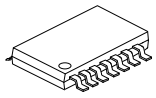
LV724

CMOS IC

QUAD LOW VOLTAGE, AND LOW POWER OPERATIONAL AMPLIFIER



TSSOP-14U

■ DESCRIPTION

The UTC **LV724** is low noise, low voltage, and low power supply current, that can be designed into a wide range of applications. The UTC **LV724** is designed to provide optimal performance in low voltage and low noise systems. It provides rail-to-rail output swing into heavy loads.

Low quiescent current 1.1mA per channel at 5V can supply 11MHz bandwidth and 0.85V/μs slew rate. The UTC **LV724** suits for Sensors, Active Filters, Audio, A/D Converters, Test Equipment, Communications, Battery-Powered Instrumentation and photodiode amplifiers, Cellular and Cordless Phones, Laptops and PDAs.

The quad version UTC **LV724** is specified over the extended industrial temperature range (-40°C ~ +125°C). The operating supply range is from 2.2V to 5.5V.

■ FEATURES

* Supply voltage range: 2.2V ~ 5.5V
* Supply current: 1.4mA/Amplifier (Max.)
* Input offset voltage: 3mV (Max.)
* Slew rate: 4.5V/μs (Typ.)
* Rail-to-Rail-Output

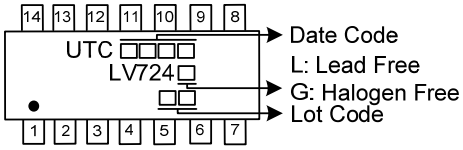
■ ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
LV724L-UEB-R	LV724G-UEB-R	TSSOP-14U	Tape Reel

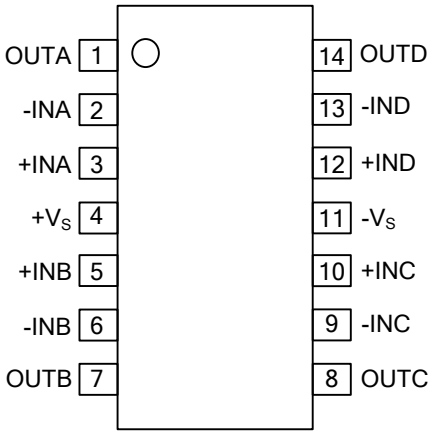
LV724G-UEB-R (1) Packing Type (2) Package Type (3) Green Package	(1) R: Tape Reel (2) UEB: TSSOP-14U (3) G: Halogen Free and Lead Free, L: Lead Free

Copyright © 2026 Unisonic Technologies Co., Ltd

■ MARKING



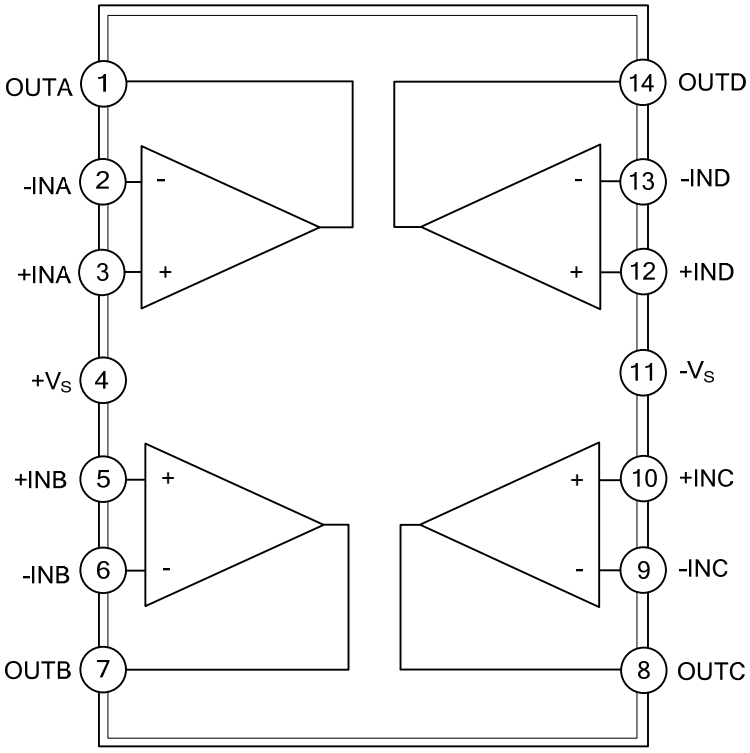
■ PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	OUTA	Output pin of A AMP
2	-INA	Inverting input pin of A AMP
3	+INA	Non-inverting input of A AMP
4	$+V_S$	Positive supply
5	+INB	Non-inverting input of B AMP
6	-INB	Inverting input pin of B AMP
7	OUTB	Output pin of B AMP
8	OUTC	Output pin of C AMP
9	-INC	Inverting input pin of C AMP
10	+INC	Non-inverting input of C AMP
11	$-V_S$	Negative supply
12	+IND	Non-inverting input of D AMP
13	-IND	Inverting input pin of D AMP
14	OUTD	Output pin of D AMP

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	$+V_S$ - ($-V_S$)	6	V
Differential Input Voltage	V_{ID}	±Supply voltage	V
Junction Temperature	T_J	+150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ RECOMMENDED OPERATING CONDITIONS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Supply Voltage	$+V_S$ - ($-V_S$)	2.2		5.5	V
Operating Free-Air Temperature	T_A	-40		+125	°C

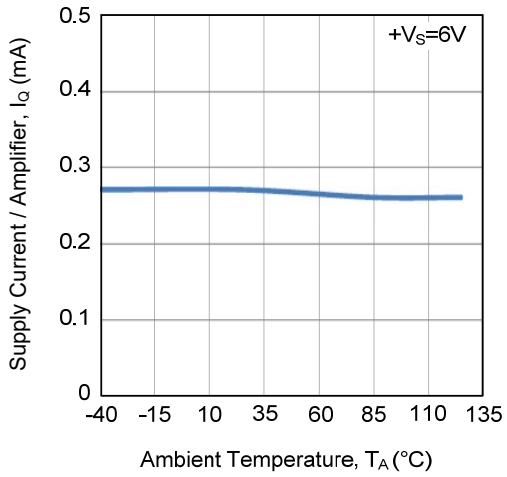
■ ELECTRICAL CHARACTERISTICS(T_A=25°C,$+V_S$=2.2V~5.5V,$-V_S$=0V, V_O=V_{CM}=$+V_S$/2,and, R_L >1MΩ)

PARAMETER	SYMBOL	TEST CONDITIONS		MIN	TYP (Note 1)	MAX (Note 2)	UNIT
Supply Current/Amplifier	I_Q				0.8	1.4	mA
Power Supply Rejection Ratio	PSRR	2V ≤ $+V_S$ ≤ 5V, V_O=0, V_{CM}=0		70	90		dB
Input Offset Voltage	V_{OS}				0.3	3	mV
Input Bias Current	I_B				260		nA
Input Offset Current	I_{OS}				25		nA
Common-Mode Voltage Range	V_{CM}	CMRR ≥ 50dB			-0.2 ~ $+V_S$ -0.9		V
Common-Mode Rejection Ratio	CMRR	0V ≤ V_{CM} ≤ $+V_S$-0.9V		70	92		dB
Large Signal Voltage Gain	A_V	R_L=600Ω, V_O=0.75 ~ $+V_S$ -0.2V		75	81		dB
		R_L=2kΩ, V_O=0.70 ~ $+V_S$ -0.1V		75	84		dB
Output Voltage	V_O	R_L=2kΩ	V_{OH}	$+V_S$ -0.07	$+V_S$ -0.05		V
			V_{OL}		0.07	0.11	V
		R_L=600Ω	V_{OH}	$+V_S$ -0.16	$+V_S$ -0.1		V
			V_{OL}		0.13	0.19	V
Short-Circuit Current	I_{SC}	Sourcing, V_O=-V_S, V_{IN}(diff)=±0.5V		10			mA
		Sinking, V_O=+V_S, V_{IN}(diff)=±0.5V		10			mA
Slew Rate	SR	(Note 3)			4.5		V/μs
Gain-Bandwidth Product	GBW				10		MHz
Total Harmonic Distortion	THD	f=1kHz, A_V=1, R_L=600Ω, V_O=500mV_{PP}			0.004		%
Input-Referred Voltage Noise	e_n	f =1kHz			9		nV/$\sqrt{Hz}$
Input-Referred Current Noise	i_n	f =1kHz			0.3		pA/$\sqrt{Hz}$

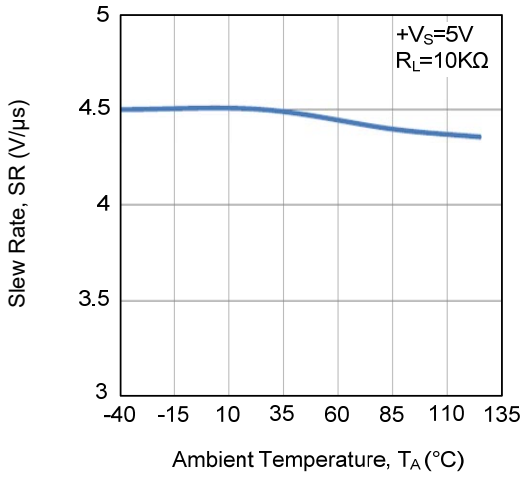
Notes: 1. Typical Values represent the most likely parametric norm.
2. All limits are guaranteed by testing or statistical analysis.
3. Connected as voltage follower with 1V step input. Number specified is the slower of the positive and negative slew rate.

■ TYPICAL CHARACTERISTICS

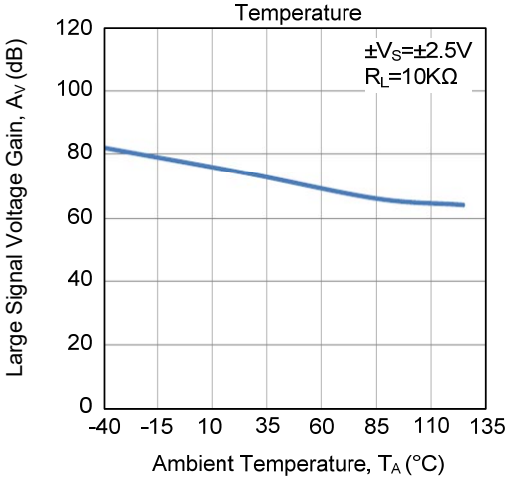
Supply Current vs. Temperature



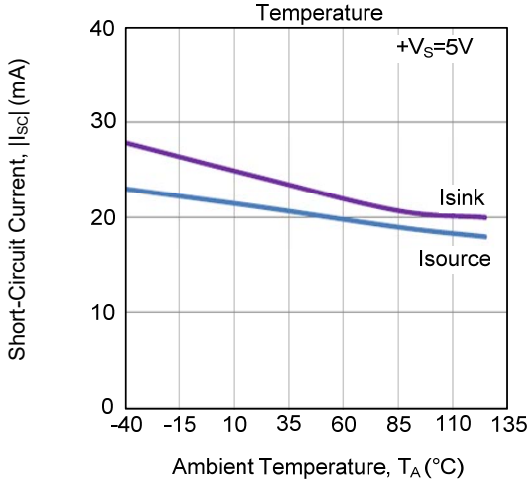
Slew Rate vs. Temperature



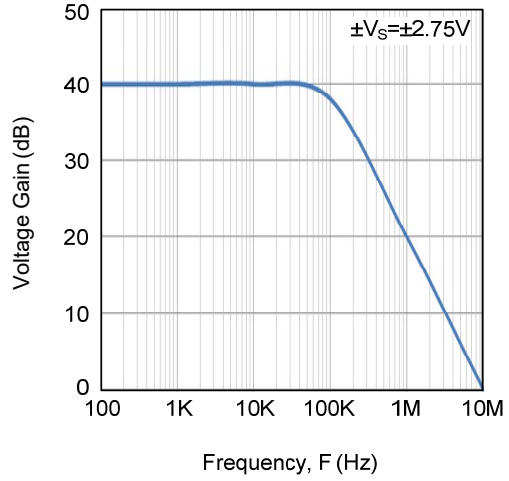
Large Signal Voltage Gain vs. Temperature



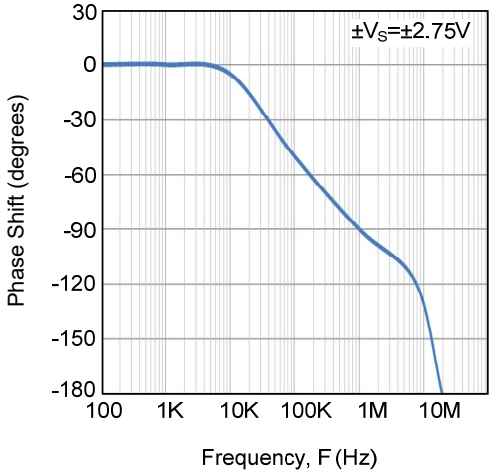
Output Short Circuit Current vs. Temperature



Voltage Gain vs. Frequency



Phase Shift vs. Frequency



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.