PRELIMINARY

ULTRA HIGH SPEED SINGLE OPERATIONAL AMPLIFIER

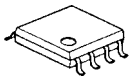
■GENERAL DESCRIPTION

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



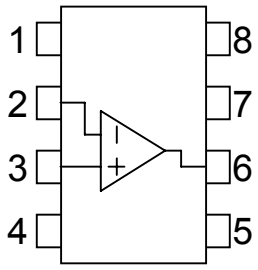
NJM2721E

■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, RL=150Ω))
	(V_{OL}:−1.35V Typ. (@V^+/V^-=±2.5V, RL=150Ω))
●Package Outline	EMP8

■PIN CONFIGURATION

(Top View)



PIN FUNCTION

1.NC
2.-INPUT
3.+INPUT
4.V-
5.NC
6.VOUT
7.V^+
8.NC

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	Topr	-40 to +85	°C
Storage Temperature Range	Tstg	-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^-=±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=2kΩ	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≦V_{ICM}≦+1.5V	60	80	-	dB
Supply Voltage Rejection Ratio	SVR	±2.5V≦V^+ / V^-≦±4.5V, R_L=2kΩ	50	60	-	dB
Maximum Output Voltage	V_{OH}	R_L=150Ω	+1.1	+1.35	-	V
	V_{OL}	R_L=150Ω	-1.1	-1.35	-	

● AC CHARACTERISTICS (V^+/V^-=±2.5V, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Unity Gain Frequency	f_T	A_V=40dB, R_F=1.98kΩ, R_G=20Ω R_L=∞ C_L=5pF	-	120	-	MHz
Phase Margin	ΦM	A_V=40dB, R_F=1.98kΩ, R_G=20Ω R_L=∞, C_L=5pF	-	60	-	Deg

● TRANSIENT CHARACTERISTICS (V^+/V^-=±2.5V, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Slew Rate	SR	A_V=0dB, R_F=0Ω, R_G=∞ R_L=150Ω, C_L=5pF, Vin=2Vpp	-	500	-	V/μs

[CAUTION]
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