

Overview

The STK350-020 is a voltage amplifier for use in audio power output stages. It comprises a 2-channel amplifier integrated in a small package, making possible audio set miniaturization and design simplification.

Features

- Split power supply for wide bandwidth ($f = 20\text{Hz}$ to 20kHz)
- Member of a family of devices with power capacities from 40W to 150W
- Compact package
- High withstand voltage

Series Configuration

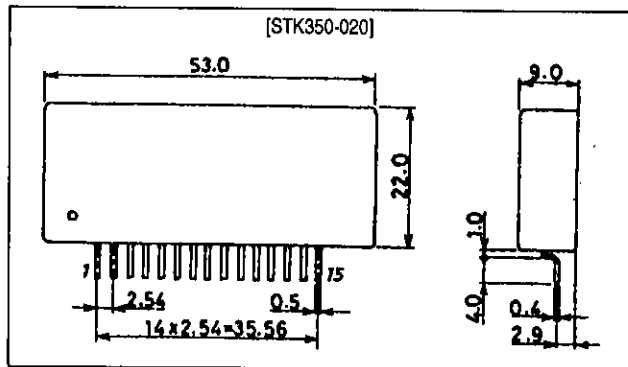
The STK350-020 is a member of a family of devices with differing output capacities.

Type No.	$V_{cc \text{ max}}$ [V]	V_{cc} [V]	THD [%]	$T_c \text{ max}$ [°C]	Power [W] ($R_L = 8\Omega$)
STK350-000	±55	±36	0.005	115	40 to 60
STK350-010	±59	±41	0.005	115	60 to 80
STK350-020	±65	±47	0.005	115	80 to 90
STK350-030	±75	±50	0.005	115	90 to 100
STK350-040	±80	±55	0.005	115	100 to 120
STK350-050	±90	±60	0.005	115	120 to 150

Package Dimensions

Unit: mm

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Specifications

Maximum Ratings at $T_a = 25^\circ\text{C}$

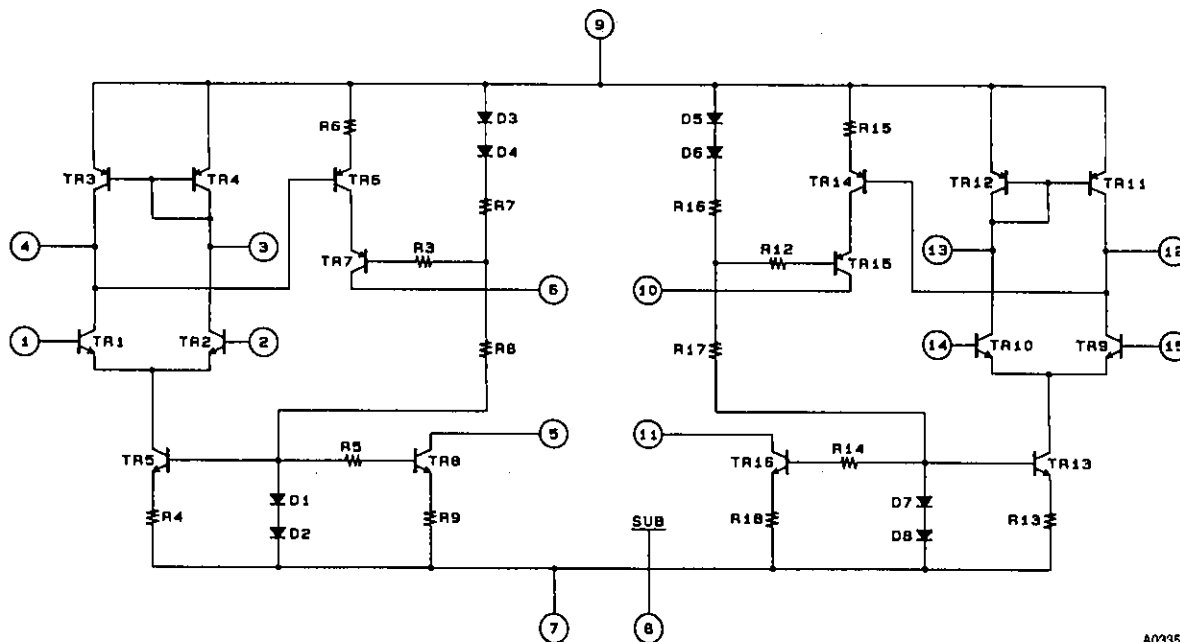
Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC \text{ max}}$		± 65	V
Operating substrate temperature	T_c		115	$^\circ\text{C}$
Storage temperature	T_{stg}		-30 to +115	$^\circ\text{C}$

Operating Characteristics at $T_a = 25^\circ\text{C}$, $V_G = 40\text{dB}$, specified test circuit

Parameter	Symbol	Conditions	min	typ	max	Unit
Current drain	I_{CC}	$V_{CC} = \pm 56\text{V}$	-	20	30	mA
Neutral voltage	V_N	$V_{CC} = \pm 56\text{V}$	-70	-	+70	mV
Output noise voltage	V_{NO}	$V_{CC} = \pm 56\text{V}$, $R_g = 10\text{k}\Omega$	-	-	1.0	mVrms
Input impedance	r_i	$V_{CC} = \pm 56\text{V}$, $f = 1\text{kHz}$, $V_o = 2.83\text{V}$	-	100	-	$\text{k}\Omega$
Total harmonic distortion	THD	$V_{CC} = \pm 47\text{V}$, $f = 20\text{kHz}$, $V_o = 25.3\text{V}$	-	-	0.005	%

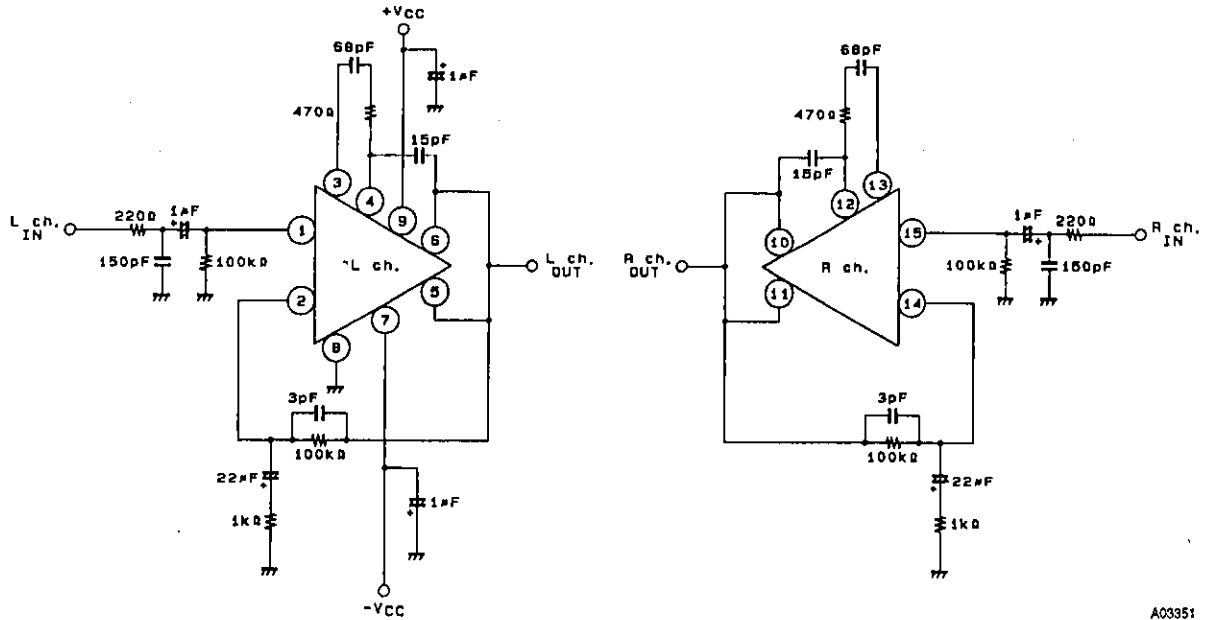
Note. All tests are made using a constant-voltage supply.

Equivalent Circuit



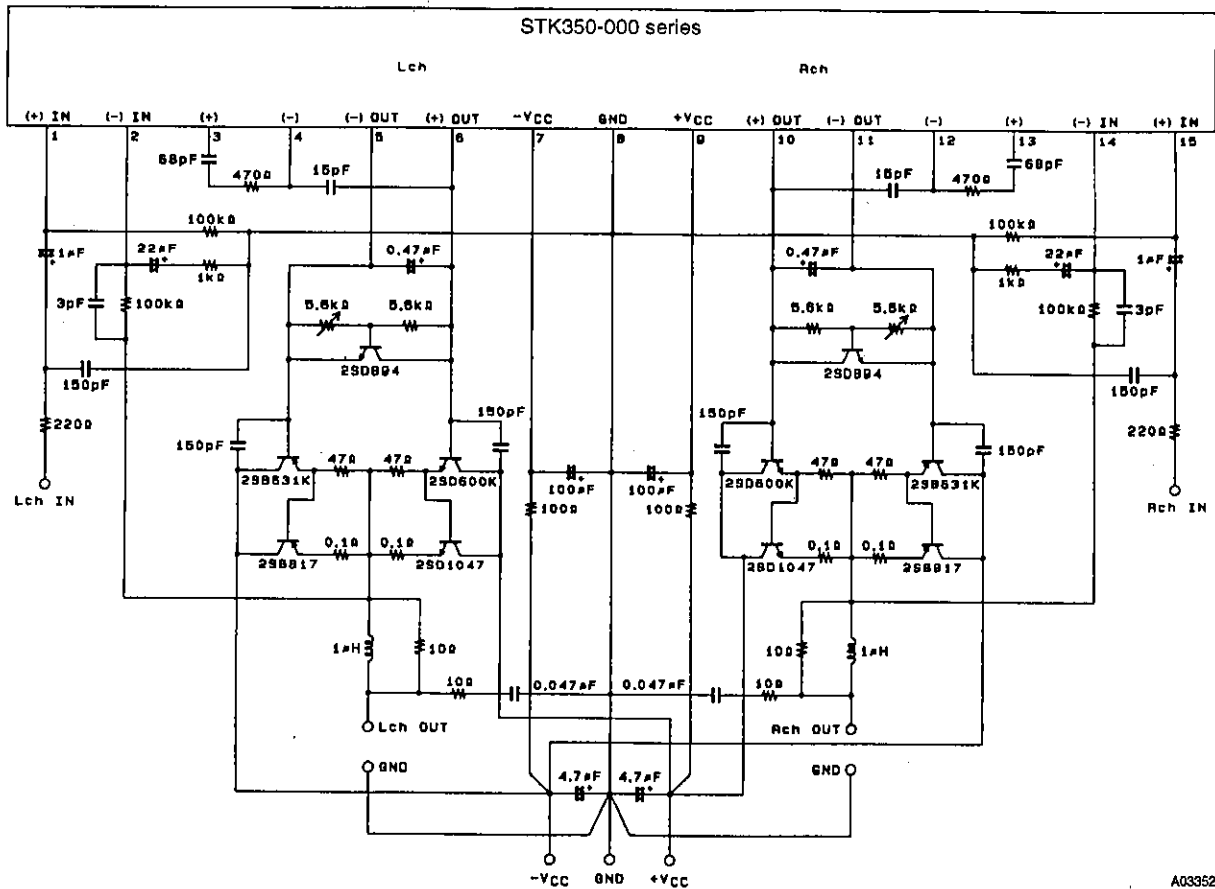
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Test Circuit



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Sample Application Circuit—60W/8Ω Amplifier ($V_{CC} = \pm 41V$)



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