

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.

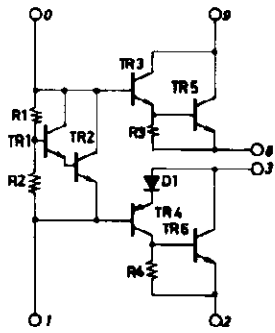
Type Number		Maximum Ratings at Ta=25°C										Operation Characteristics at Ta=25°C		
		Case Outline	Maximum Supply Voltage V _{CCmax}	Junction Temperature T _J	Storage Temperature T _{stg}	Thermal Resistance, θ	Collector Current, I _{Cmax}	Allowable Load Shorting Time, t _s	Supply Voltage at Rated Power, V _{CC}	Output Power, P _o f _s =20 to 20kHz	Total Harmonic Distortion, THD(f _s =20 to 20kHz)	Quiescent Current, I _{ccq}	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.		
STK 0040	STK 0039	4002	±40	150	-30 to +105	2.4	4	2	±28.5	30 min.	0.1 max.	40 typ, 80 max.		
		4004	±45	150	-30 to +105	2.0	5	2	±31	35 min.	0.1 max.	40 typ, 80 max.		
STK 0050	STK 0049	4002	±48	150	-30 to +105	2.0	5	2	±33	40 min.	0.1 max.	40 typ, 80 max.		
		4004	±50	150	-30 to +105	1.8	5	2	±35	45 min.	0.1 max.	40 typ, 80 max.		
STK 0060	STK 0059	4004	±53	150	-30 to +105	1.8	5	2	±36	50 min.	0.1 max.	40 typ, 80 max.		
		4004	±52.5	150	-30 to +105	1.6	7	-	±38	55 min.	0.1 max.	40 typ, 80 max.		
STK 0070	STK 0059	4006	±55	150	-30 to +105	1.4	7	-	±40	60 min.	0.1 max.	40 typ, 80 max.		
		4006	±55	150	-30 to +105	1.4	7	-	±43	70 min.	0.1 max.	40 typ, 80 max.		
STK 0080	STK 0059	4006	±65	150	-30 to +105	1.3	10	-	±46	80 min.	0.1 max.	40 typ, 80 max.		
		4007	±75	150	-30 to +105	1.0	10	-	±50	100 min.	0.1 max.	40 typ, 80 max.		
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	STK 1035	4004	±40	150	-30 to +105	2.4	5	2	±28.5	30 min.	0.02 max.	40 typ, 80 max.		
		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 1049	4004	±48	150	-30 to +105	1.8	7	2	±33	40 min.	0.02 max.	40 typ, 80 max.		
		4004	±50	150	-30 to +105	1.8	7	2	±34	45 min.	0.02 max.	40 typ, 80 max.		
STK 1060	STK 1059	4004	±53	150	-30 to +105	1.8	7	2	±36	50 min.	0.02 max.	40 typ, 80 max.		
		4004	±53	150	-30 to +105	1.6	7	-	±38	55 min.	0.02 max.	40 typ, 80 max.		
STK 1060		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	STK 2029	4015	±40	150	-30 to +105	2.6	3	2	±24	20x2 min.	0.02 max.	40 typ, 80 max.		
		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.		
		4015	±50	150	-30 to +105	1.85	5	2	±30	35x2 min.	0.02 max.	40 typ, 80 max.		
STK 2240	STK 2139	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.		
STK 2250	STK 2145	4015	±54	150	-30 to +105	1.8	5	2	±33.5	40x2 min.	0.01 max.	35 typ, 80 max.		
		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	STK 8280	4006	±56	150	-30 to +105	1.8	5	2	±38	50 min.	0.01 max.	80 max.		
		4006	±59	150	-30 to +105	1.4	7	2	±42	60 min.	0.01 max.	80 max.		
STK 8270	STK 8280	4006	±60	150	-30 to +105	1.4	7	2	±44	70 min.	0.01 max.	80 max.		
		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.		

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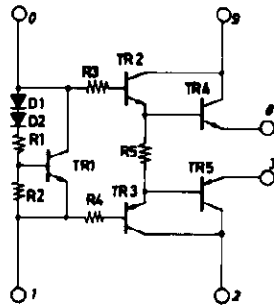
Design check



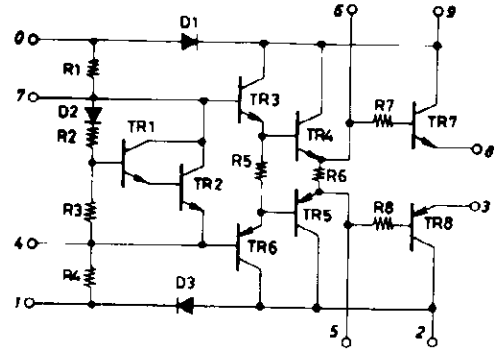
EQUIVALENT CIRCUIT



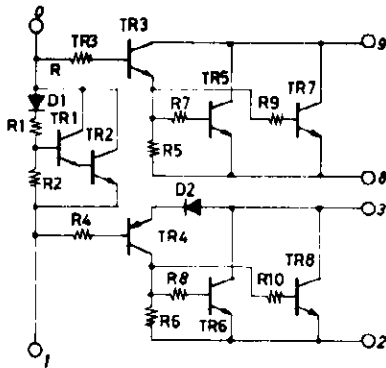
STK 0025, 0029, 0039, 0049, 0059



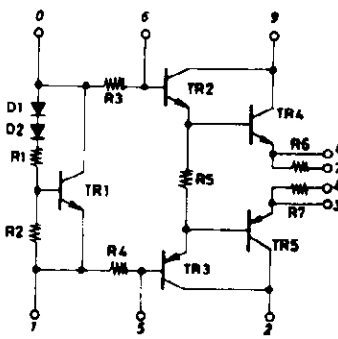
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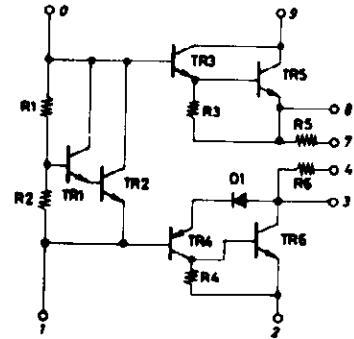
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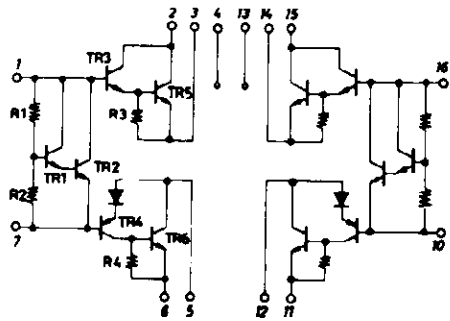
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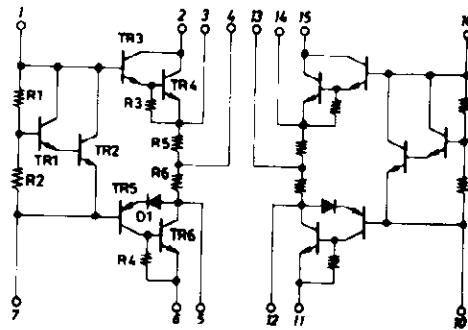
STK 1030, 1040, 1050, 1060



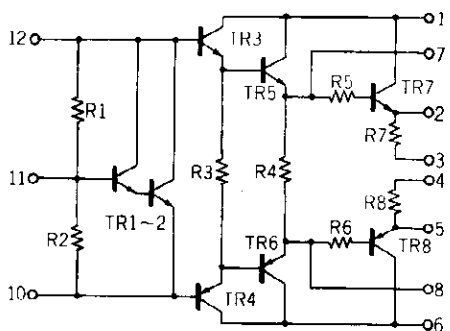
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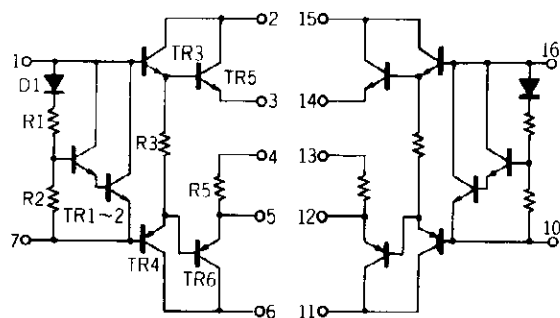
STK 2025, 2029



STK 2135, 2139, 2145



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



STK 2230, 2240, 2250