

Overview

The STK350-010 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 = 20Hz to 20kHz)
- Member of a family of devices with power capacities from 40W to 150W
- · Compact package
- · High withstand voltage

Series Configuration

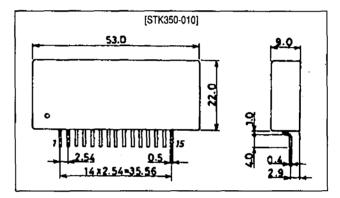
The STK350-010 is a member of a family of devices with differing output capacities.

| Type No. | V _{cc} max [V] | v _{cc} [V] | THD [%] | Tc max [°C] | Power [W] (R _L = 8Ω) |
|------------|----------------------------|------------------------|------------|-------------|---------------------------------------|
| 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

4155



Specifications

Maximum Ratings at Ta = 25°C

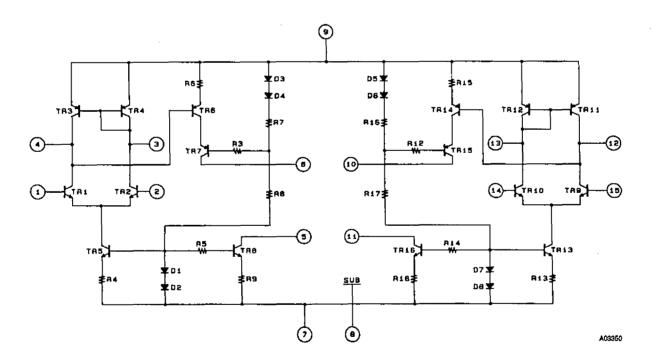
| Parameter | Symbol | Conditions | Ratings | Unit |
|---------------------------------|---------------------|------------|-------------|------|
| Maximum supply voltage | V _{CC} max | | ±59 | ٧ |
| Operating substrate temperature | Tc | | 115 | °C |
| Storage temperature | Tstg | | -30 to +115 | °C |

Operating Characteristics at Ta = 25°C, VG = 40dB, specified test circuit

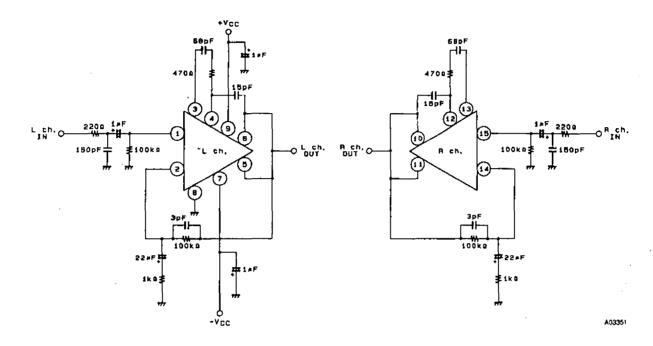
| Parameter | Symbol | Conditions | min | typ | max | Unit |
|---------------------------|-----------------|--|-----|-----|-------|-------|
| Current drain | lcc | V _{CC} = ±48V | - | 20 | 30 | mA |
| Neutral voltage | V _N | V _{CC} = ±48V | -70 | - | +70 | mV |
| Output noise voltage | V _{NO} | $V_{CC} = \pm 48V$, $Rg = 10k\Omega$ | - | - | 1.0 | mVrms |
| Input impedance | rı | $V_{CC} = \pm 48V, f = 1kHz, V_0 = 2.83V$ | - | 100 | - | kΩ |
| Total harmonic distortion | THD | V _{CC} = ±41V, f = 20kHz, V _O = 22.0V | - | - | 0.005 | % |

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

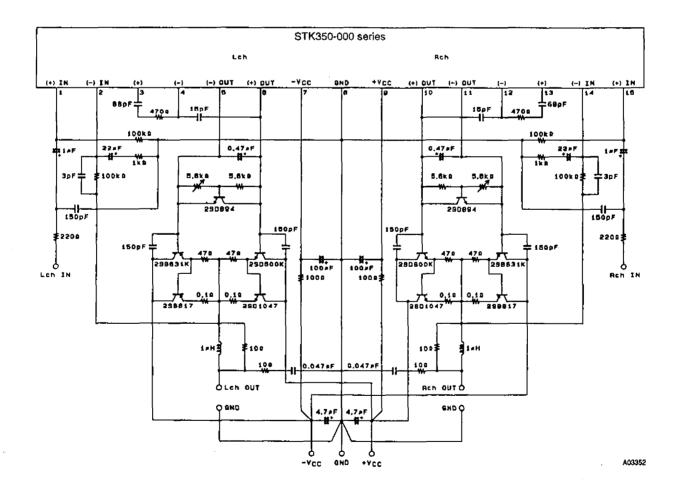
Equivalent Circuit



Test Circuit



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



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