

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

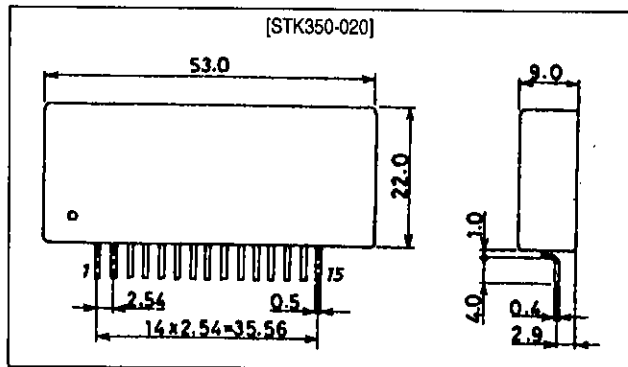
The STK350-020 is a member of a family of devices with differing output capacities.

| 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

4155



Specifications

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

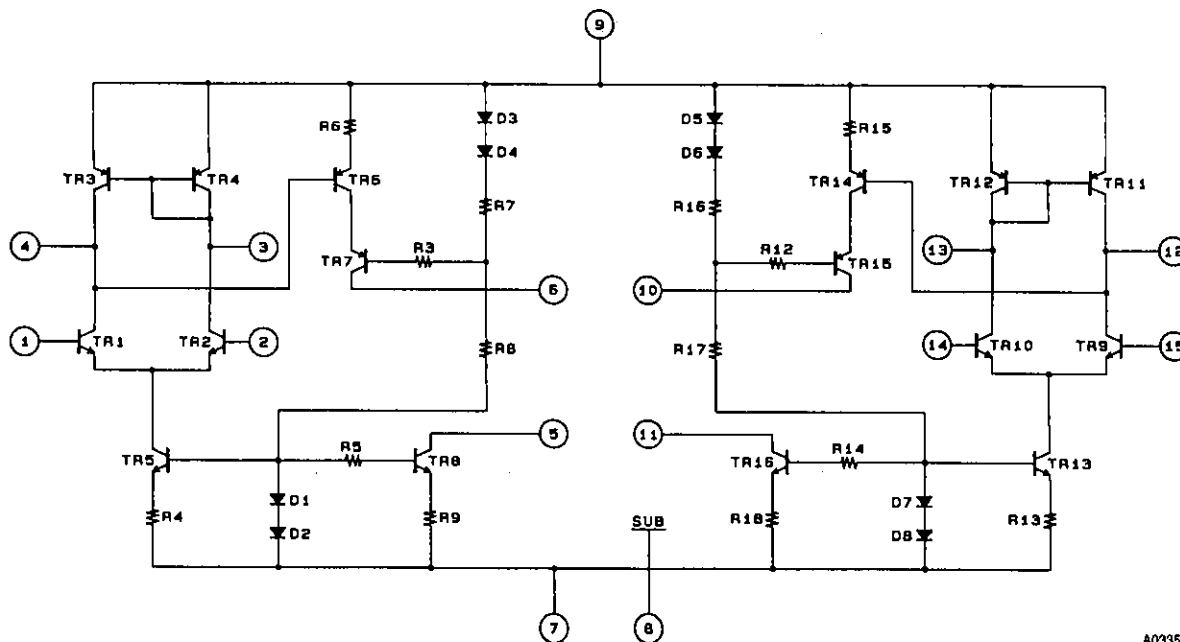
| Parameter | Symbol | Conditions | Ratings | Unit |
|---------------------------------|---------------------|------------|-------------|------------------|
| Maximum supply voltage | $V_{CC\text{ max}}$ | | ± 65 | V |
| Operating substrate temperature | T_c | | 115 | $^\circ\text{C}$ |
| Storage temperature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



A03350

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