



STK-1050

50 W MIN. AF POWER AMPLIFIER OUTPUT STAGE (DPP) INTEGRATED EMITTER RESISTOR THICK FILM HYBRID INTEGRATED CIRCUIT

FEATURES

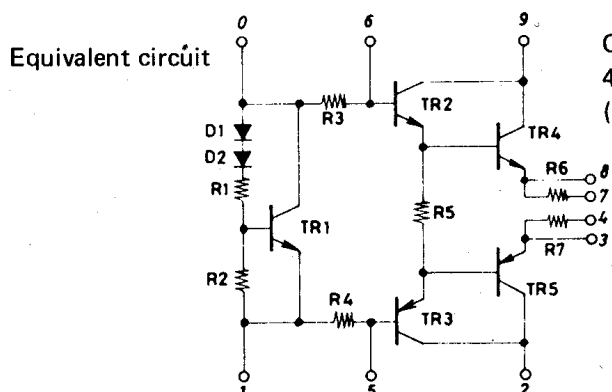
- Does not require externally connected emitter resistors.
- Values of emitter resistors have carefully been reviewed to provide superior characteristics.
 - Better supply voltage utilization permits designing power supply voltages that are ± 0.7 V (for $R_L = 4\Omega$) lower than those required for previous DPP models.
 - Maximum allowable power consumption for each resistor is 5 W or higher, permitting accommodation for all loads.
 - Peak allowable current is 18 A or more, providing an ample margin even for peak currents under when short circuited or similar emergencies.
 - In particular, maximum outputs 4Ω have been enormously improved.
- Use of emitter resistors facilitates meeting deferent safety standards and designing PCBs.
- Mutual interferences in the high-frequency range caused by layout of externally connected emitter resistors no longer exist. This facilitates lower distortion factors.
- Pins are used for emitter resistor output terminals that were not connected in previous DPPs. All other terminals remain unchanged; there is no need for major circuit board changes.

MAXIMUM RATINGS/ $T_a = 25^\circ\text{C}$

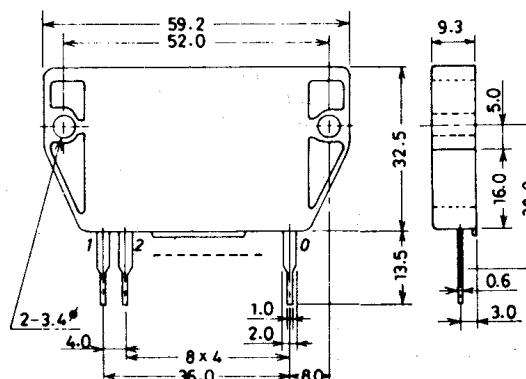
			unit
Maximum power supply voltage	V_{CC} max	± 53	V
Thermal resistance	θ_{j-c} Ideal dissipating condition	1.8	$^\circ\text{C/W}$
Collector current	I_C	7	A
Junction temperature	T_j	150	$^\circ\text{C}$
Storage ambient temperature	T_{stg}	$-30 \sim +105$	$^\circ\text{C}$
Short-circuit load allowable time	t_s	$V_{CC} = \pm 36$ V*, $f = 50$ Hz, $R_L = 8\Omega$, $P_o = 50$ W	2 sec
* Employ specified transformer power supply			

RECOMMENDED OPERATING CONDITIONS/ $T_a = 25^\circ\text{C}$

			unit
Recommended power supply voltage	V_{CC}	± 36	V
Load resistance	R_L	8	Ω



Case Outline
4004
(unit: mm)

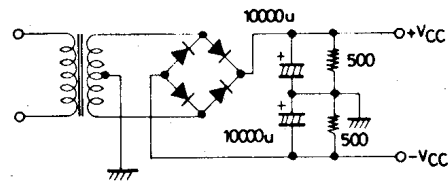


OPERATING CHARACTERISTICS/ $T_a = 25^\circ$, $V_{CC} = \pm 36$ V, $R_L = 8\Omega$, $R_g = 600\Omega$, $V_G = 26.3$ dB, at specified test circuit (conforming with sample application circuit)

			min	typ	max	unit
No signal current	I_{CCO}	$V_{CC} = \pm 43$ V	20	40	80	mA
			50			W

			min	typ	max	unit
Output power	P_O (1)	THD = 0.02%, $f = 20$ Hz ~ 20 kHz	50			W
	P_O (2)	$V_{CC} = \pm 31$ V, THD = 0.03%, $f = 1$ kHz, $R_L = 4\Omega$	55			W
Total harmonic distortion	THD	$P_O = 1 \sim 50$ W, $f = 20$ Hz ~ 20 kHz			0.02	%
Emitter resistor	R_E		0.18	0.22	0.30	Ω

*To test for short-circuit allowable time, use a transformer power supply specified in diagram at the right.



Specified transformer power supply
(Sansui RP-35 or equivalent)
(Tango MG-200 or equivalent)

■ SAMPLE APPLICATION CIRCUIT: 50 W min. AF Power Amplifier

