

D.P.P.
Darlington
Power Pack

thick film hybrid

OUTPUT STAGE OF AF POWER AMP.

Features

General output stage of power amplifier has a difficult and complex problem about heat sink designing and its setting. Sanyo's D.P.P. intends to decrease electronic parts and rationalize a manufacturing process by designing IC of only output stage of power amplifier.

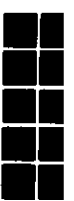
- IMST system.
- Output stage for AF high power amplifier.
- Dual power supply.

- Darlington type pure / quasi-complementary circuit.
- These same pin assignment and pin interval lead to standardize a printed board.
- Metal substrate use IMST[®] makes good thermal stability.
- Able to design freely previous section of power amplifier. This leads tone control designing.

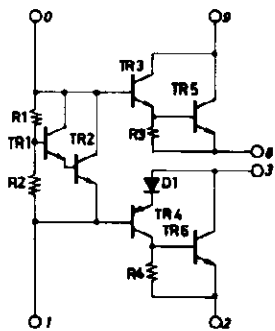
| Type Number | | Maximum Ratings at Ta=25°C | | | | | | | | | | Operation Characteristics at Ta=25°C | | | |
|--|-----------------------------|----------------------------|-------------------------------|-------------------------|--------------------------|----------------------|-------------------------|---------------------------------|--|---------------------------------|--|--------------------------------------|-------------------|--|--|
| | | Case Outline | Maximum Supply Voltage VCCmax | Junction Temperature Tj | Storage Temperature Tstg | Thermal Resistance θ | Collector Current ICmax | Allowable Load Shorting Time tL | Supply Voltage at Rated Power at Output RL=16Ω | Output Power Po (f=20 to 20kHz) | Total Harmonic Distortion THD(f=20 to 20kHz) | Quiescent Current Iqcc | Equipment Circuit | | |
| Pure-Complementary Circuit | Quasi-Complementary Circuit | V | °C | °C | °C/W | A | sec | V | W | % | mA | | | | |
| 1-Channel Darlington Power Pack (Without emitter resistance) | | | | | | | | | | | | | | | |
| STK 0030 | STK 0025 | 4002 | ±35 | 150 | -30 to +105 | 2.6 | 3 | 2 | ±24.4 | 23 min. | 0.05 max. | 40 typ, 80 max. | | | |
| | STK 0029 | 4002 | ±37 | 150 | -30 to +105 | 2.4 | 5 | 2 | ±25.0 | 25 min. | 0.1 max. | 40 typ, 80 max. | | | |
| | | 4002 | ±40 | 150 | -30 to +105 | 2.4 | 4 | 2 | ±28.5 | 30 min. | 0.1 max. | 40 typ, 80 max. | | | |
| STK 0040 | STK 0039 | 4004 | ±45 | 150 | -30 to +105 | 2.0 | 5 | 2 | ±31 | 35 min. | 0.1 max. | 40 typ, 80 max. | | | |
| | | 4002 | ±48 | 150 | -30 to +105 | 2.0 | 5 | 2 | ±33 | 40 min. | 0.1 max. | 40 typ, 80 max. | | | |
| STK 0050 | STK 0049 | 4004 | ±50 | 150 | -30 to +105 | 1.8 | 5 | 2 | ±35 | 45 min. | 0.1 max. | 40 typ, 80 max. | | | |
| | | 4004 | ±53 | 150 | -30 to +105 | 1.8 | 5 | 2 | ±36 | 50 min. | 0.1 max. | 40 typ, 80 max. | | | |
| STK 0060 | STK 0059 | 4004 | ±52.5 | 150 | -30 to +105 | 1.6 | 7 | - | ±38 | 55 min. | 0.1 max. | 40 typ, 80 max. | | | |
| | | 4006 | ±55 | 150 | -30 to +105 | 1.4 | 7 | - | ±40 | 60 min. | 0.1 max. | 40 typ, 80 max. | | | |
| STK 0070 | | 4006 | ±55 | 150 | -30 to +105 | 1.4 | 7 | - | ±43 | 70 min. | 0.1 max. | 40 typ, 80 max. | | | |
| | | 4006 | ±65 | 150 | -30 to +105 | 1.3 | 10 | - | ±46 | 80 min. | 0.1 max. | 40 typ, 80 max. | | | |
| STK 0080 | | 4007 | ±75 | 150 | -30 to +105 | 1.0 | 10 | - | ±50 | 100 min. | 0.1 max. | 40 typ, 80 max. | | | |
| | STK 0105 | | | | | | | | | | | | | | |
| STK 0040II | | 4002 | ±48 | 150 | -30 to +105 | 1.8 | 5 | 1 | ±36 | 40 min. | 0.01 max. | 40 typ, 70 max. | | | |
| STK 0050II | | 4004 | ±53 | 150 | -30 to +105 | 1.6 | 6 | 1 | ±39 | 50 min. | 0.01 max. | 40 typ, 70 max. | | | |
| STK 0060II | | 4006 | ±55 | 150 | -30 to +105 | 1.3 | 8 | 1 | ±41 | 60 min. | 0.01 max. | 40 typ, 70 max. | | | |
| STK 0070II | | 4006 | ±60 | 150 | -30 to +105 | 1.3 | 10 | 1 | ±45 | 70 min. | 0.01 max. | 40 typ, 70 max. | | | |
| STK 0080II | | 4006 | ±65 | 150 | -30 to +105 | 1.2 | 12 | 1 | ±47 | 80 min. | 0.01 max. | 40 typ, 70 max. | | | |
| 1-Channel Darlington Power Pack (With emitter resistance) | | | | | | | | | | | | | | | |
| STK 1030 | | 4004 | ±40 | 150 | -30 to +105 | 2.4 | 5 | 2 | ±28.5 | 30 min. | 0.02 max. | 40 typ, 80 max. | | | |
| | STK 1035 | 4004 | ±40 | 150 | -30 to +105 | 2.4 | 5 | 2 | ±28.5 | 30 min. | 0.02 max. | 40 typ, 80 max. | | | |
| STK 1040 | STK 1039 | 4004 | ±46.1 | 150 | -30 to +105 | 1.85 | 6 | 2 | ±30 | 35 min. | 0.02 max. | 40 typ, 80 max. | | | |
| | | 4004 | ±48 | 150 | -30 to +105 | 1.8 | 7 | 2 | ±33 | 40 min. | 0.02 max. | 40 typ, 80 max. | | | |
| STK 1050 | STK 1045 | 4004 | ±48 | 150 | -30 to +105 | 1.8 | 7 | 2 | ±33 | 40 min. | 0.02 max. | 40 typ, 80 max. | | | |
| | STK 1049 | 4004 | ±50 | 150 | -30 to +105 | 1.8 | 7 | 2 | ±34 | 45 min. | 0.02 max. | 40 typ, 80 max. | | | |
| STK 1060 | | 4004 | ±53 | 150 | -30 to +105 | 1.8 | 7 | 2 | ±36 | 50 min. | 0.02 max. | 40 typ, 80 max. | | | |
| | STK 1059 | 4004 | ±53 | 150 | -30 to +105 | 1.6 | 7 | - | ±38 | 55 min. | 0.02 max. | 40 typ, 80 max. | | | |
| | | 4004 | ±56 | 150 | -30 to +105 | 1.6 | 10 | - | ±40 | 60 min. | 0.02 max. | 40 typ, 80 max. | | | |
| STK 1050II | | 4020 | ±55 | 150 | -30 to +105 | 1.6 | 6 | 1 | ±38 | 50 min. | 0.01 max. | 40 typ, 70 max. | | | |
| STK 1060II | | 4020 | ±56 | 150 | -30 to +105 | 1.3 | 8 | 1 | ±40 | 60 min. | 0.01 max. | 40 typ, 70 max. | | | |
| STK 1070II | | 4020 | ±63 | 150 | -30 to +105 | 1.3 | 10 | 1 | ±43 | 70 min. | 0.01 max. | 40 typ, 70 max. | | | |
| STK 1080II | | 4020 | ±65 | 150 | -30 to +105 | 1.2 | 10 | 1 | ±45 | 80 min. | 0.01 max. | 40 typ, 70 max. | | | |
| 2-Channel Darlington Power Pack (Without emitter resistance) | | | | | | | | | | | | | | | |
| | STK 2025 | 4015 | ±40 | 150 | -30 to +105 | 2.6 | 3 | 2 | ±24 | 20x2 min. | 0.02 max. | 40 typ, 80 max. | | | |
| | STK 2029 | 4015 | ±43 | 150 | -30 to +105 | 2.2 | 4 | 2 | ±25.5 | 25x2 min. | 0.02 max. | 40 typ, 80 max. | | | |
| 2-Channel Darlington Power Pack (With emitter resistance) | | | | | | | | | | | | | | | |
| STK 2230 | STK 2135 | 4015 | ±48 | 150 | -30 to +105 | 2.1 | 4 | 2 | ±28.5 | 30x2 min. | 0.02 max. | 40 typ, 80 max. | | | |
| | STK 2139 | 4015 | ±50 | 150 | -30 to +105 | 1.85 | 5 | 2 | ±30 | 35x2 min. | 0.02 max. | 40 typ, 80 max. | | | |
| | STK 2145 | 4015 | ±54 | 150 | -30 to +105 | 1.8 | 7 | 2 | ±32 | 40x2 min. | 0.02 max. | 40 typ, 80 max. | | | |
| | | 4015 | ±48 | 150 | -30 to +105 | 2.1 | 4 | 2 | ±30 | 30x2 min. | 0.01 max. | 35 typ, 80 max. | | | |
| | | 4015 | ±54 | 150 | -30 to +105 | 1.8 | 5 | 2 | ±33.5 | 40x2 min. | 0.01 max. | 35 typ, 80 max. | | | |
| STK 2240 | | 4015 | ±59 | 150 | -30 to +105 | 1.8 | 5 | 2 | ±37 | 50x2 min. | 0.01 max. | 35 typ, 80 max. | | | |
| STK 2250 | | 4015 | ±59 | 150 | -30 to +105 | 1.8 | 5 | 2 | ±37 | 50x2 min. | 0.01 max. | 35 typ, 80 max. | | | |
| 1-Channel No Switching Darlington Power Pack | | | | | | | | | | | | | | | |
| STK 8250 | | 4006 | ±56 | 150 | -30 to +105 | 1.8 | 5 | 2 | ±38 | 50 min. | 0.01 max. | 80 max. | | | |
| STK 8260 | | 4006 | ±59 | 150 | -30 to +105 | 1.4 | 7 | 2 | ±42 | 60 min. | 0.01 max. | 80 max. | | | |
| STK 8270 | | 4006 | ±60 | 150 | -30 to +105 | 1.4 | 7 | 2 | ±44 | 70 min. | 0.01 max. | 80 max. | | | |
| STK 8280 | | 4006 | ±65 | 150 | -30 to +105 | 1.4 | 7 | 2 | ±47 | 80 min. | 0.01 max. | 80 max. | | | |
| STK 8250II | | 4020 | ±55 | 150 | -30 to +105 | 1.6 | 6 | 1 | ±38 | 50 min. | 0.005 max. | 70 max. | | | |
| STK 8260II | | 4020 | ±56 | 150 | -30 to +105 | 1.3 | 8 | 1 | ±40 | 60 min. | 0.005 max. | 40 typ, 70 max. | | | |
| STK 8270II | | 4020 | ±63 | 150 | -30 to +105 | 1.3 | 10 | 1 | ±44 | 70 min. | 0.005 max. | 40 typ, 70 max. | | | |
| STK 8280II | | 4020 | ±65 | 150 | -30 to +105 | 1.2 | 12 | 1 | ±45 | 80 min. | 0.01 max. | 70 max. | | | |

Shown on the next page.

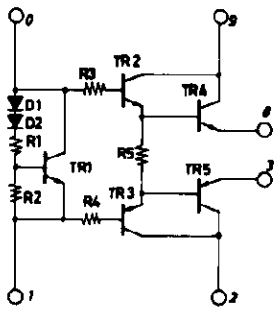
Deriv
-
chng



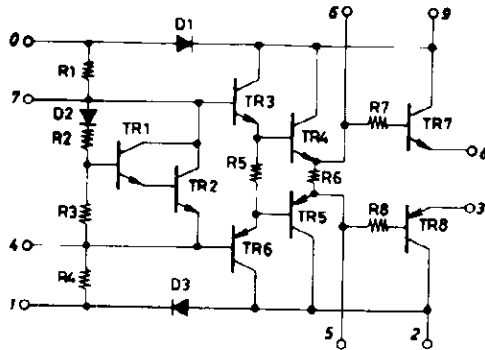
EQUIVALENT CIRCUIT



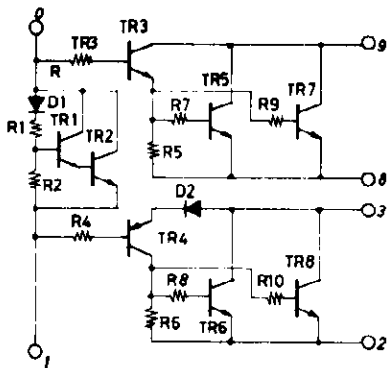
STK 0025, 0029, 0039, 0049, 0059



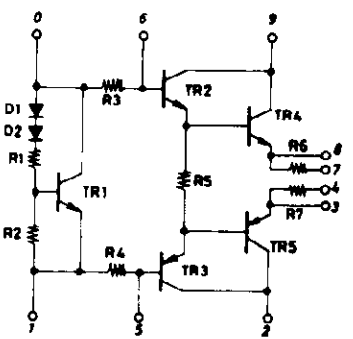
STK 0030, 0040, 0050, 0060, 0070, 0080,



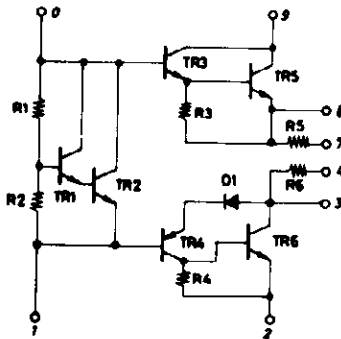
STK 0040II, 0050II, 0060II, 0070II, 0080II



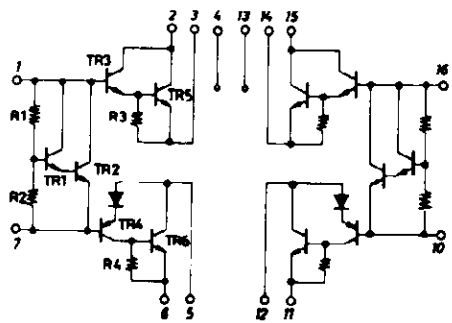
STK 0105



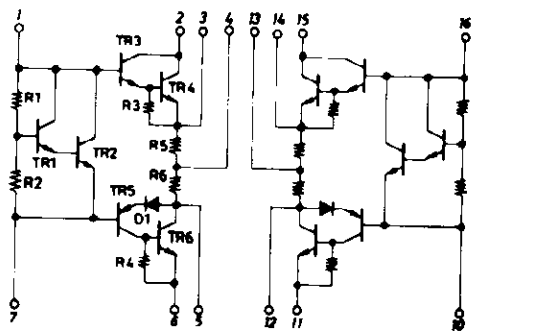
STK 1030, 1040, 1050, 1060



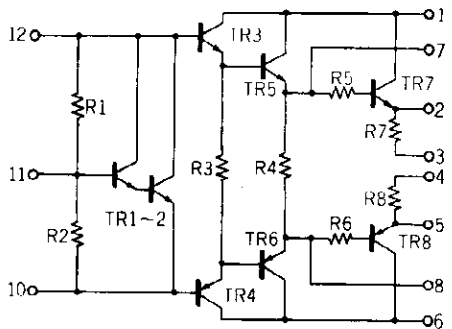
STK 1035, 1039, 1045, 1049, 1059



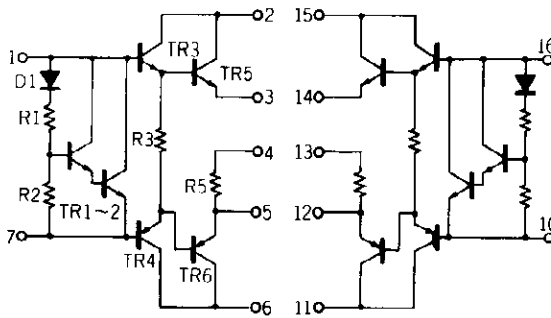
STK 2025, 2029



STK 2135, 2139, 2145



STK 1050II, 1060II, 1070II, 1080II



STK 2230, 2240, 2250

Copyright © Each Manufacturing Company.

All Datasheets cannot be modified without permission.

This datasheet has been download from :

www.AllDataSheet.com

100% Free DataSheet Search Site.

Free Download.

No Register.

Fast Search System.

www.AllDataSheet.com