



No.1296

STK4131 II

Thick Film Hybrid Integrated Circuit
2-CHANNEL 20W MIN AF POWER AMP.

Features

1. Smaller package as compared with the STK450 series.
2. Built-in muting circuit to cut off various kinds of shock noise.
3. Greatly reduced heat sink due to case temperature 125°C guaranteed.
4. Excellent cost performance.

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

			unit
Maximum Supply Voltage	V_{CCmax}	± 34.5	V
Thermal Resistance	θ_{j-c}	2.6	$^\circ\text{C/W}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Operating Case Temperature	T_c	125	$^\circ\text{C}$
Storage Temperature	T_{stg}	-30 to +125	$^\circ\text{C}$
Available Time for Load Shorted	t_s	$V_{CC}=\pm 23\text{V}, R_L=8\text{ohm}, f=50\text{Hz}, P_o=20\text{W}$	2 sec

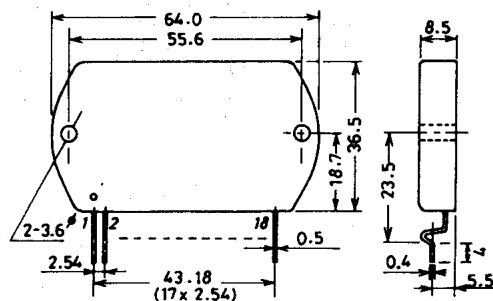
Operating Conditions at $T_a=25^\circ\text{C}$

			unit
Recommended Supply Voltage	V_{CC}	± 23	V
Recommended Load Resistance	R_L	8	ohm

Operating Characteristics at $T_a=25^\circ\text{C}, V_{CC}=\pm 23\text{V}, R_L=8\text{ohm}, R_g=600\text{ohm}, V_G=40\text{dB}$, at specified test circuit (based on sample application circuit).

			min	typ	max	unit
Quiescent Current	I_{cc}	$V_{CC}=\pm 28\text{V}$	20	40	100	mA
Output Power	$P_o(1)$	THD=0.4%, $f=20\text{Hz}$ to 20kHz	20			W
	$P_o(2)$	$V_{CC}=\pm 20\text{V}, \text{THD}=1.0\%, R_L=4\text{ohm}, f=1\text{kHz}$	20			W
Total Harmonic Distortion	THD	$P_o=1.0\text{W}, f=1\text{kHz}$			0.3	%
Frequency Characteristic	f_L, f_H	$P_o=1.0\text{W}, -3\text{dB}$		20 to 50k		Hz
Input Resistance	r_i	$P_o=1.0\text{W}, f=1\text{kHz}$		55		kohm
Output Noise Voltage	V_{NO}	$V_{CC}=\pm 28\text{V}, R_g=10\text{kohm}$			1.2	mVrms
Middle Point Voltage	V_N	$V_{CC}=\pm 28\text{V}$	-70	0	70	mV
Muting Voltage	V_M		-2	-5	-10	V

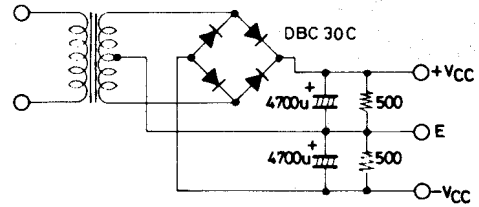
Case Outline 4040 (unit:mm)



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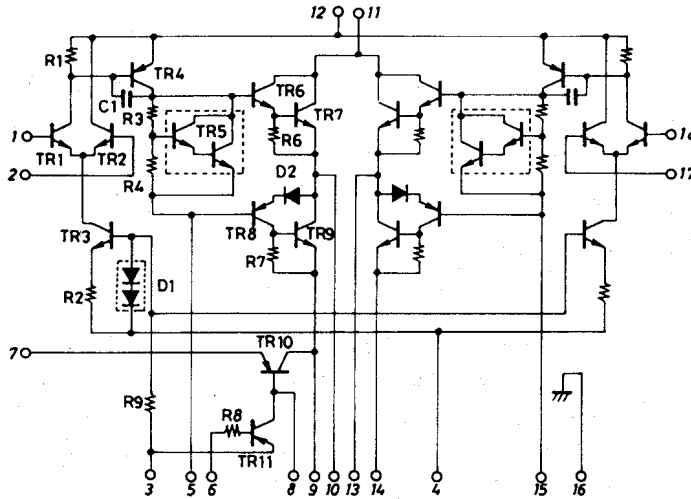
(Note)

- 1) For power supply at the time of test, use a constant-voltage power supply unless otherwise specified.
- 2) For measurement of the available time for load shorted and output noise voltage, use the specified transformer power supply shown right.
- 3) The output noise voltage is the peak value on rms scale (VTVM) of average value indicating type. For AC power supply, use an AC stabilized power supply (50Hz) to eliminate the effect of flicker noise in AC primary line.



Specified transformer power supply

Equivalent Circuit



Sample Application Circuit : 20W min 2-channel AF power amp.

