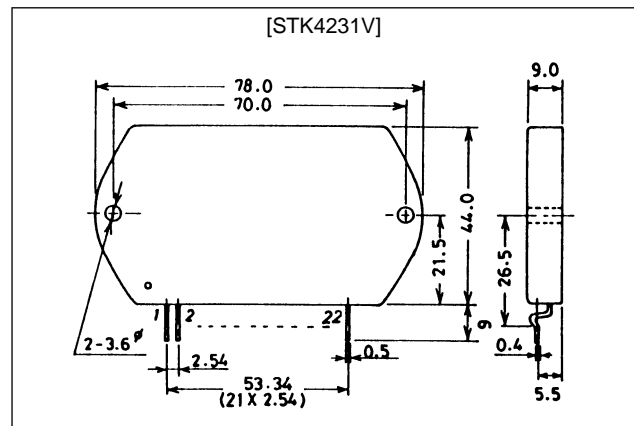


**STK4231V**
**AF Power Amplifier (Split Power Supply)
(100W+100W min, THD = 0.08%)**
Features

- Muting circuit built-in to isolate all types of shock noise
- Current mirror circuit for low 0.08% total harmonic distortion
- Pin compatible with the STK4201II series (THD = 0.4%) and the STK4141X series (THD = 0.02%)

Package Dimensions

unit: mm

4086A**Specifications****Maximum Ratings** at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC \text{ max}}$		± 75	V
Thermal resistance	θ_{j-c}		1.2	$^\circ\text{C}/\text{W}$
Junction temperature	T_j		150	$^\circ\text{C}$
Operating substrate temperature	T_c		125	$^\circ\text{C}$
Storage temperature	T_{stg}		-30 to +125	$^\circ\text{C}$
Available time for load short-circuit ¹	t_s	$V_{CC} = \pm 51\text{V}$, $R_L = 8\Omega$, $f = 50\text{Hz}$, $P_O = 100\text{W}$	1	s

Recommended Operating Conditions at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V_{CC}		± 51	V
Load resistance	R_L		8	Ω

STK4231V

Operating Characteristics at $T_a = 25^\circ\text{C}$, $V_{CC} = \pm 51\text{V}$, $R_L = 8\Omega$ (noninductive load), $R_g = 600\Omega$, $V_G = 40\text{dB}$

Parameter	Symbol	Conditions	min	typ	max	Unit
Quiescent current	I_{CCO}	$V_{CC} = \pm 61.5\text{V}$	20	40	100	mA
Output power	P_O	THD = 0.08%, $f = 20\text{Hz}$ to 20kHz	100	–	–	W
Total harmonic distortion	THD	$P_O = 1.0\text{W}$, $f = 1\text{kHz}$	–	–	0.08	%
Frequency response	f_L, f_H	$P_O = 1.0\text{W}$, $+0_{-3}\text{dB}$	–	20 to 50k	–	Hz
Input impedance	r_i	$P_O = 1.0\text{W}$, $f = 1\text{kHz}$	–	55	–	$\text{k}\Omega$
Output noise voltage ²	V_{NO}	$V_{CC} = \pm 61.5\text{V}$, $R_g = 10\text{k}\Omega$	–	–	1.2	mVrms
Neutral voltage	V_N	$V_{CC} = \pm 61.5\text{V}$	-70	0	+70	mV
Muting voltage	V_M		-2	-5	-10	V

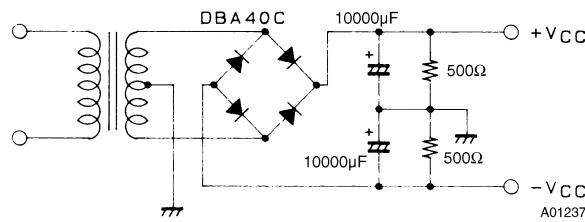
Notes.

All tests are measured using a regulated voltage supply unless otherwise specified.

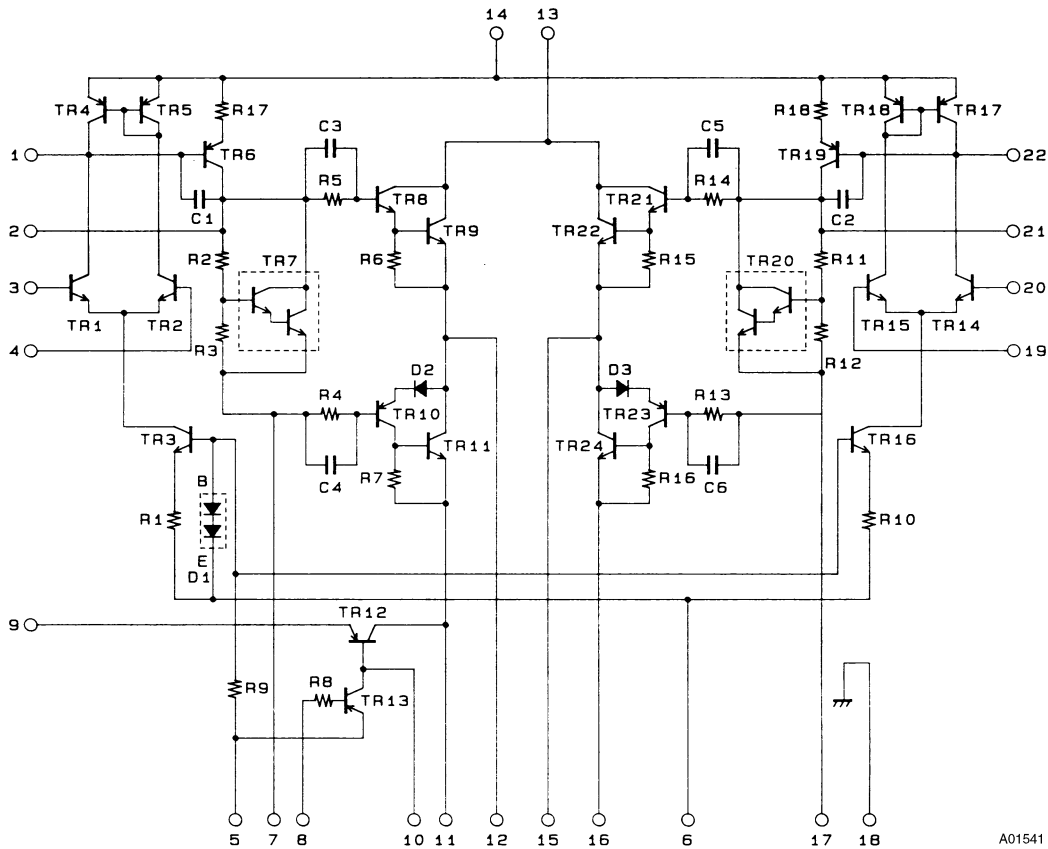
1. Available time for load short-circuit and output noise voltage are measured using the transformer supply specified below.

2. The output noise voltage is the peak value of an average-reading meter with an rms value scale (VTVM). The noise voltage waveform includes no flicker noise.

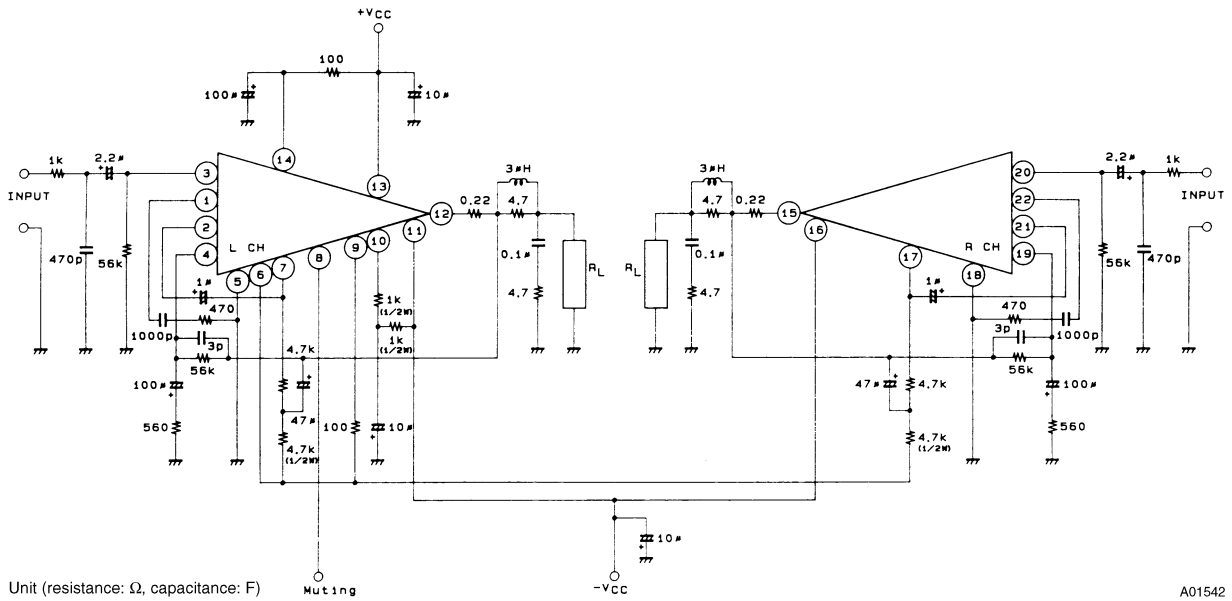
Specified Transformer Supply (MG-200 or Equivalent)



Equivalent Circuit



Sample Application Circuit (100W min 2-Channel AF Power Amplifier)



Unit (resistance: Ω, capacitance: F)

Muting

-Vcc

A01542

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