

Ordering number : EN4478A

Thick Film Hybrid IC



STK4131V

AF Power Amplifier (Split Power Supply) (20 W + 20 W min, THD = 0.08%)

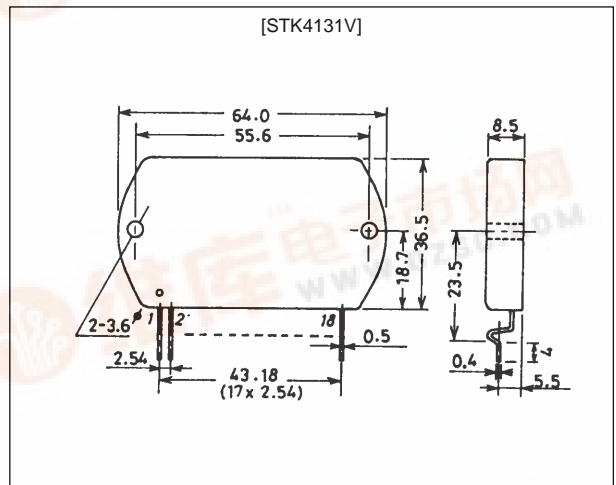
Features

- 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.

Package Dimensions

unit : mm

4040



Specifications

Maximum Ratings at Ta = 25°C

Parameter	Symbol	Condition	Rating	Unit
Maximum supply voltage	V _{CC} max		±37	V
Thermal resistance	θ _{j-c}		2.6	°C/W
Junction temperature	T _j max		150	°C
Operating case temperature	T _c		125	°C
Storage temperature	T _{stg}		-30 to +125	°C
Available time for load shorted	t _s	V _{CC} = ±24.5 V, R _L = 8 Ω, f = 50 Hz, P _O = 20 W	2	s

Recommended Operating Conditions at Ta = 25°C

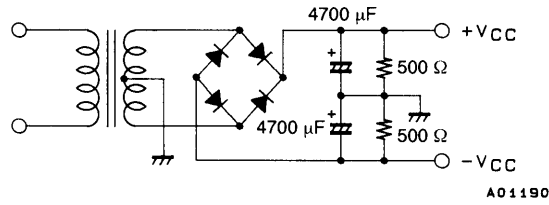
Parameter	Symbol	Condition	Rating	Unit
Recommended supply voltage	V _{CC}		±24.5	V
Load resistance	R _L		8	Ω

Operating Characteristics

at Ta = 25°C, V_{CC} = ±24.5 V, R_L = 8 Ω, R_g = 600 Ω, V_G = 40 dB, R_L: non-inductive load

Parameter	Symbol	Condition	Rating			Unit
			min	typ	max	
Quiescent current	I _{CCO}	V _{CC} = ±29.5 V	20	40	100	mA
Output power	P _O (1)	THD = 0.08%, f = 20 Hz to 20 kHz	20			W
	P _O (2)	V _{CC} = ±21.5 V, THD = 0.2%, R _L = 4 Ω, f = 1 kHz	20			W
Total harmonic distortion	THD	P _O = 1 W, f = 1 kHz			0.08	%
Frequency response	f _L , f _H	P _O = 1 W, +0/-3 dB		20 to 50 k		Hz
Input resistance	r _i	P _O = 1 W, f = 1 kHz		55		kΩ
Output noise voltage	V _{NO}	V _{CC} = ±29.5 V, R _g = 10 kΩ			1.2	mVrms
Neutral voltage	V _N	V _{CC} = ±29.5 V	-70	0	+70	mV
Muting voltage	V _M		-2	-5	-10	V

STK4131V

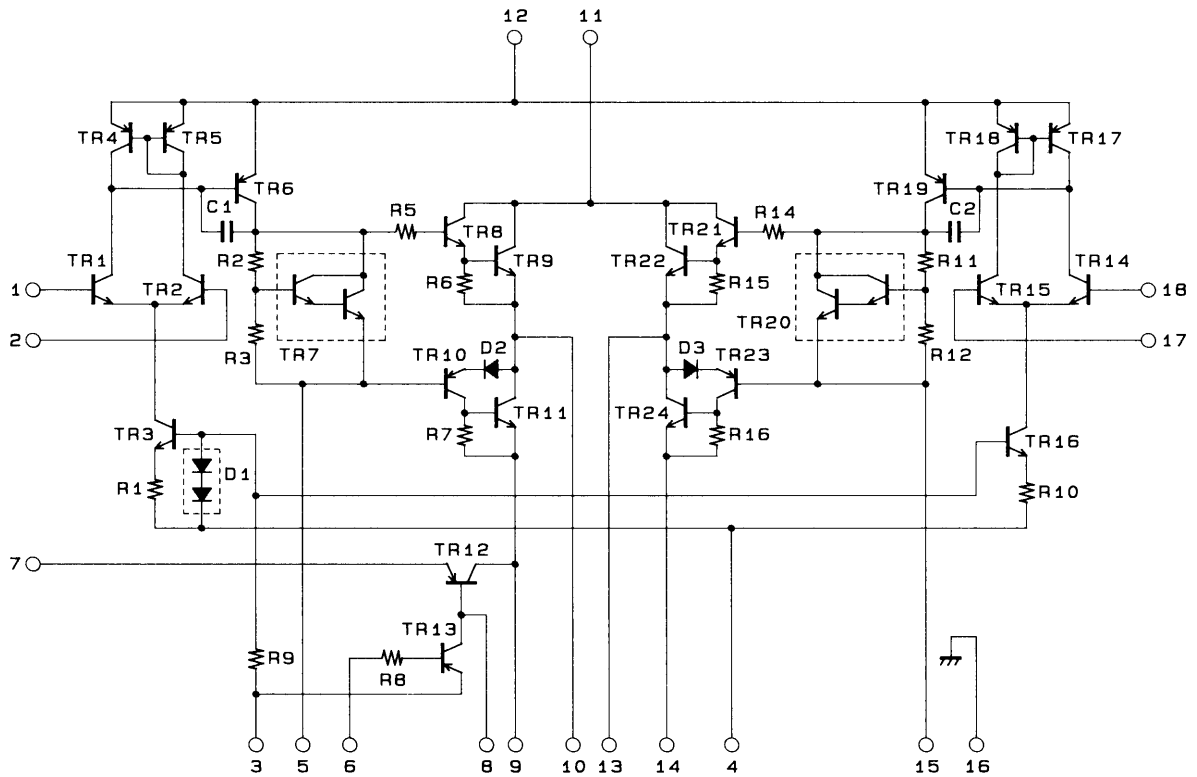


Specified Transformer Power Supply (RP-25 equivalent)

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 shorted 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.

Equivalent Circuit

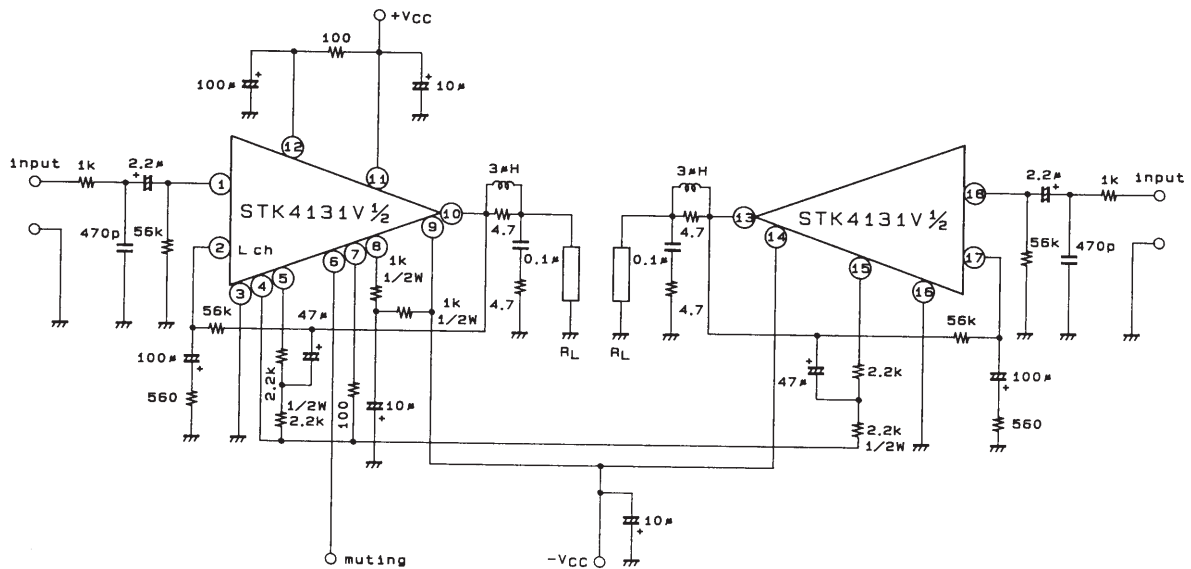


A01191



STK4131V

Sample Application Circuit: 20 W (minimum) 2-channel AF power amplifier



A01193

Unit (resistance: Ω , capacitance: F)

- 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 November, 1996. Specifications and information herein are subject to change.

