



STK4221V

2-Channel 80 W min AF Power Amplifier (Split Power Supply)

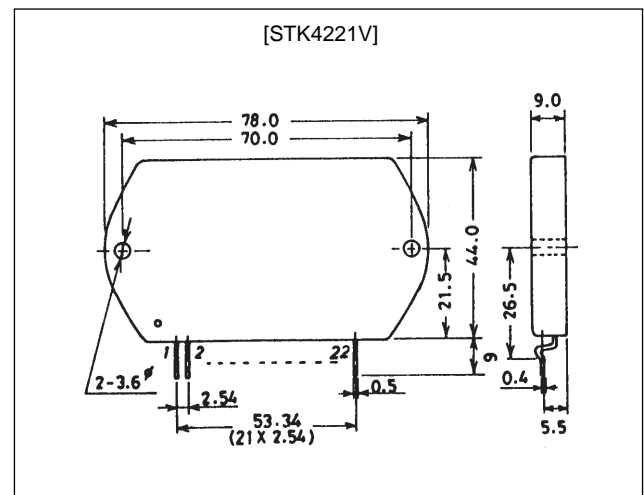
Features

- The inclusion of a muting circuit on-chip allows all types of impulse noise to be excluded.
- Current mirror circuit application reduces distortion to 0.008%.
- 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	Condition	Rating	Unit
Maximum supply voltage	V_{CC} max		± 65	V
Thermal resistance	θ_{j-c}		1.4	$^\circ\text{C}/\text{W}$
Junction temperature	T_j		150	$^\circ\text{C}$
Operating case temperature	T_c		125	$^\circ\text{C}$
Storage temperature	T_{stg}		-30 to +125	$^\circ\text{C}$
Available time for load shorted	t_S^*	$V_{CC} = \pm 45\text{ V}$, $R_L = 8\ \Omega$, $f = 50\text{ Hz}$, $P_O = 80\text{ W}$	1	sec

Note: Use a constant voltage power supply as the test power supply unless otherwise specified.

* Use the transformer power supply shown on the next page when measuring the available time for load shorted and the output noise voltage.

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

Parameter	Symbol	Condition	Rating	Unit
Recommended supply voltage	V_{CC}		± 45	V
Load resistance	R_L		8	Ω

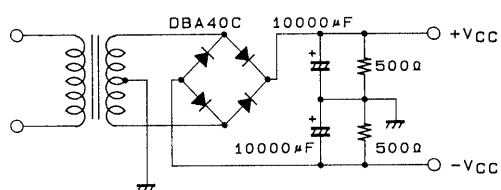
STK4221V

Operating Characteristics at $T_a = 25^\circ\text{C}$, $V_{CC} = \pm 45\text{ V}$, $R_L = 8\ \Omega$ (noninductive load), $R_G = 600\ \Omega$, $V_G = 40\ \text{dB}$

Parameter	Symbol	Condition	Rating			Unit
			min	typ	max	
Quiescent current	I_{CCO}	$V_{CC} = \pm 54\text{ V}$	20	40	100	mA
Output power	P_O	THD = 0.08%, $f = 20\text{ Hz to } 20\text{ kHz}$	80			W
Total harmonic distortion	THD	$P_O = 1.0\text{ W}$, $f = 1\text{ kHz}$			0.08	%
Frequency response	f_L, f_H	$P_O = 1.0\text{ W}$, -3 dB		20 to 50 k		Hz
Input resistance	r_i	$P_O = 1.0\text{ W}$, $f = 1\text{ kHz}$		55		k Ω
Output noise voltage	V_{NO}^*	$V_{CC} = \pm 54\text{ V}$, $R_G = 10\text{ k}\Omega$			1.2	mVrms
Neutral voltage	V_N	$V_{CC} = \pm 54\text{ V}$	-70	0	+70	mV
Muting voltage	V_M		-2	-5	-10	V

Note: Use a constant voltage power supply as the test power supply unless otherwise specified.

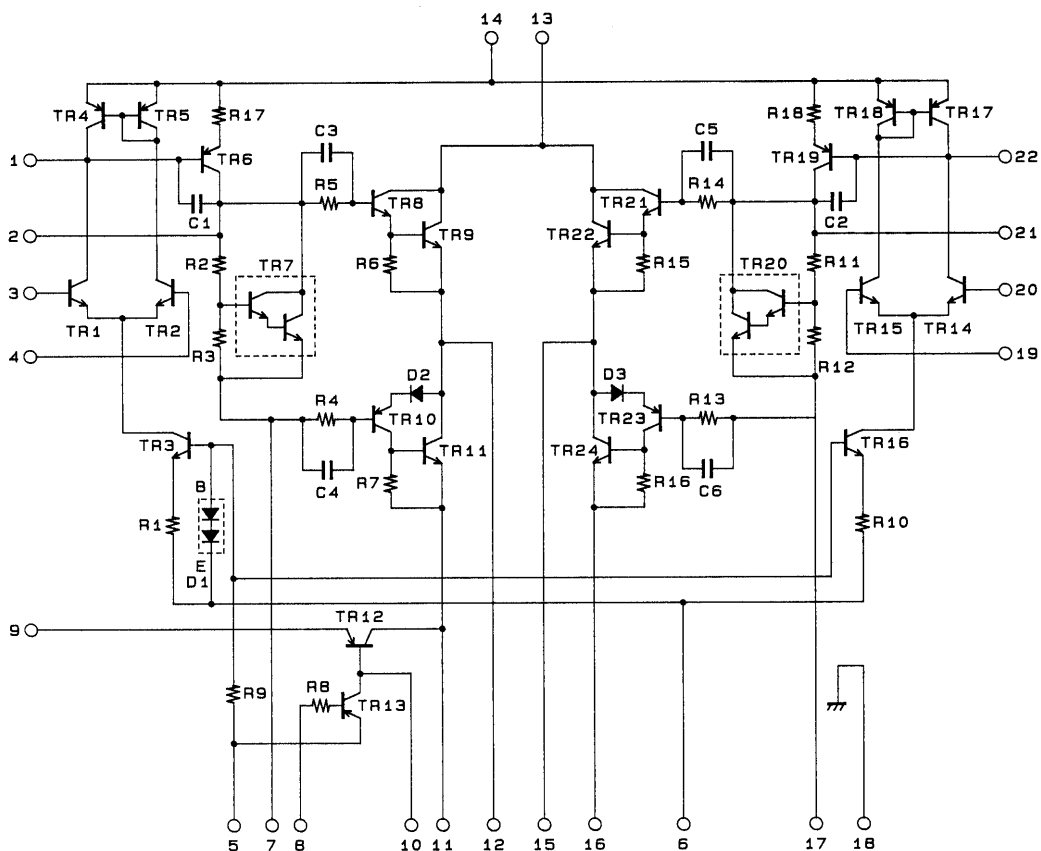
* The output noise voltage is the peak value measured with an averaging rms scale volt meter. The noise voltage waveform should not include pulse noise.



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Specified Transformer Power Supply (MG-200 equivalent)

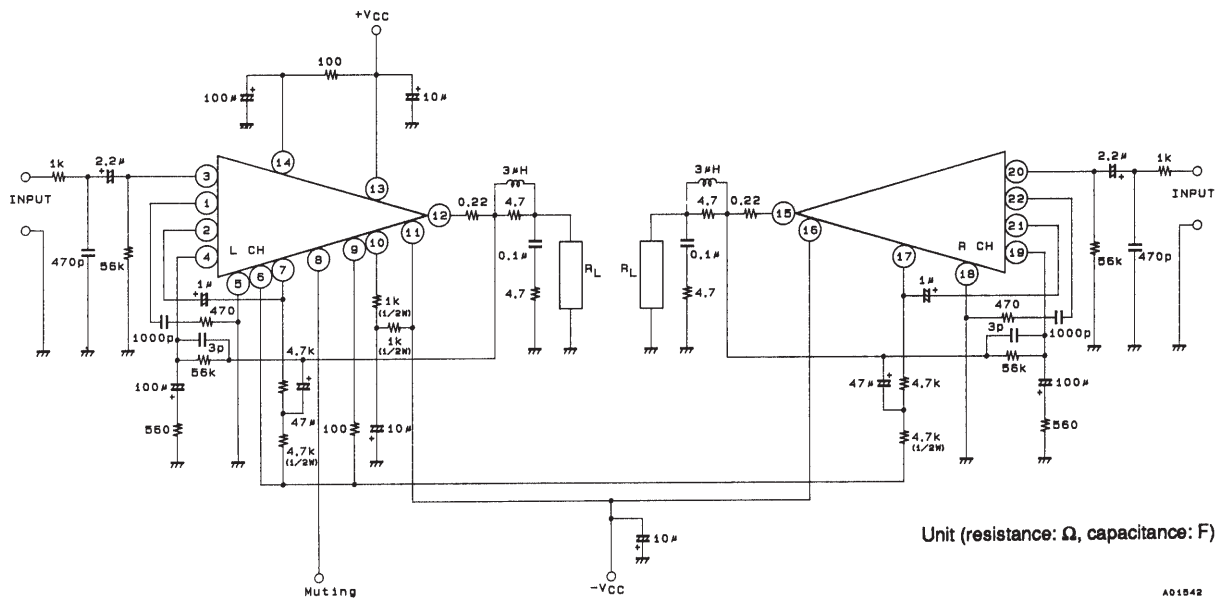
Equivalent Circuit



A01541

Equivalent Circuit

Sample Application Circuit: 2-Channel 80 W min AF Power Amplifier



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