



STK-1060

**60 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.
  - a. Better supply voltage utilization permits designing power supply voltages that are  $\pm 0.7\text{ V}$  (for  $R_L = 4\Omega$ ) lower than those required for previous DPP models.
  - b. Maximum allowable power consumption for each resistor is 5 W or higher, permitting accommodation for all loads.
  - c. Peak allowable current is 18 A or more, providing an ample margin even for peak currents under when short circuited or similar emergencies.
  - d. In particular, maximum outputs  $4\Omega$  have been enormously improved.
- Use of emitter resistors facilitates meeting different 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	$V_{CC\text{ max}}$	$\pm 56$	V
Thermal resistance	$\theta_{j-c}$	Ideal dissipating condition	1.6 $^\circ\text{C/W}$
Collector current	$I_{CC}$	10	A
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage ambient temperature	$T_{stg}$	$-30 \sim +105$	$^\circ\text{C}$

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

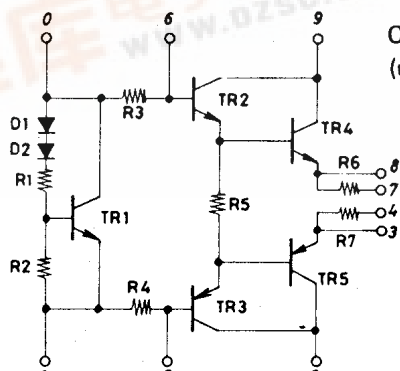
			unit
Recommended power supply voltage	$V_{CC}$	$\pm 40$	V
Load resistance	$R_L$	8	$\Omega$

**OPERATING CHARACTERISTICS/ $T_a = 25^\circ\text{C}$ ,  $V_{CC} = \pm 40\text{ V}$ ,  $R_L = 8\Omega$ ,  $R_g = 600\Omega$ ,  $V_G = 26.3\text{ dB}$ , at specified test circuit (conforming with sample application circuit)**

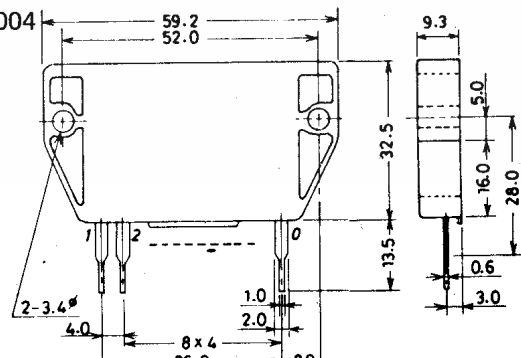
		min	typ	max	unit
No signal current	$I_{CC0}$	20	40	80	mA
Output power	$P_O(1)$	60			W

$V_{CC} = \pm 48\text{ V}$   
 $\text{THD} = 0.02\%, f = 20\text{ Hz} \sim 20\text{ kHz}$

Equivalent circuit



Case Outline 4004 (unit: mm)



## STK-1060

		min	typ	max	unit
Output power	$P_O$ (2) $V_{CC} = \pm 34.5 \text{ V}$ , $f = 1 \text{ kHz}$ , THD = 0.03%, $R_L = 4 \Omega$	70			W
Total harmonic distortion	THD $P_O = 1 \sim 60 \text{ W}$ , $f = 20 \text{ Hz} \sim 20 \text{ kHz}$			0.02	%
Emitter resistor	$R_E$	0.18	0.22	0.30	$\Omega$

■ SAMPLE APPLICATION CIRCUIT: 60 W min. AF Power Amplifier

