



STK4046V

AF Power Amplifier (Split Power Supply) (120 W min, THD = 0.08%)

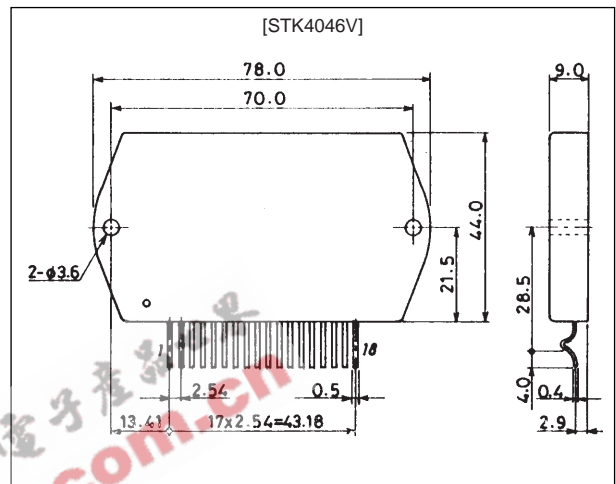
Features

- 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 reduces 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	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC \text{ max}}$		± 80	V
Thermal resistance	θ_{j-c}		1.3	$^\circ\text{C}/\text{W}$
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 Operating Conditions at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V_{CC}		± 55	V
Load resistance	R_L		8	Ω

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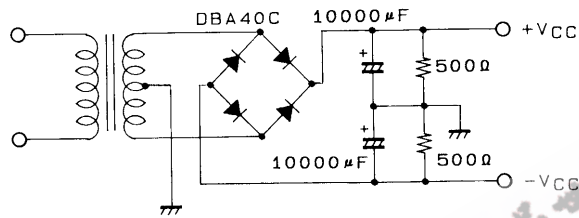
Operating Characteristics

at $T_a = 25^\circ\text{C}$, $V_{CC} = \pm 55\text{ V}$, $R_L = 8\ \Omega$ (noninductive load), $V_G = 40\ \text{dB}$, $R_g = 600\ \Omega$, 100 k LPF ON

Parameter	Symbol	Conditions	min	typ	max	Unit
Quiescent current	I_{CCO}	$V_{CC} = \pm 66\text{ V}$	15		120	mA
Output power	P_O	THD = 0.08%, $f = 20\text{ Hz to } 20\text{ kHz}$	120			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 50 k		Hz
Input resistance	r_i	$P_O = 1.0\text{ W}$, $f = 1\text{ kHz}$		55		k Ω
Output noise voltage	V_{NO}^*	$V_{CC} = \pm 66\text{ V}$, $R_g = 10\text{ k}\Omega$			1.2	mVrms
Neutral voltage	V_N	$V_{CC} = \pm 66\text{ V}$	-70	0	+70	mV

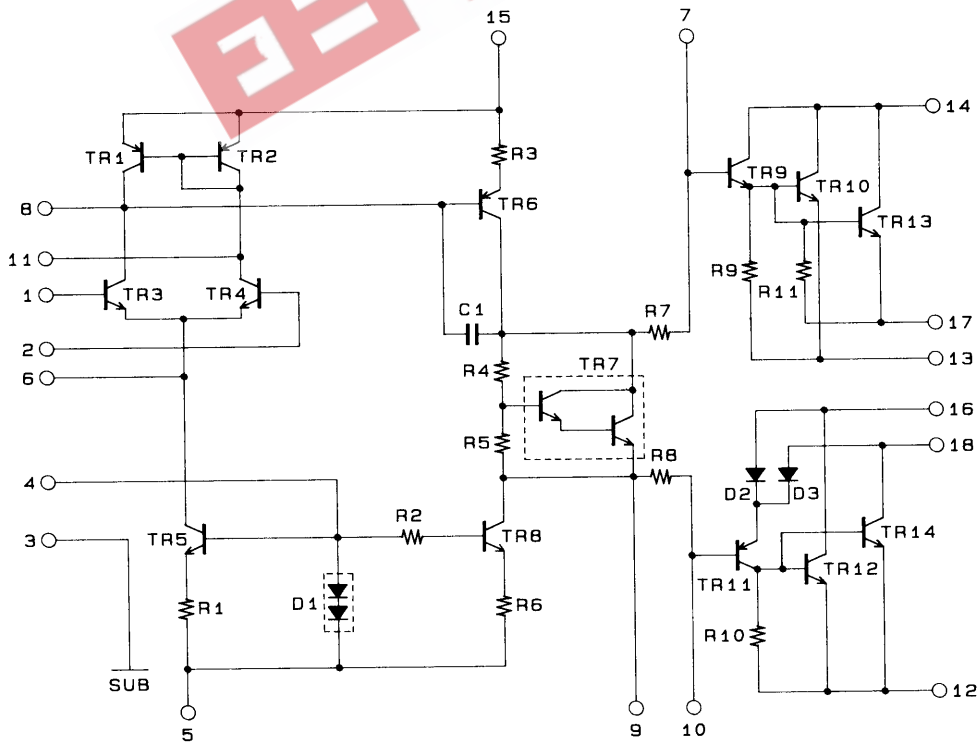
Note: Use rated power supply for test unless otherwise specified.

* Output noise voltage represents the peak value on the rms scale (VTVM). The noise voltage waveform does not include the pulse noise.



Specified Transformer Power Supply
(MG-250 equivalent)

Equivalent Circuit



A01538

