

D.P.P. SERIES

thick film-IC

DARLINGTON POWER PACK

General Description

D.D.P. series are designed to meet requirement for high performance of audio components. The rate of total harmonic distortion are less than 0.03% (0040, 0049, 0055, 0059, 0060, 0070, 0080, 0105) and 0.03% (0025, 0029, 0030, 0035, 0039) at rated output 20KHz/4Ω, and typically 0.004% at 1/3 rated output 1KHz/4Ω.

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.

ABSOLUTE MAXIMUM RATINGS at Ta=25°

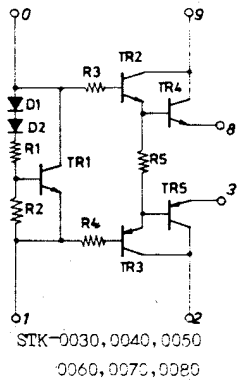
STK	Quasi- Complementary Circuit Pure- Complementary Circuit	0025	0029	0035	0039	0040	0049	0055	0059	0060	0070	0080	0105	Unit
Maximum Supply Voltage	V _{CC} max	±35	±37	±40	±45	±48	±50	±53	±53	±55	±55	±65	±75	V
Operating Case Temperature	T _C max							105						°C
Storage Temperature	T _{stg}						-30	to +105						°C
Allowable Load Shorting Time	t _s							2						sec
Junction Temperature	T _j							150						°C
Thermal Resistance	θ _{J-C}	2.6	2.4	2.4	2.0	2.0	1.8	1.8	1.6	1.4	1.4	1.3	1.0	°C/W
Collector Current	I _C max	3	5	4	5	5	5	5	7	7	7	10	10	A

ELECTRICAL CHARACTERISTICS

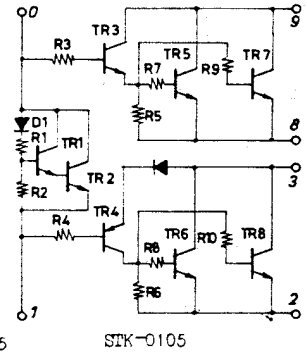
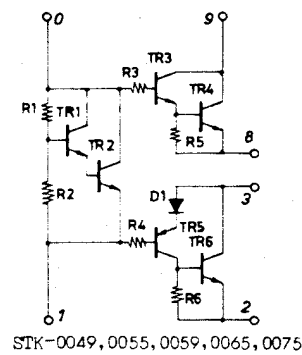
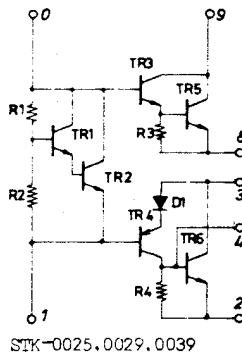
STK	Quasi- Complementary Circuit	0025	0029	0035	0039	0040	0049	0055	0059					0105	Unit
	Pure- Complementary Circuit			0030				0050		0060	0070	0080			
Recommended Supply	V _{CC}	±23	±24	±26	±28	±31	±32	±33	±35	±36	±38	±42	±45	V	
Quiescent Current															
I _{cco} (Type)								40						mA	
I _{cco} (max)								80						mA	
Output Power	P _O (R _L =4. ohm)														
(f=20Hz to 20kHz)															
THD<0.03%						45	50	55	60	70	80	100	120	W	
THD<0.05%		25	30	35	40										
Total Harmonic	THD (max)			0.05						0.03				%	
Voltage Gain	V _G							34						dB	

EQUIPMENT CIRCUIT

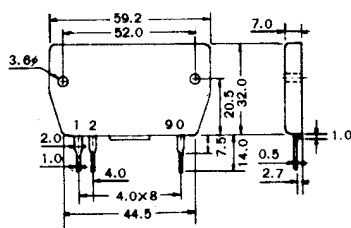
Pure-Complementary Circuit



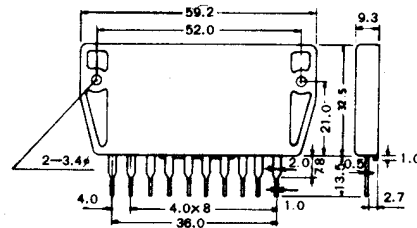
Quasi-Complementary Circuit



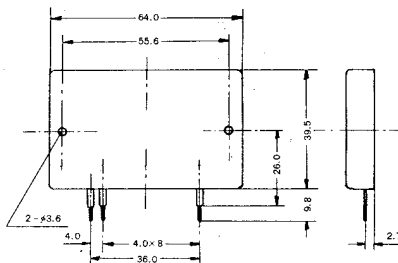
PACKAGE DIMENSION (UNIT: mm)



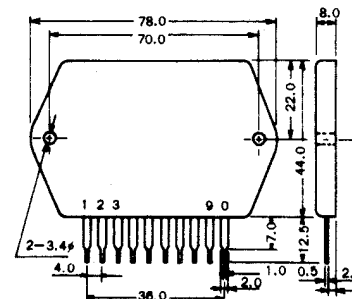
STK-0025
STK-0029
STK-0030
STK-0040



STK-0035
STK-0039
STK-0049
STK-0055
STK-0059
STK-0050



STK-0060
STK-0070
STK-0080



STK-0105

HEAT SINK THERMAL RESISTANCE ON THE MEASURING EQUIPMENT

TYP NO.	STK-0025	-0029	-0035	-0039	-0040	-0049	-0055	-0059	-0060	-0070	-0080	-0105
			-0030				-0050					
Thermal resistance	4.2	3.9	3.3	2.7	2.4	2.2	2.0	1.8	1.7	1.5	1.2	1.1

