

## Overview

The STK350-050 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  $20\text{kHz}$ )
- Member of a family of devices with power capacities from 40W to 150W
- Compact package
- High withstand voltage

## Series Configuration

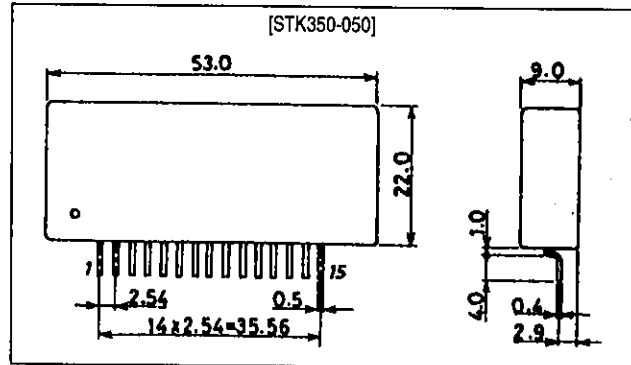
The STK350-050 is a member of a family of devices with differing output capacities.

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

## Package Dimensions

Unit: mm

4155



## Specifications

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

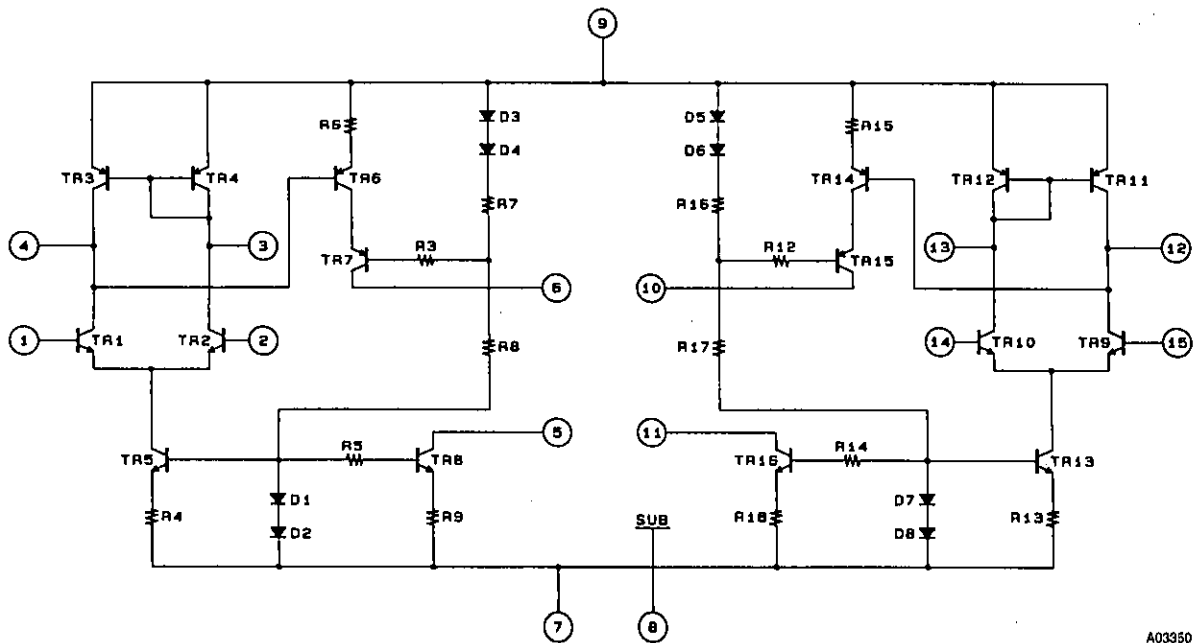
| Parameter                       | Symbol               | Conditions | Ratings     | Unit             |
|---------------------------------|----------------------|------------|-------------|------------------|
| Maximum supply voltage          | $V_{CC \text{ max}}$ |            | $\pm 90$    | V                |
| Operating substrate temperature | $T_c$                |            | 115         | $^\circ\text{C}$ |
| Storage temperature             | $T_{sg}$             |            | -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             | $I_{CC}$ | $V_{CC} = \pm 72\text{V}$  | -   | 20  | 30    | mA               |
| Neutral voltage           | $V_N$    | $V_{CC} = \pm 72\text{V}$  | -70 | -   | +70   | mV               |
| Output noise voltage      | $V_{NO}$ | $V_{CC} = \pm 72\text{V}$ , $R_g = 10\text{k}\Omega$                     | -   | -   | 1.0   | mVrms            |
| Input impedance           | $r_i$    | $V_{CC} = \pm 72\text{V}$ , $f = 1\text{kHz}$ ,<br>$V_O = 2.83\text{V}$  | -   | 100 | -     | $\text{k}\Omega$ |
| Total harmonic distortion | THD      | $V_{CC} = \pm 60\text{V}$ , $f = 20\text{kHz}$ ,<br>$V_O = 34.6\text{V}$ | -   | -   | 0.005 | %                |

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

### Equivalent Circuit



A03350



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