



NEC UPC81C Integrated Circuit Audio Power Amplifier, 1W

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Supply Voltage, V_{CC} 20V
 Collector Current, I_{CC} 1A
 Operating Temperature Range, T_{opr} -20° to $+75^\circ\text{C}$
 Storage Temperature Range, T_{stg} -40° to $+125^\circ\text{C}$

Electrical Characteristics: ($V_{CC} = 5V$, $T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Max. Output Power	P_{Omax}	$R_f = 2k$, $f = 1\text{KHz}$, THD = 3%	1	1.5	-	W
Voltage Gain	G_V	$R_f = \infty$, $f = 1\text{KHz}$	60	68	-	dB
		$R_f = 2k$, $f = 1\text{KHz}$	37	42	-	dB
Efficiency	η	$P_O = 1W$	46.5	-	-	%
Total Harmonic Distortion	THD	$P_O = 1W$, $R_f = 2K$, $f = 1\text{KHz}$	-	0.5	2	%
		$P_O = 50mW$, $R_f = 2k$, $f = 1\text{KHz}$	-	0.1	1	%
Supply Current	I_{CC}		5	7.5	14	mA
Frequency Response	f_c	$P_O = 500mW$, $\pm 3\text{dB}$	-	50	-	Hz
	N_{OVc}	$R_f = 2K$	-	0.5	-	mV
Input Impedance	Z_i	$f = 1\text{KHz}$, $R_f = 2K$	-	60	-	K
Output Impedance	Z_{out}		-	0.12	-	K

Pin Connection Diagram

