



AF Power Amplifier (Split Power Supply) (15 W + 15 W min, THD = 0.08 %)

Features

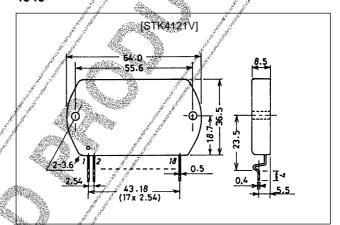
- Built-in muting circuit cuts off various kinds of pop noises.
- Current mirror circuit provides low distortion (THD = 0.08%).
- Pin compatible with the STK4102II series, forming a series of products with output powers from 15 W/ch to 120 W/ch.

Specified Transformer Power Supply (RP-22 equivalent)

Package Dimensions

unit: mm

4040



Specifications

Maximum Ratings at $Ta = 25^{\circ}C$

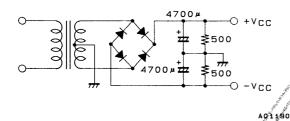
Parameter	Symbol Conditions	Ratings	Unit
Maximum supply voltage	V _{CC} max	±32	٧
Thermal resistance	θj-¢	2.6	°C/W
Junction temperature	Tj/max	150	°C
Operating substrate temperature	√fc √	125	°C
Storage temperature	Tstg	-30 to +125	°C
Available time for load short circuit	$t_s = 1.5 \text{ V}, R_L = 8 \Omega, f = 50 \text{ Hz}, P_0 = 15 \text{ W}$	2	s

Recommended Operating Conditions at Ta = 25°C

Parameter / /	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V _{CC}		±21.5	V
Load resistance	R ₀ /	1	8	Ω

Operating Characteristics at Ta = 25°C, V_{CC} = ±21.5 V, R_L = 8 Ω , Rg = 600 Ω , VG = 40 dB, R_L : non-inductive load

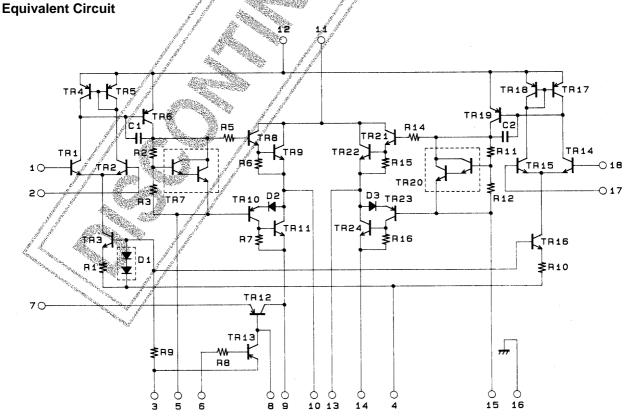
Parameter	Cumbal	Conditions	Ratings			
	Symbol		min	typ	max	Unit
Quiescent current	I _{cco}	V _{CC} = ±26 V	20	/ ⁴ 40·~	100	mA
Output power	P ₀ (1)	THD = 0.08%, f = 20 Hz to 20 kHz	15	3	A Section of Section 1	W
	P ₀ (2)	V_{CC} = ±18 V, THD = 0.2%, R_L = 4 Ω , f = 1 kHz	15	and the same of		», W
Total harmonic distortion	THD	P _O = 1.0 W, f = 1 kHz	A		0.08	% % m
Frequency response	f _L , f _H	$P_0 = 1.0 \text{ W}, +0 \text{ dB}$	14/1	20 to 50 k		Hz
Input impedance	r _i	P _O = 1.0 W, f = 1 kHz	gent getting	55	4	ÆΩ
Output noise voltage	V _{NO}	$V_{CC} = \pm 26 \text{ V}, \text{ Rg} = 10 \text{ k}\Omega$			1.2	mVrms
Neutral voltage	V _N	V _{CC} = ±26 V	<i>-</i> 70	0	+70	mV
Muting voltage	V _M		j −2 €	<u>⊢</u> 5	<i>/</i> −10	V



Unit (resistance: Ω , capacitance:F)

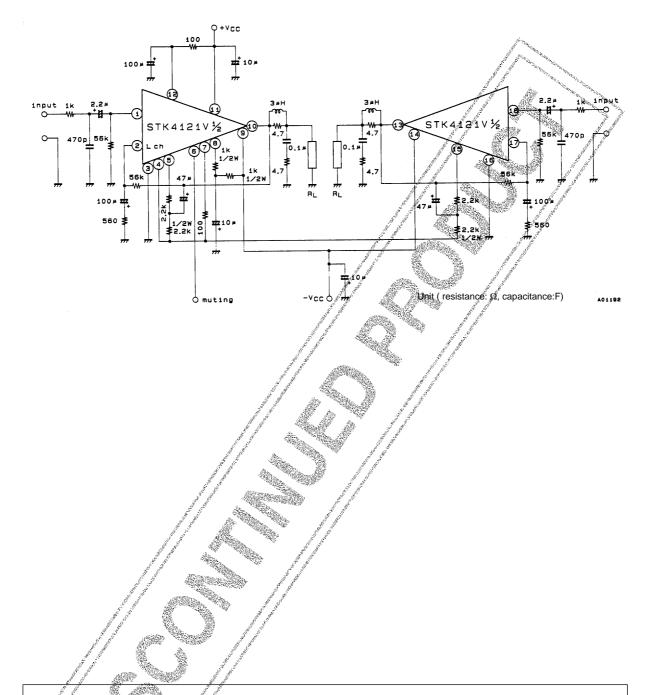
Notes

- Use a constant voltage power supply for the test power supply unless otherwise noted.
 Use the transformer power supply shown in the figure above when measuring the available time for load short circuit and the output noise voltage.
 The output noise voltage is the peak value measured with an averaging rms scale volt meter (VTVM). A 50 Hz AC stabilized power supply should be used to eliminate the effects of AC primary line flicker noise when an AC power supply is used.



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Sample Application Circuit: 15 W (minimum) 2-channel AF power amplifier



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