Ordering number : EN4592A

Thick Film Hybrid IC

STK4050V

AF Power Amplifier (Split Power Supply) (200 W min, THD = 0.08%)

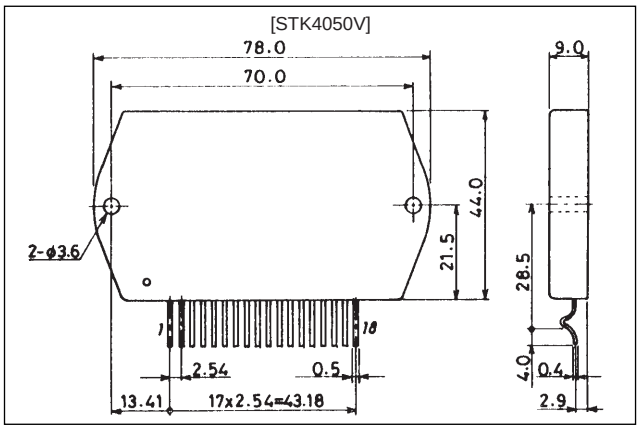
Features

- 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 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 Ta = 25°C

Parameter	Symbol	Condition	Rating	Unit
Maximum supply voltage	V_{CC} max		± 95	V
Thermal resistance	θj-c		0.95	°C/W
Junction temperature	Tj		150	°C
Operating substrate temperature	Tc		125	°C
Storage temperature	Tstg		–30 to +125	°C

Recommended Operational Conditions at Ta = 25°C

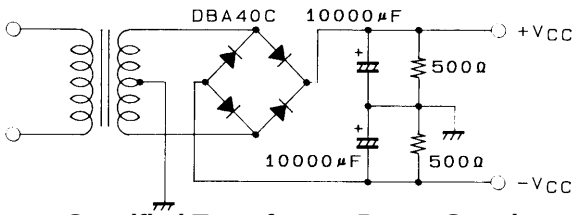
Parameter	Symbol	Condition	Rating	Unit
Recommended supply voltage	V_{CC}		± 66	V
Load resistance	R_L		8	Ω

Operating Characteristics

at Ta = 25°C, V_{CC} = ± 66 V, R_L = 8 Ω, VG = 40 dB, Rg = 600 Ω, 100 k LPF ON, R_L (non-inductive)

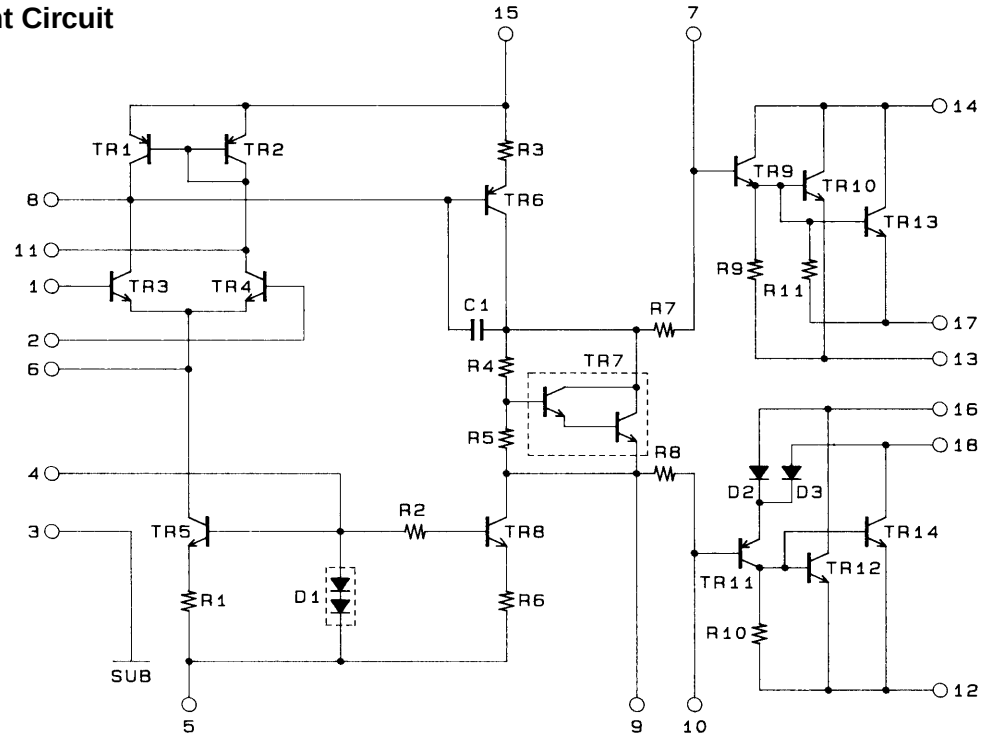
Parameter	Symbol	Condition	Rating			Unit
			min	typ	max	
Quiescent current	I_{CCO}	V_{CC} = ± 80 V	15		120	mA
Output power	P_O	THD = 0.08 %, f = 20 Hz to 20 kHz	200			W
Total harmonic distortion	THD	P_O = 1.0 W, f = 1 kHz			0.08	%
Frequency response	f_L, f_H	P_O = 1.0 W, $^{+0}_{-3}$ dB		20 to 50k		Hz
Input resistance	r_i	P_O = 1.0 W, f = 1 kHz		55		kΩ
Output noise voltage	V_{NO}	V_{CC} = ± 80 V, Rg = 10 kΩ			1.2	mVrms
Neutral voltage	V_N	V_{CC} = ± 80 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: 200W min Single Channel AF Power Amplifier