Ordering number: EN 4584A

Thick Film Hybrid IC

STK4201V

AF Power Amplifier (Split Power Supply) (60W + 60W min, THD = 0.08%)

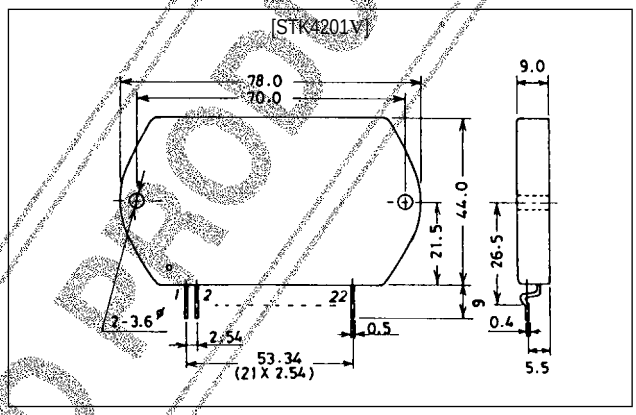
Features

- The STK4201II series (THD=0.4%), STK4201V series (THD=0.08%) and STK4141X series (THD=0.02%) are pin-compatible. Once the PCB pattern is designed, you can easily satisfy the requirements for new sets simply by changing the IC.
- Built-in muting circuit to cut off various kinds of pop noise.
- Current mirror circuit application reduces distortion to 0.08%.

Package Dimensions

unit: mm

4086A



Specifications

Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC} max		±57	V
Thermal resistance	θj-c		1.5	°C/W
Junction temperature	Tj		150	°C
Operating substrate temperature	Tc		125	°C
Storage temperature	Tstg		–30 to +125	°C
Available time for load short-circuit	t_s	V_{CC} = ±39V, R_L = 8Ω, f = 50Hz, P_O = 60W	1	s

Recommended Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V_{CC}		±39	V
Load resistance	R_L		8	Ω

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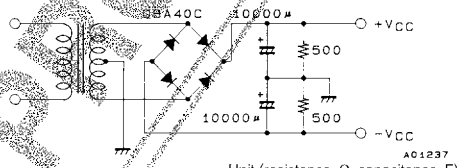
Operating Characteristics

at Ta = 25°C, V_{CC} = ±39V, R_L = 8Ω, Rg = 600Ω, VG = 40dB,
R_L : non-inductive load

Parameter	Symbol	Conditions	min	typ	max	Unit
Quiescent current	I_{CCO}	V_{CC} = ±47V	20	40	100	mA
Output power	P_O	THD = 0.08%, f = 20Hz to 20kHz	60			W
Total harmonic distortion	THD	P_O = 1.0W, f = 1kHz			0.08	%
Frequency response	f_L, f_H	P_O = 1.0W, $^{+0}_{-3}$ dB		20 to 50k		Hz
Input impedance	r_i	P_O = 1.0W, f = 1kHz		55		kΩ
Output noise voltage	V_{NO}	V_{CC} = ±47V, Rg = 10kΩ			1.2	mVrms
Neutral voltage	V_N	V_{CC} = ±47V	–70	0	+70	mV
Muting voltage	V_M		–2	–5	–10	V

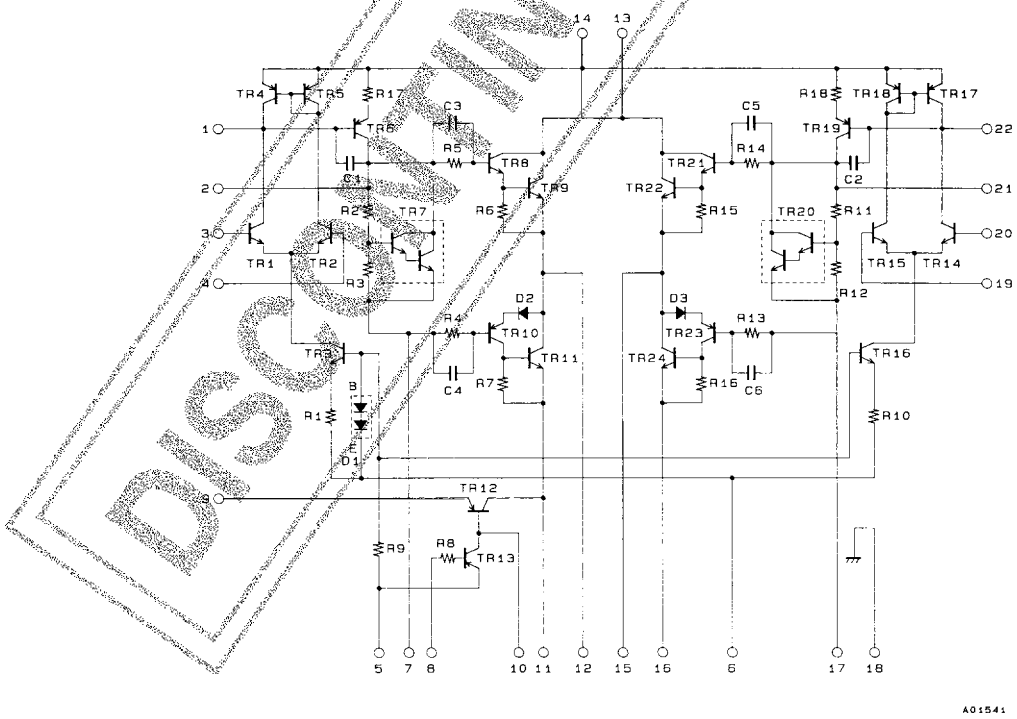
Notes.
For power supply at the time of test, use a constant-voltage power supply unless otherwise specified.
For measurement of the available time for load short-circuit and output noise voltage, use the specified transformer power supply shown right.
The output noise voltage is represented by the peak value on rms scale (VTVM) of average value indicating type. For AC power supply, use an AC stabilized power supply (50Hz) to eliminate the effect of flicker noise in AC primary line.



Unit (resistance: Ω, capacitance: F)

Specified Transformer Power Supply
(Equivalent to MG-200)

Equivalent Circuit



Sample Application Circuit: 60W min 2channel AF Power Amplifier