

ULTRA HIGH SPEED SINGLE OPERATIONAL AMPLIFIER

■GENERAL DESCRIPTION

The **NJM2721** is an ultra high speed single operational amplifier. It can swing 500V/μs high slew rate, and 75-ohm load drive is possible at supply voltage of ±2.5V. It is suitable for pulse amplifiers, D/A current to voltage conversion, digital communication, video signal processing, line buffer, and cable drivers.

■PACKAGE OUTLINE

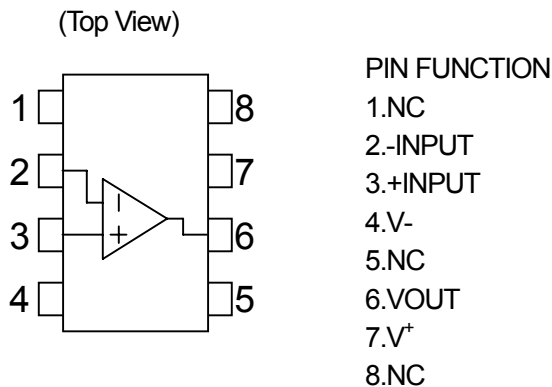


NJM2721E

■FEATURES

- Operating Voltage (±2.5V to ±5V)
- Supply Current (11.3mA Typ.)
- High Slew Rate (500V/μs Typ.)
- Unity Gain Frequency (120MHz Typ.)
- Input Offset Voltage (3mV Typ.)
- Output Voltage (V_{OH}:+1.35V Typ. (@V⁺/V⁻=±2.5V, R_L=150Ω))
(V_{OL}:-1.35V Typ. (@V⁺/V⁻=±2.5V, R_L=150Ω))
- Package Outline EMP8

■PIN CONFIGURATION



NJM2721

PRELIMINARY

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+ / V^-	±5.5	V
Differential Voltage	V_{ID}	±3	V
Input Voltage	V_{ICM}	±5.5	V
Power Dissipation	P_D	300	mW
Operating Temperature Range	T_{opr}	-40 to +85	°C
Storage Temperature Range	T_{stg}	-40 to +125	°C

■ RECOMMENDED OPERATING CONDITION

(Ta=25°C)

PARAMETER	SYMBOL	CONDITION	UNIT
Supply Voltage	V^+ / V^-	±2.5 to ±5	V

■ ELECTRICAL CHARACTERISTICS

● DC CHARACTERISTICS

($V^+ / V^- = \pm 2.5V$, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Operating Current	I_{CC}	No Signal	-	11.3	18.3	mA
Input Offset Voltage	V_{IO}		-	3	19	mV
Input Bias Current	I_B		-	15	50	μA
Input Offset Current	I_{IO}		-	150	900	nA
Voltage Gain	A_V	$R_L = 2k\Omega$	50	60	-	dB
Input Common Mode Voltage Range	V_{ICM}		+1.5	+1.7	-	V
			-1.0	-1.2	-	
Common Mode Rejection Ratio	CMR	$-1V \leq V_{ICM} \leq +1.5V$	60	80	-	dB
Supply Voltage Rejection Ratio	SVR	$\pm 2.5V \leq V^+ / V^- \leq \pm 4.5V$, $R_L = 2k\Omega$	50	60	-	dB
Maximum Output Voltage	V_{OH}	$R_L = 150\Omega$	+1.1	+1.35	-	V
	V_{OL}	$R_L = 150\Omega$	-1.1	-1.35	-	

● AC CHARACTERISTICS

($V^+ / V^- = \pm 2.5V$, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Unity Gain Frequency	f_T	$A_V = 40dB$, $R_F = 1.98k\Omega$, $R_G = 20\Omega$ $R_L = \infty$, $C_L = 5pF$	-	120	-	MHz
Phase Margin	Φ_M	$A_V = 40dB$, $R_F = 1.98k\Omega$, $R_G = 20\Omega$ $R_L = \infty$, $C_L = 5pF$	-	60	-	Deg

● TRANSIENT CHARACTERISTICS

($V^+ / V^- = \pm 2.5V$, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Slew Rate	SR	$A_V = 0dB$, $R_F = 0\Omega$, $R_G = \infty$ $R_L = 150\Omega$, $C_L = 5pF$, $V_{in} = 2V_{pp}$	-	500	-	V/μs

[CAUTION]

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