



STK4221V

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

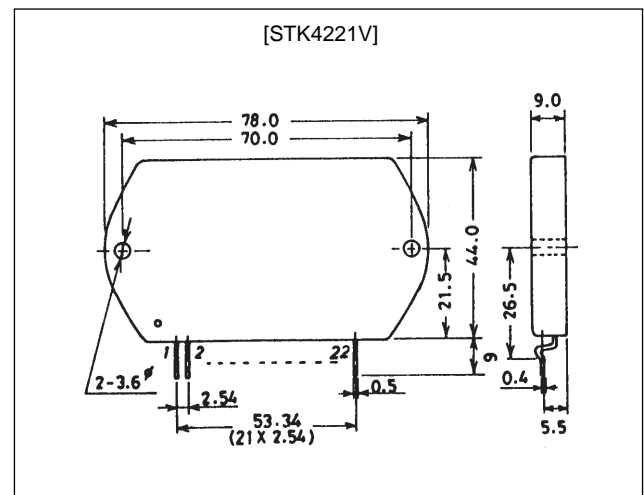
Features

- 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	$V_{CC \text{ max}}$		± 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

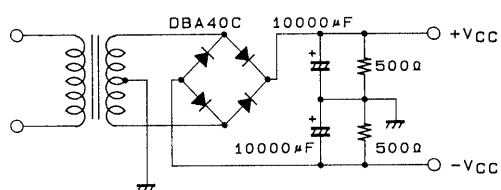
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Operating Characteristics at $T_a = 25^\circ\text{C}$, $V_{CC} = \pm 45\text{ V}$, $R_L = 8\ \Omega$ (noninductive load), $R_G = 600\ \Omega$, $V_G = 40\ \text{dB}$

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.

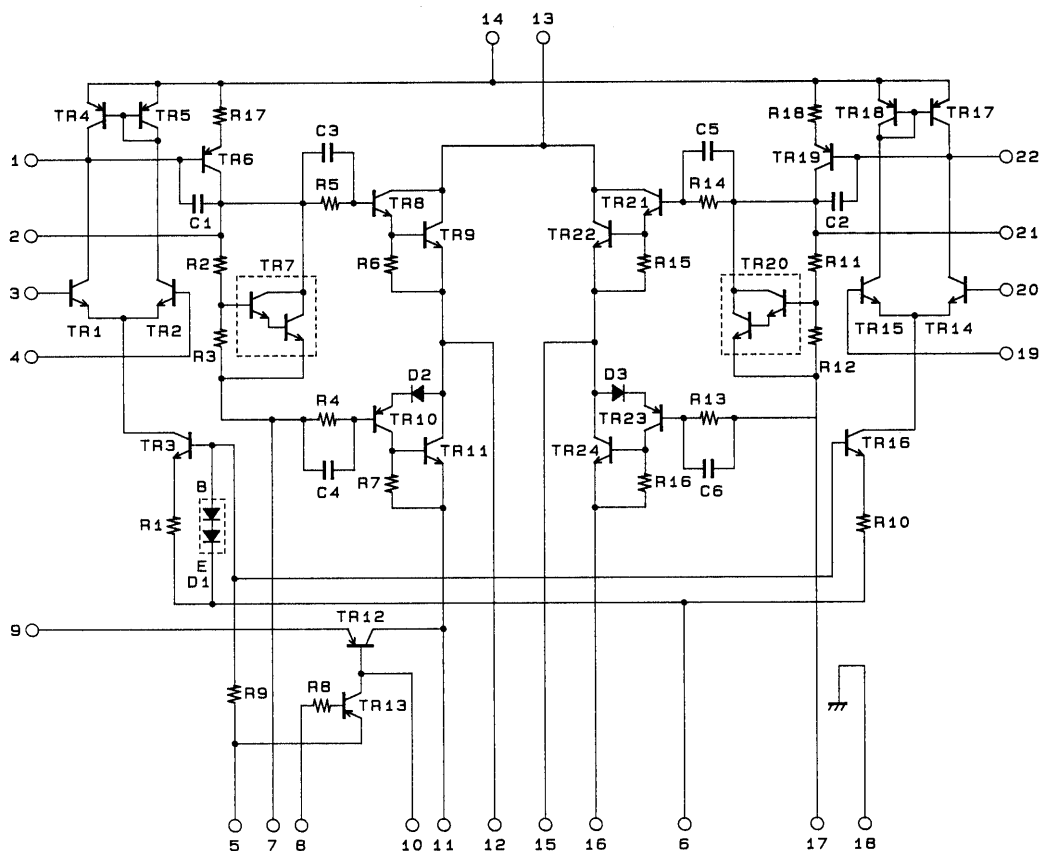
* The output noise voltage is the peak value measured with an averaging rms scale volt meter. The noise voltage waveform should not include pulse noise.



A01237

Specified Transformer Power Supply (MG-200 equivalent)

Equivalent Circuit



A01541

