Ordering number : EN4594A

Thick Film Hybrid IC

STK4046V

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

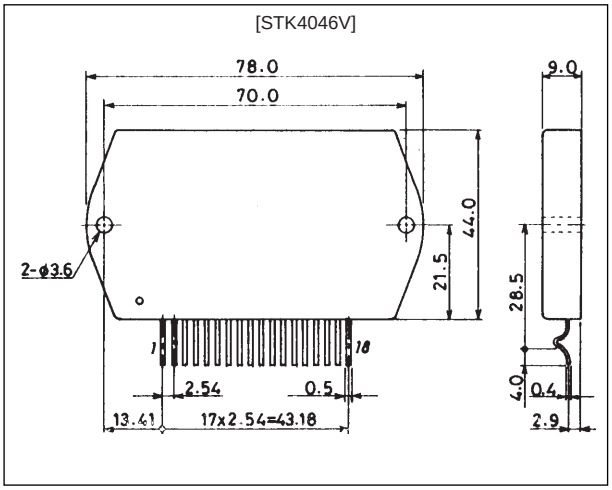
Features

- 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 Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC} max		±80	V
Thermal resistance	θj-c		1.3	°C/W
Junction temperature	Tj		150	°C
Operating substrate temperature	Tc		125	°C
Storage temperature	Tstg		–30 to +125	°C

Recommended Operating Conditions at Ta = 25°C

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

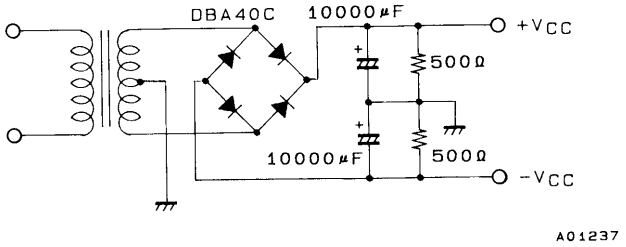
Operating Characteristics

at Ta = 25°C, V_{CC} = ±55 V, R_L = 8 Ω (noninductive load), VG = 40 dB, Rg = 600 Ω, 100 k LPF ON

Parameter	Symbol	Conditions	min	typ	max	Unit
Quiescent current	I_{CCO}	V_{CC} = ±66 V	15		120	mA
Output power	P_O	THD = 0.08%, f = 20 Hz to 20 kHz	120			W
Total harmonic distortion	THD	P_O = 1.0 W, f = 1 kHz			0.08	%
Frequency response	f_L, f_H	P_O = 1.0 W, $^{+0}_{-3}$ dB		20 to 50 k		Hz
Input resistance	r_i	P_O = 1.0 W, f = 1 kHz		55		kΩ
Output noise voltage	V_{NO}*	V_{CC} = ±66 V, Rg = 10 kΩ			1.2	mVrms
Neutral voltage	V_N	V_{CC} = ±66 V	–70	0	+70	mV

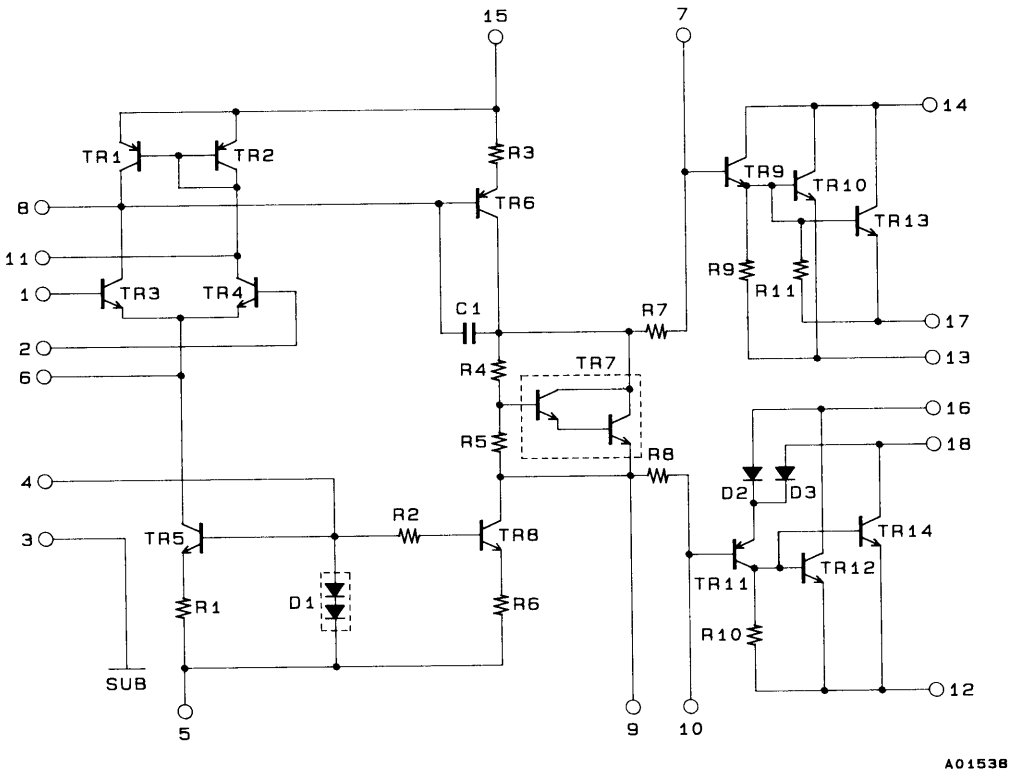
Note: Use rated power supply for test unless otherwise specified.

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

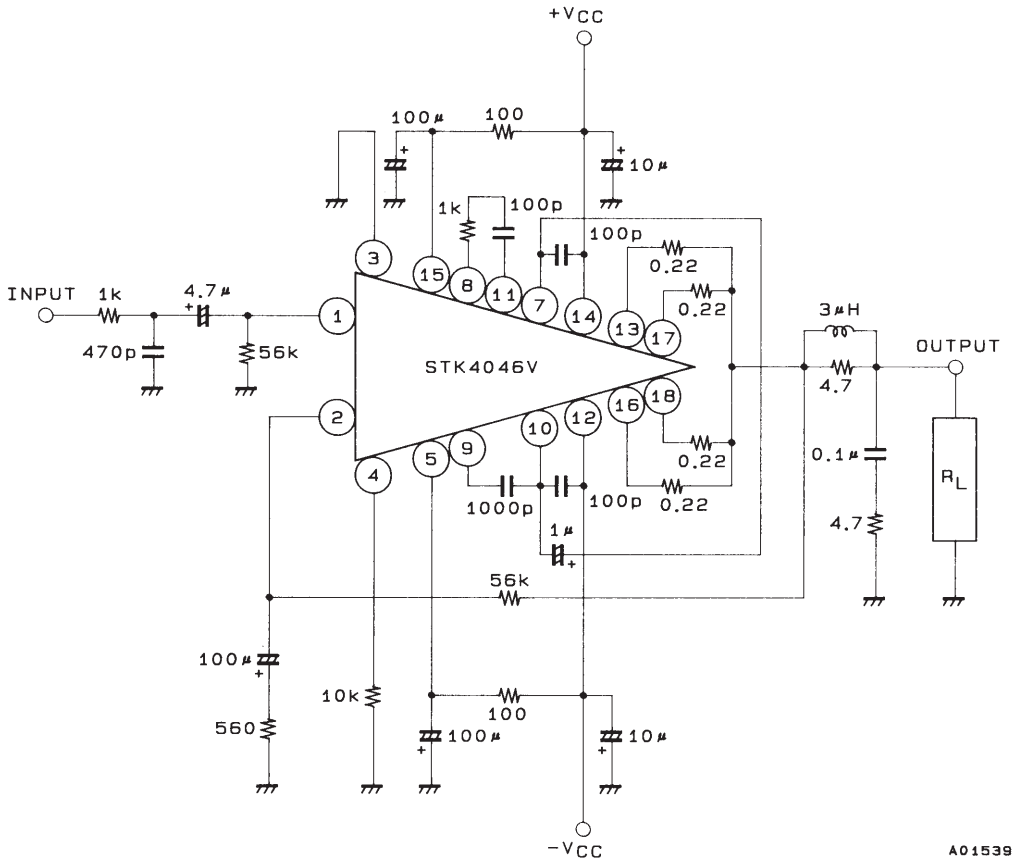


Specified Transformer Power Supply
(MG-250 equivalent)

Equivalent Circuit



Application Circuit: Single-Channel 120 W min. AF Power Amplifier



Unit (resistance: Ω, capacitance: F)