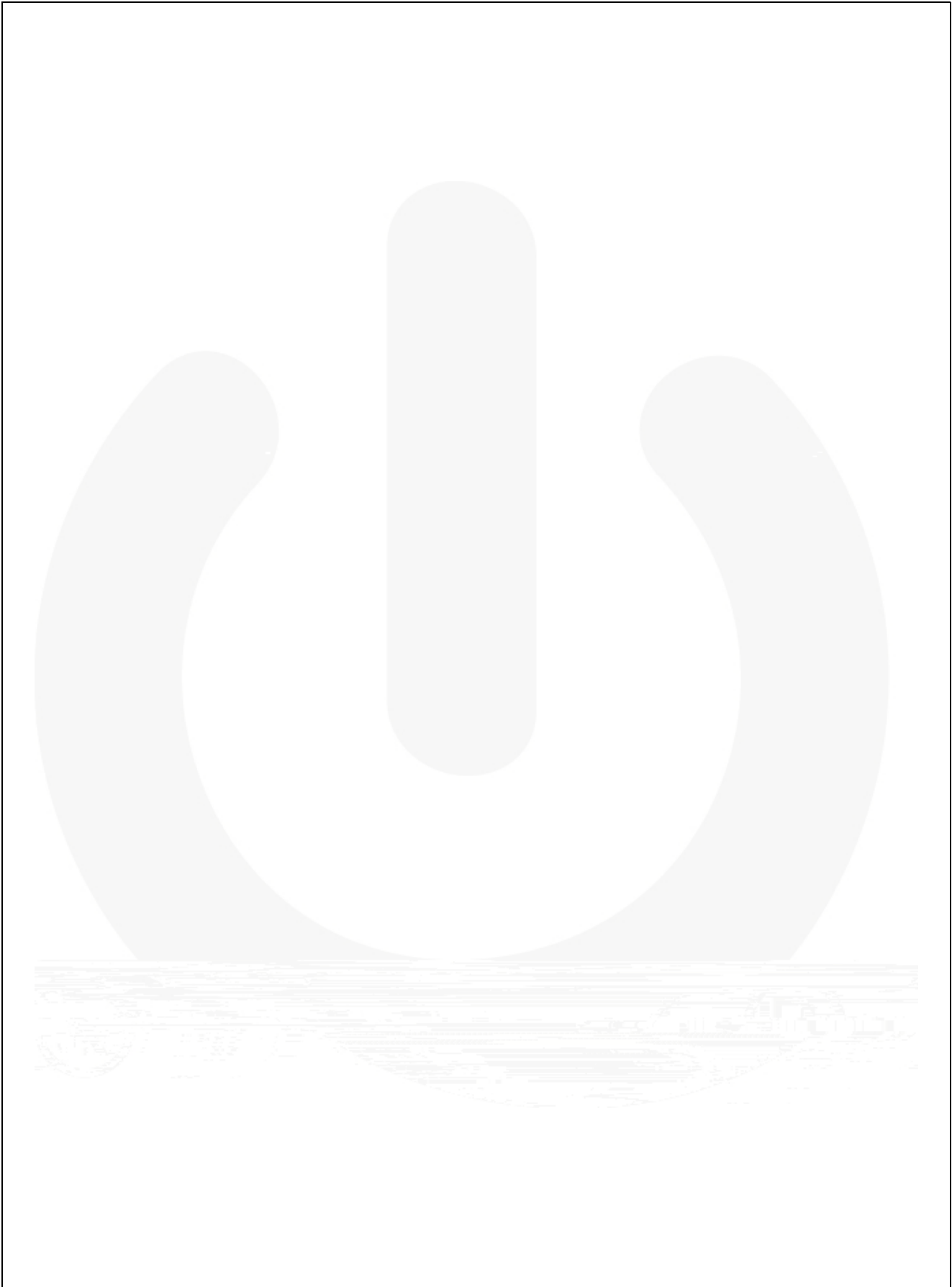
Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

Parameter	Symbol	KA324 / KA324A	KA2902	Unit
Power Supply Voltage	V_{CC}	± 16 or 32	± 13 or 26	V
Differential Input Voltage	$V_{I(DIFF)}$	32	26	V
Input Voltage	V_I	-0.3 to +32	-0.3 to +26	V
Output Short Circuit to GND $V_{CC} = 15\text{ V}, T_A = 25^\circ\text{C}$ (One Amp)	-	Continuous	Continuous	-
Operating Temperature Range		-55 to 125	-40 to 85	$^\circ\text{C}$

Thermal Characteristics

Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.



Electrical Characteristics (Continued)

Values are at $V_{CC} = 5.0\text{ V}$, $V_{EE} = \text{GND}$, $T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified.

Symbol	Parameter	Conditions	KA324A			Unit
			Min.	Typ.	Max.	
V_{IO}	Input Offset Voltage	$V_{CM} = 0\text{ V to }V_{CC} - 1.5\text{ V}$, $V_{O(P)} = 1.4\text{ V}$, $R_S = 0\text{ }\Omega$ ⁽⁵⁾	-	1.5	3.0	mV
I_{IO}	Input Offset Current	V_{CMIO}				

Notes:

5. $V_{CC}=30\text{V}$ for KA324A.

6. This parameter, although guaranteed is not 100% tested in production.

Electrical Characteristics (Continued)

Values are at $V_{CC} = 5.0\text{ V}$, $V_{EE} = \text{GND}$, unless otherwise specified.

The following specification apply over the range of $0^{\circ}\text{C} \leq T_A \leq +70^{\circ}\text{C}$ for the KA324A.

Symbol	Parameter	Conditions	KA324A			Unit
			Min.	Typ.	Max.	
V_{IO}	Input Offset Voltage	$V_{CM} = 0\text{ V to }V_{CC} - 1.5\text{ V}$,				

Notes:

7. $V_{CC}=30\text{V}$ for KA324A.

8. This parameter, although guaranteed is not 100% tested in production.

Typical Performance Characteristics

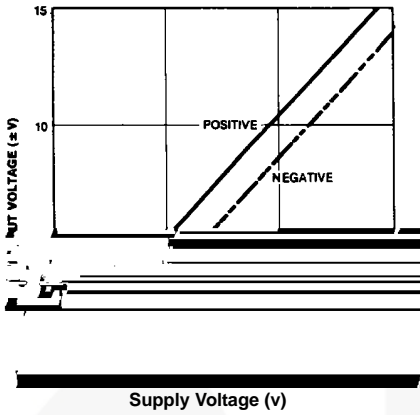


Figure 3. Input Voltage Range vs. Supply Voltage

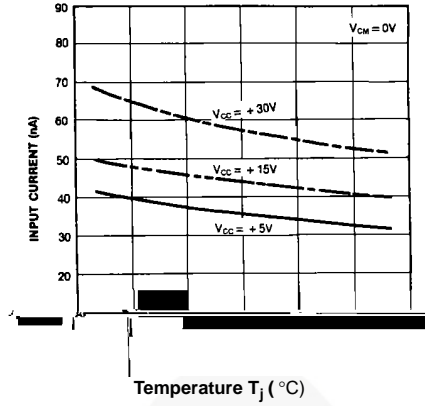


Figure 4. Input Current vs. Temperature

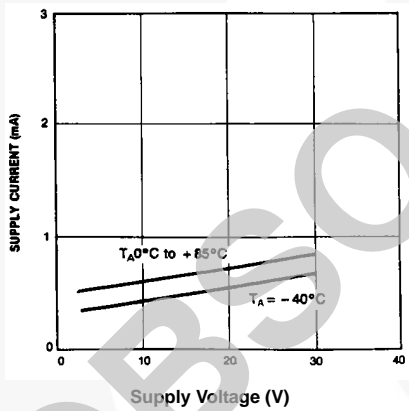


Figure 5. Supply Current vs. Supply Voltage

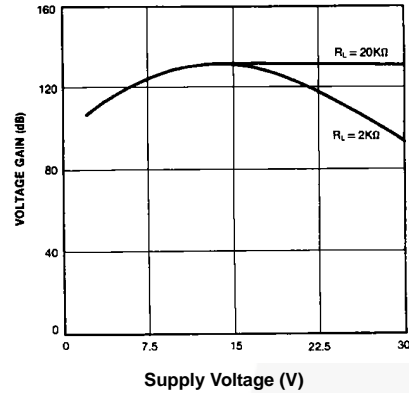


Figure 6. Voltage Gain vs. Supply Voltage

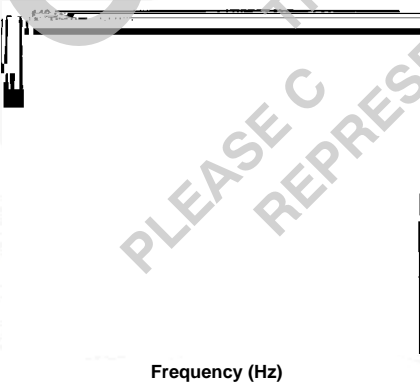


Figure 7. Open Loop Frequency Response

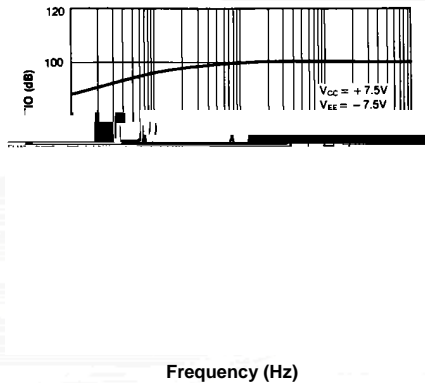


Figure 8. Common Mode Rejection Ratio



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