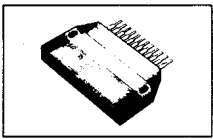


No.1094

# STK1080 II



Thick Film Hybrid Integrated Circuit  
 80W MIN AF POWER AMP. OUTPUT STAGE (D.P.P.)  
 WITH BUILT-IN EMITTER RESISTANCE

## Features

- . Built-in emitter resistance.
- . Allowable power rating of resistor is 5W min. which is capable of meeting the requirements for any load.
- . Allowable peak current is 15A min. which is capable of covering any peak current at abnormal mode such as load short.
- . Meets the requirements of various safety standards in the world.
- . Easy to make PCB design because of built-in emitter resistance.
- . Capable of forming quasi class A bias circuit by connecting peripheral circuit externally.

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

Parameter	Symbol	Value	Unit
Maximum Supply Voltage	$V_{CCmax}$	$\pm 65$	W
Thermal Resistance	$\theta_{j-c}$	Ideal heat radiation	$1.2$ $^\circ\text{C}/\text{W}$
Collector Current	$I_C$	10	A
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-30 to +105	$^\circ\text{C}$
Available Time for Load Shorted	$t_s$	$V_{CC}=\pm 45\text{V}, *f=50\text{Hz}, R_L=8\text{ohm}, P_O=80\text{W}$	1 sec

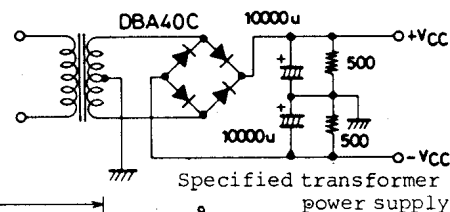
## Recommended Operating Conditions at $T_a=25^\circ\text{C}$

Parameter	Symbol	Value	Unit
Recommended Supply Voltage	$V_{CC}$	$\pm 45$	V
Load Resistance	$R_L$	8	ohm

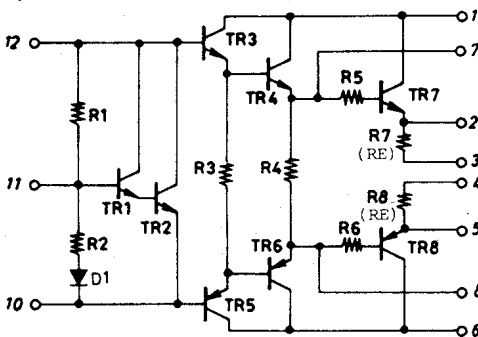
## Operating Characteristics at $T_a=25^\circ\text{C}, V_{CC}=\pm 45\text{V}, R_L=8\text{ohm}, R_g=600\text{ohm}, V_G=36.7\text{dB}$ , at specified test circuit (based on sample application circuit)

Parameter	Symbol	Test Conditions	min	typ	max	unit
Quiescent Current	$I_{CCO}$	$V_{CC}=\pm 55\text{V}$	20	40	70	mA
Output Power	$P_O$	THD=0.01%, $f=20\text{Hz}$ to $20\text{kHz}$	80			W
Total Harmonic Distortion	THD(1)	$P_O=80\text{W}, f=20\text{Hz}$ to $20\text{kHz}$	0.005	0.01		%
		$P_O=1\text{W}, f=20\text{Hz}$ to $20\text{kHz}$		0.01		%
Power Bandwidth	PBW	$P_O=40\text{W}, f=50\text{kHz}$	0.05			%
Emitter Resistance	$R_E$		0.18	0.22	0.30	ohm

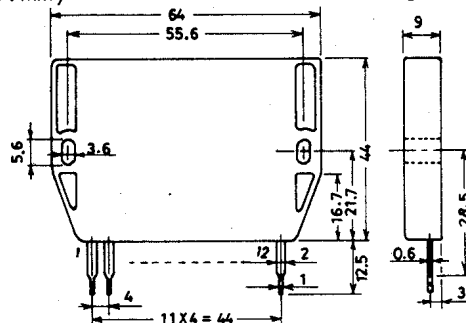
\* : For measuring available time for load shorted, use the specified transformer power supply shown right.



## Equivalent Circuit



## Case Outline 4020 (unit:mm)



These specifications are subject to change without notice.

# STK1080II

Sample Application Circuit : 80W min AF Power Amp.

