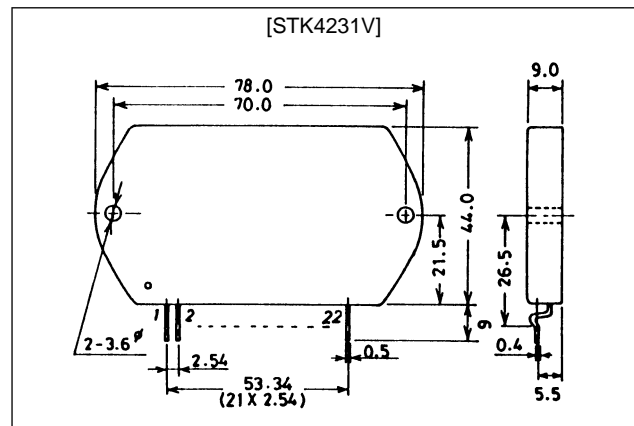


**STK4231V**
**AF Power Amplifier (Split Power Supply)  
(100W+100W min, THD = 0.08%)**
**Features**

- 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	$V_{CC \text{ max}}$		$\pm 75$	V
Thermal resistance	$\theta_{j-c}$		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 <sup>1</sup>	$t_s$	$V_{CC} = \pm 51\text{V}$ , $R_L = 8\Omega$ , $f = 50\text{Hz}$ , $P_O = 100\text{W}$	1	s

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

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	$V_{CC}$		$\pm 51$	V
Load resistance	$R_L$		8	$\Omega$

# 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 $20\text{kHz}$	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	–	$k\Omega$
Output noise voltage <sup>2</sup>	$V_{NO}$	$V_{CC} = \pm 61.5\text{V}$ , $R_g = 10k\Omega$	–	–	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

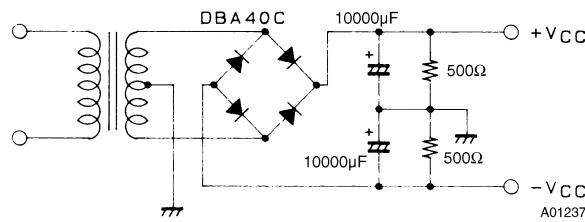
**Notes.**

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

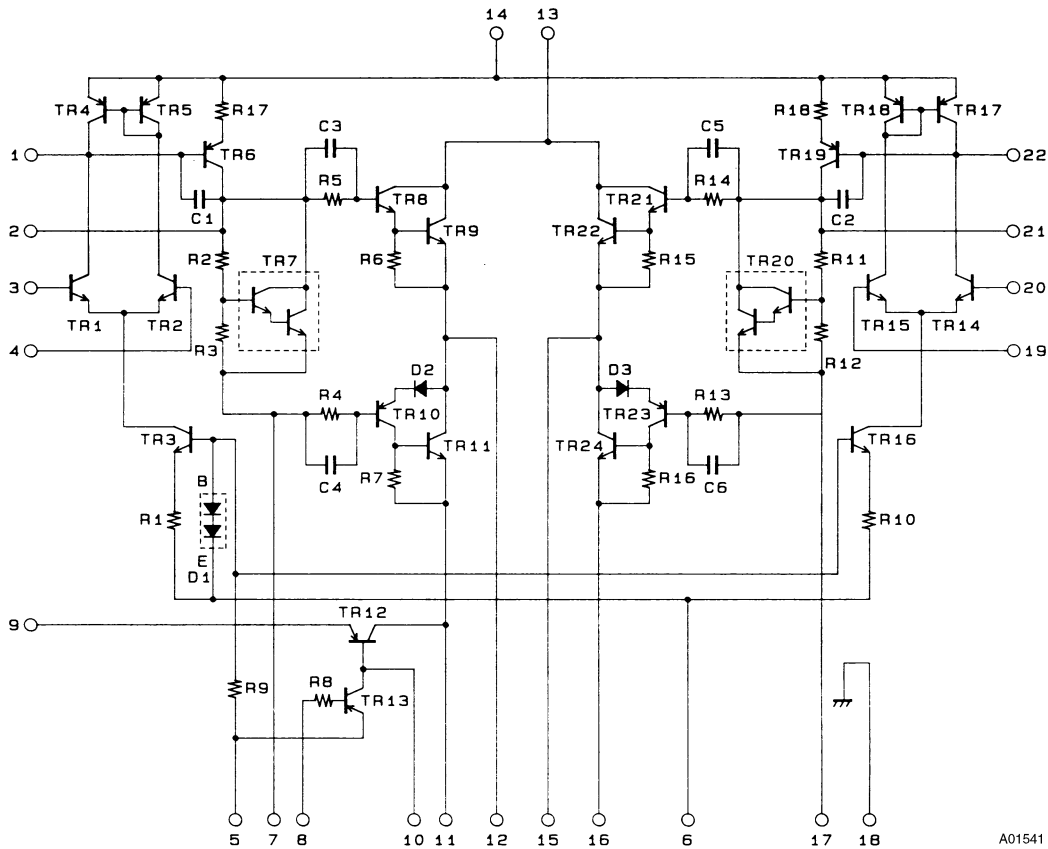
1. Available time for load short-circuit and output noise voltage are measured using the transformer supply specified below.

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.

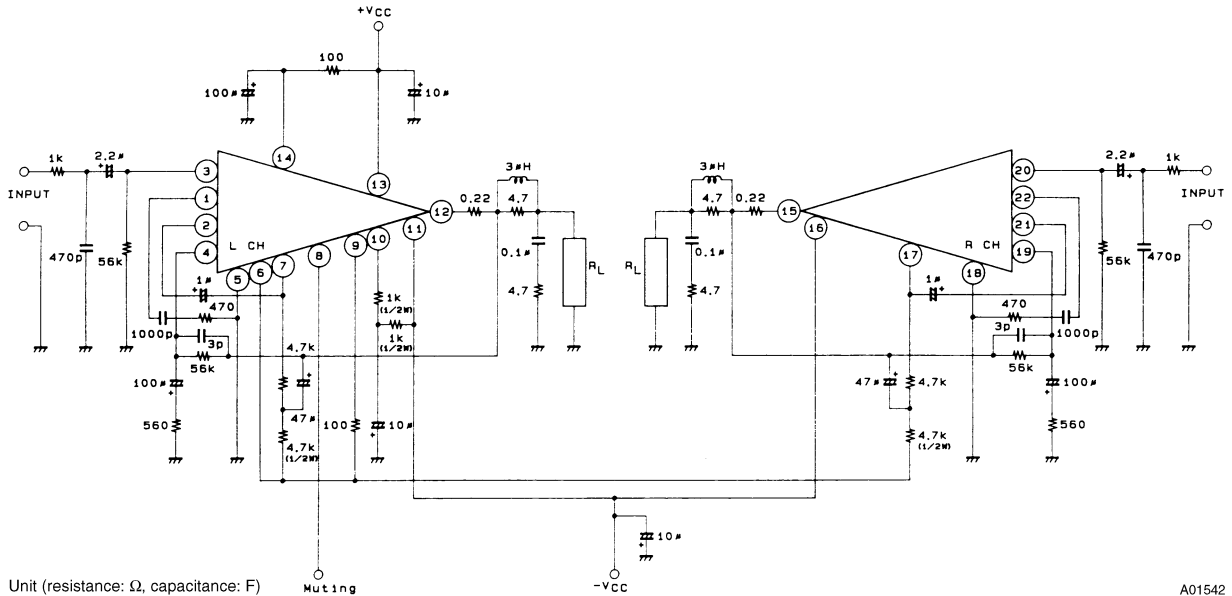
**Specified Transformer Supply (MG-200 or Equivalent)**



**Equivalent Circuit**



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



- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
  - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
  - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees, jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of June, 1997. Specifications and information herein are subject to change without notice.