

HITACHI TRANSISTORS

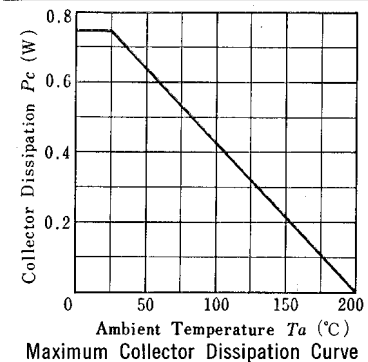
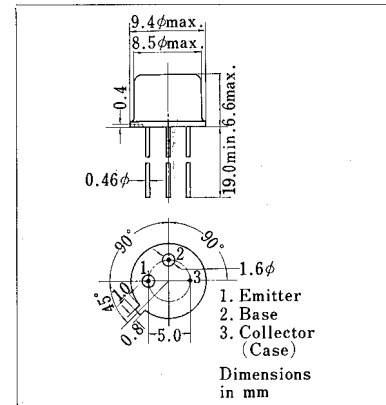
—FOR COMPLEMENTARY SYMMETRY OTL AMP.—

2SA537 2SA537A

The Hitachi 2SA537 and 2SA537A are silicon PNP epitaxial planar type transistors with high breakdown voltage and good linearity of DC current transfer ratio, specifically designed for use in the driver stage of high fidelity audio amplifier, especially featuring in complementary symmetry with the Hitachi transistor 2SC708 and 2SC708A.

ABSOLUTE MAXIMUM RATINGS (At 25°C Ambient Temperature)

Item	Symbol	2SA537	2SA537A	Unit
Collector to Base Voltage	V_{CBO}	-60	-90	V
Collector to Emitter Voltage	V_{CEO}	-50	-80	V
Emitter to Base Voltage	V_{EBO}	-4	-4	V
Collector Current	I_C	-0.7	-0.7	A
Collector Dissipation	P_C	0.75	0.75	W
Junction Temperature	T_j	200	200	°C
Storage Temperature	T_{stg}	-65~+200	-65~+200	°C

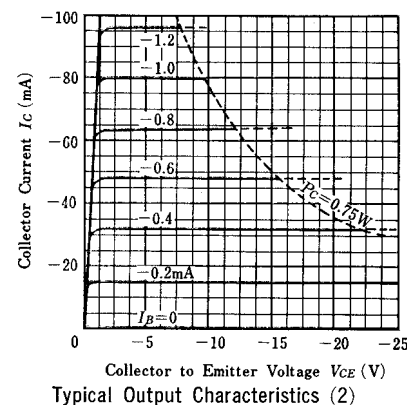
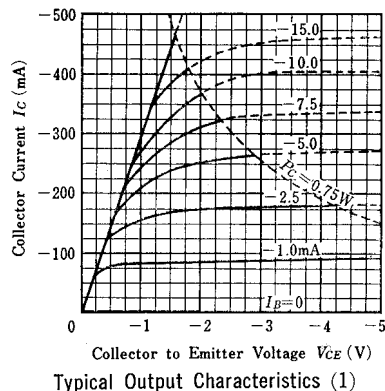


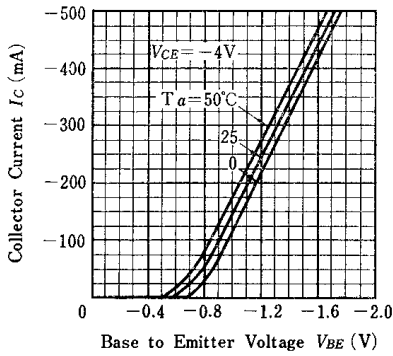
ELECTRICAL CHARACTERISTICS (At 25°C Ambient Temperature)

Item	Symbol	Test Condition	2SA537			2SA537A			Unit
			min.	typ.	max.	min.	typ.	max.	
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10 \text{ mA}$, $R_{BE} = \infty$	-50	—	—	-80	—	—	V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -5 \text{ mA}$, $I_C = 0$	-4	—	—	-4	—	—	V
DC Current Transfer Ratio*	h_{FE}	$V_{CE} = -4 \text{ V}$, $I_C = -50 \text{ mA}$	35	80	200	35	80	200	
		$V_{CE} = -4 \text{ V}$, $I_C = -400 \text{ mA (pulse)}$	20	40	—	20	40	—	
Base to Emitter Voltage	V_{BE}	$V_{CE} = -4 \text{ V}$, $I_C = -50 \text{ mA}$	—	-0.8	-1.0	—	-0.8	-1.0	V
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -150 \text{ mA}$, $I_B = -15 \text{ mA}$	—	-0.5	-1.0	—	-0.5	-1.0	V
Gain Bandwidth Product	f_T	$V_{CE} = -4 \text{ V}$, $I_C = -30 \text{ mA}$	—	200	—	—	200	—	MHz

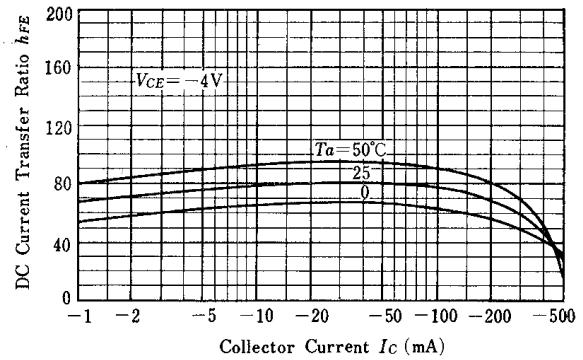
* The 2SA537 and 2SA537A are grouped by h_{FE} ($V_{CE} = -4 \text{ V}$, $I_C = -50 \text{ mA}$) as follows.

Ⓐ 35~70, Ⓑ 60~120, Ⓒ 100~200



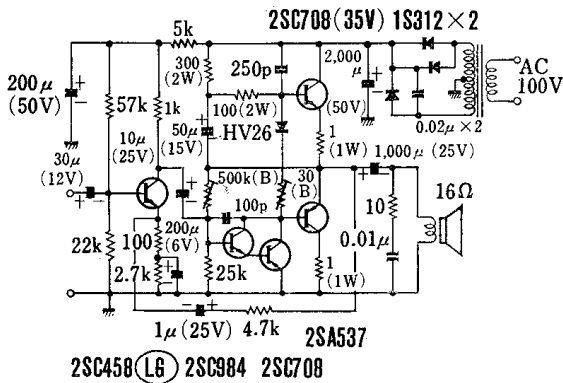


Typical Transfer Characteristics



DC Current Transfer Ratio vs. Collector Current

CIRCUIT EXAMPLE—5W Complementary OTL Amplifier



- Note) 1. Resistors are $\frac{1}{2}$ watt unless otherwise specified.
2. The 2SA537 and 2SC708 attach on the heat sink fin.

Performance Data

- Power Gain 67 dB
- Power Output 5 W (*Dist.* = 0.5%)
- Frequency Characteristic 20 Hz ~ 60 kHz (at -2 dB)
- Input Impedance 15 k Ω min.
- Negative Feedback 30 dB

