



# STK4048V

## 150 W min AF Power Amplifier (Split Power Supply)

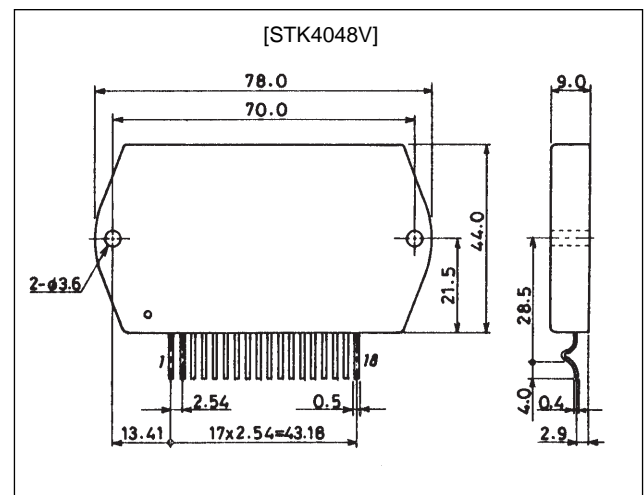
### Features

- Compact packaging supports slimmer set designs
- Series designed from 20 up to 100 W (200 W) and pin-compatibility (120 to 200 W have 18 pins)
- Simpler heat sink design facilitates thermal design of slim stereo sets
- Current mirror circuit application reduce distortion to 0.08 %
- 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

4051A



### Specifications

#### Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Condition	Rating	Unit
Maximum supply voltage	$V_{CC \text{ max}}$		$\pm 87$	V
Thermal resistance	$\theta_{j-c}$		1.2	$^\circ\text{C}/\text{W}$
Junction temperature	$T_j$		150	$^\circ\text{C}$
Operating substrate temperature	$T_c$		125	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-30 to +125	$^\circ\text{C}$

#### Recommended Operational Conditions at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Condition	Rating	Unit
Recommended supply voltage	$V_{CC}$		$\pm 60$	V
Load resistance	$R_L$		8	$\Omega$

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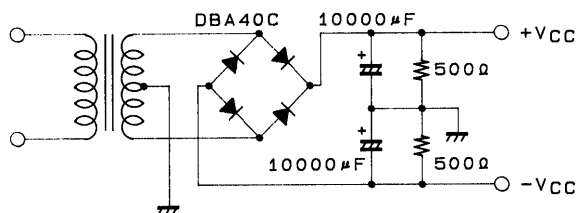
### Operating Characteristics

at  $T_a = 25^\circ\text{C}$ ,  $V_{CC} = \pm 60\text{ V}$ ,  $R_L = 8\ \Omega$ ,  $V_G = 40\text{ dB}$ ,  $R_g = 600\ \Omega$ , 100 k LPF ON,  $R_L$  (non-inductive load)

Parameter	Symbol	Condition	Rating			Unit
			min	typ	max	
Quiescent current	$I_{CCO}$	$V_{CC} = \pm 72\text{ V}$	15		120	mA
Output power	$P_O$	THD = 0.08 %, $f = 20\text{ Hz to } 20\text{ kHz}$	150			W
Total harmonic distortion	THD	$P_O = 1.0\text{ W}$ , $f = 1\text{ kHz}$			0.08	%
Frequency response	$f_L, f_H$	$P_O = 1.0\text{ W}$ , $+0, -3\text{ dB}$		20 to 50k		Hz
Input resistance	$r_i$	$P_O = 1.0\text{ W}$ , $f = 1\text{ kHz}$		55		k $\Omega$
Output noise voltage	$V_{NO}$	$V_{CC} = \pm 72\text{ V}$ , $R_g = 10\text{ k}\Omega$			1.2	mVrms
Neutral voltage	$V_N$	$V_{CC} = \pm 72\text{ V}$	-70	0	+70	mV

Note: Use a constant-voltage power supply as the test power supply unless otherwise specified

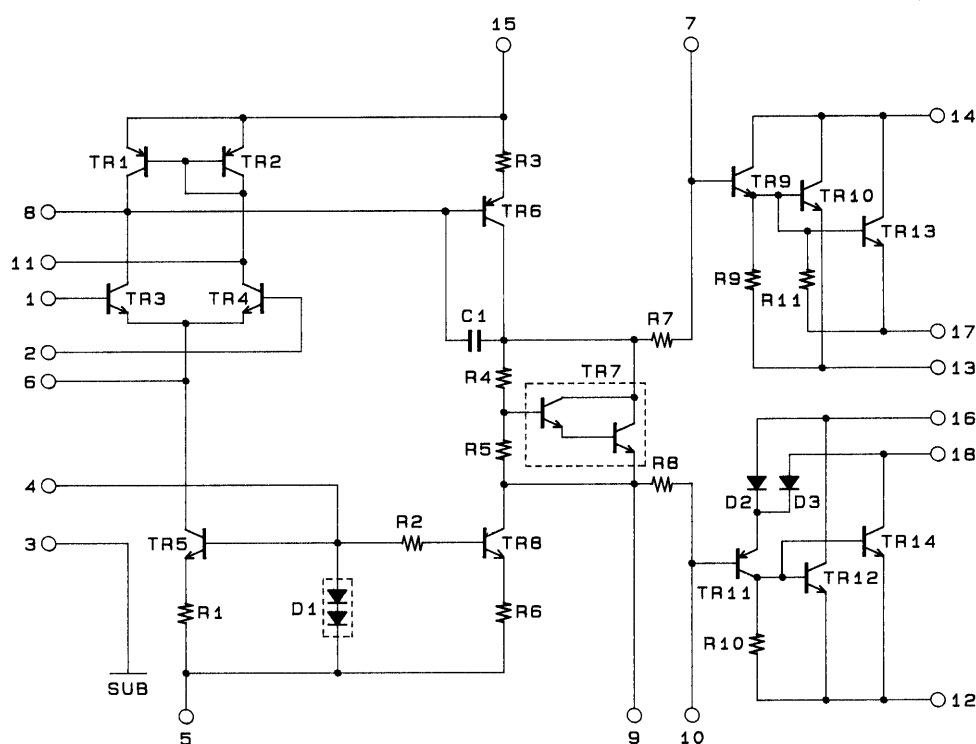
\* The output noise voltage is the peak value measured with an averaging rms scale volt meter. The noise voltage waveform should not include pulse noise.



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### Specified Transformer Power Supply (MG-250 Equivalent)

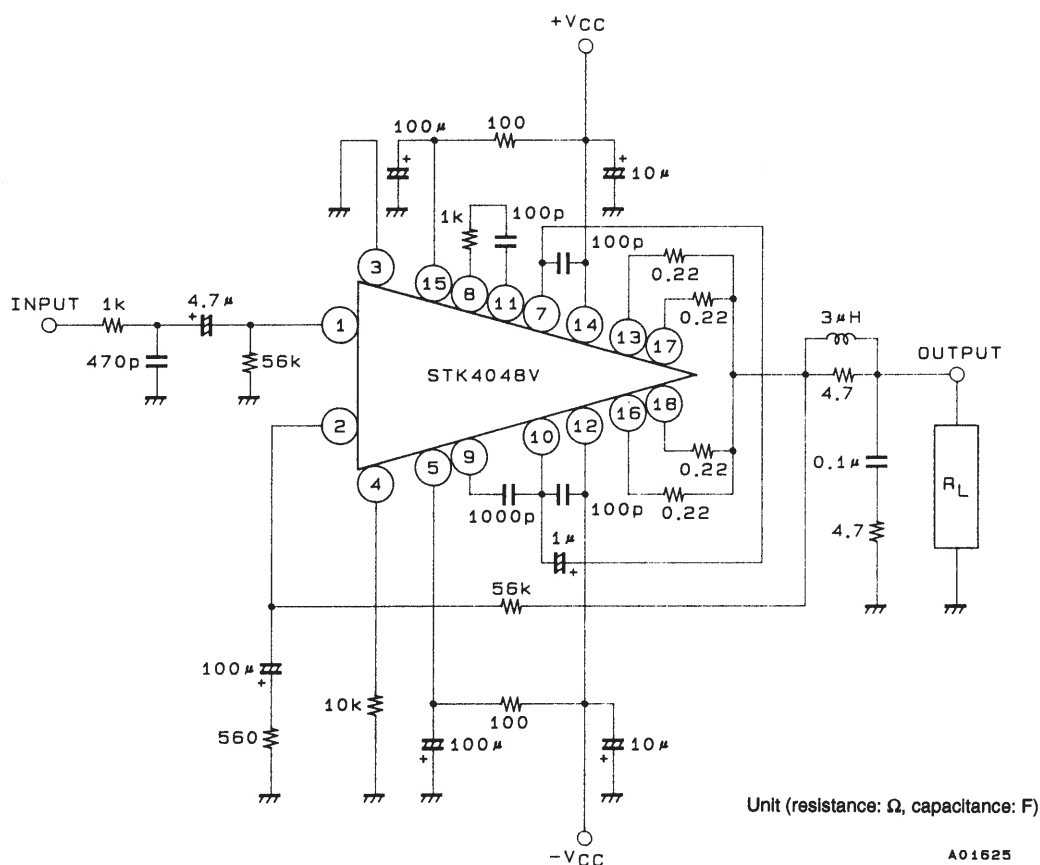
### Equivalent Circuit



A01538

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### Application Circuit: 150W min Single Channel AF Power Amplifier



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