

STK4038 II

AF Power Amplifier (Split Power Supply) (60 W min, THD = 0.4%)

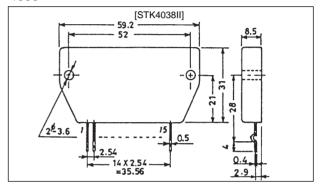
Features

- Compact packaging supports slimmer set designs
- Series designed for 20 up to 200 W and pincompatibility
- Simpler heat sink design facilitates thermal design of slim stereo sets
- The pulse noises associated with turning the power on and off have been reduced by the adoption of fixed current circuits
- Supports addition of electronic circuits for thermal shutdown and load-short protection circuit as well as pop noise muting which occurs when the power supply switch is turned on and off

Package Dimensions

unit: mm

4033



Specifications

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

Parameter	Symbol	Condition	Rating	Unit
Maximum supply voltage	V _{CC} max		±57	V
Thermal resistance	θј-с		1.4	°C/W
Junction temperature	Tj		150	°C
Operating substrate temperature	Tc		125	°C
Storage temperature	Tstg		-30 to +125	°C
Available time for load shorted	t _S *1	$V_{CC} = \pm 38 \text{ V}, R_L = 8 \Omega, f = 50 \text{ Hz}, P_O = 60 \text{ W}$	2	S

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

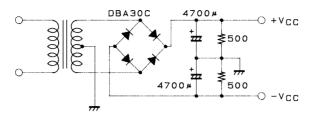
Parameter	Symbol	Condition	Rating	Unit
Recommended supply voltage	V _{CC}		±38	V
Load resistance	R _L		8	Ω

Operating Characteristics at Ta = 25°C, V_{CC} = ±38 V, R_L = 8 Ω , VG = 40 dB, Rg = 600 Ω , R_L (non-inductive)

Parameter	Symbol	Condition	Rating			Unit
			min	typ	max	Onit
Quiescent current	Icco	V _{CC} = ±45.5 V	10	20	50	mA
Output power	P _O (1)	THD = 0.4%, f = 20 Hz to 20 kHz	60			W
	P _O (2)	$V_{CC} = \pm 32.5 \text{ V}, \text{ THD} = 1.0\%, R_L = 4 \Omega, f = 1 \text{ kHz}$	60			W
Total harmonic distortion	THD	P _O = 1.0 W, f = 1kHz			0.3	%
Frequency response	f _L , f _H	$P_{O} = 1.0 \text{ W}, {}^{+0}_{-3} \text{ dB}$		20 to 50k		Hz
Input resistance	r _i	P _O = 1.0 W, f = 1kHz		55		kΩ
Output noise voltage	V _{NO} *2	$V_{CC} = \pm 45.5 \text{ V, Rg} = 10 \text{ k}\Omega$			1.2	mVrms
Neutral voltage	V _N	V _{CC} = ±45.5 V	-70	0	+70	mV

Note: Use rated power supply for test unless otherwise specified.

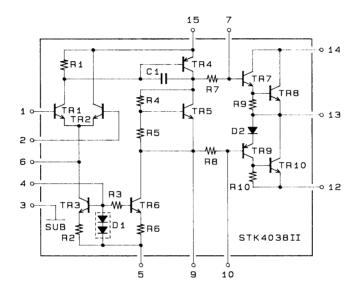
- 1. Use the transformer power supply shown on the next page when measuring the available time for load shorted and the output noise voltage.
- $2. \ \, \text{Output noise voltage represents the peak value on the rms scale (VTVM)}. \ \, \text{The noise voltage waveform does not include the pulse noise}.$



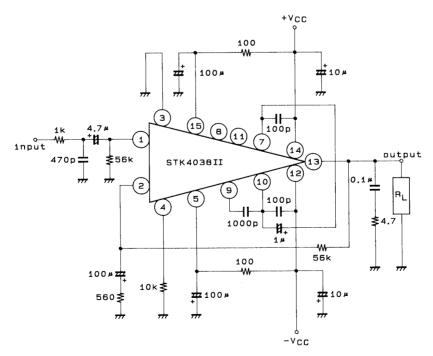
Unit (resistance: Ω , capacitance: F)

Specified Transformer Power Supply (RP-25 equivalent)

Equivalent Circuit



Application Circuit: 60 W min AF Power Amplifier



Unit (resistance: Ω , capacitance: F)

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