

2SD2256

Silicon NPN Triple Diffused

HITACHI

ADE-208-928 (Z)
1st. Edition
Sep. 2000

Application

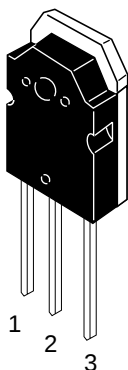
Low frequency power amplifier complementary pair with 2SB1494

Features

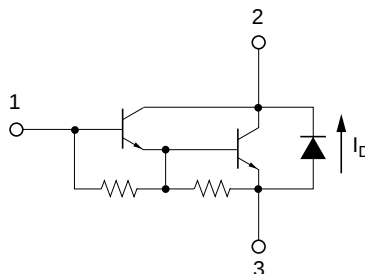
- High breakdown voltage and high current ($V_{CE0} = 120 \text{ V}$, $I_C = 25 \text{ A}$)
- Built-in C-E diode

Outline

TO-3P



1. Base
2. Collector (Flange)
3. Emitter



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	120	V
Collector to emitter voltage	V_{CEO}	120	V
Emitter to base voltage	V_{EBO}	7	V
Collector current	I_C	25	A
Collector peak current	$I_{C(peak)}$	35	A
Collector power dissipation	P_C^{*1}	120	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	−55 to +150	°C
C to E diode forward current	I_D^{*1}	25	A

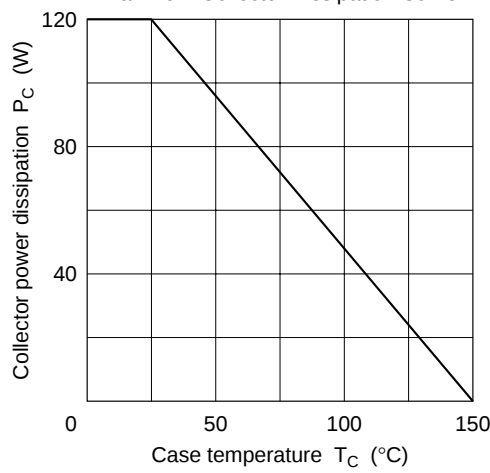
Note: 1. Value at $T_C = 25^{\circ}\text{C}$.

Electrical Characteristics (Ta = 25°C)

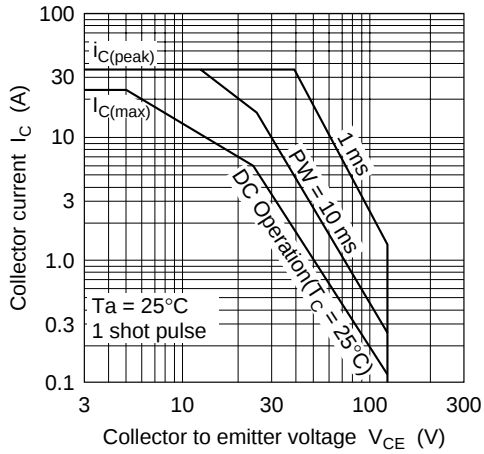
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	120	—	—	V	$I_C = 0.1\text{ mA}$, $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	120	—	—	V	$I_C = 25\text{ mA}$, $R_{BE} = \infty$
Collector to emitter sustain voltage	$V_{CEO(sus)}$	120	—	—	V	$I_C = 200\text{ mA}$, $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	7	—	—	V	$I_E = 50\text{ mA}$, $I_C = 0$
Collector cutoff current	I_{CBO}	—	—	10	μA	$V_{CB} = 100\text{ V}$, $I_E = 0$
	I_{CEO}	—	—	10	μA	$V_{CE} = 100\text{ V}$, $R_{BE} = \infty$
DC current transfer ratio	h_{FE1}	2000	—	20000		$V_{CE} = 4\text{ V}$, $I_C = 12\text{ A}^{*1}$
	h_{FE2}	500		—		$V_{CE} = 4\text{ V}$, $I_C = 25\text{ A}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)1}$	—	—	2.0	V	$I_C = 12\text{ A}$, $I_B = 24\text{ mA}^{*1}$
	$V_{CE(sat)2}$	—	—	3.5	V	$I_C = 25\text{ A}$, $I_B = 250\text{ mA}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)1}$	—	—	3.0	V	$I_C = 12\text{ A}$, $I_B = 24\text{ mA}^{*1}$
	$V_{BE(sat)2}$	—	—	4.5	V	$I_C = 25\text{ A}$, $I_B = 250\text{ mA}^{*1}$

Note: 1. Pulse test.

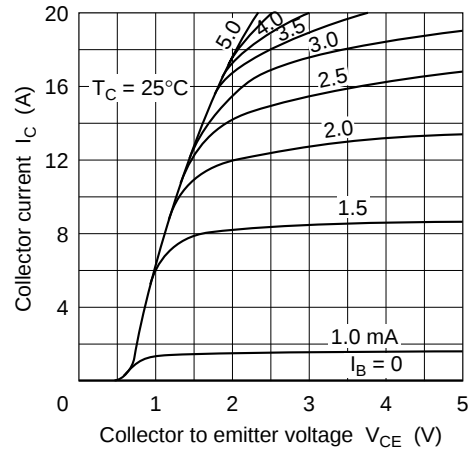
Maximum Collector Dissipation Curve



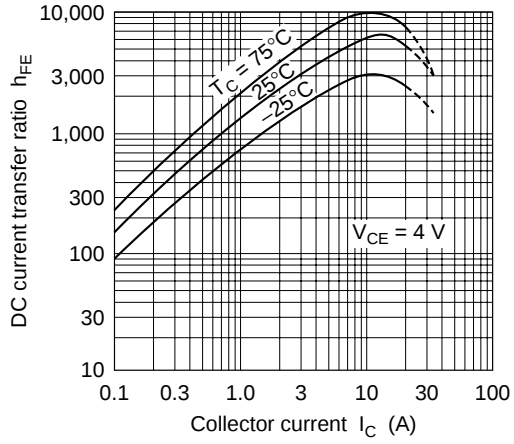
Area of Safe Operation

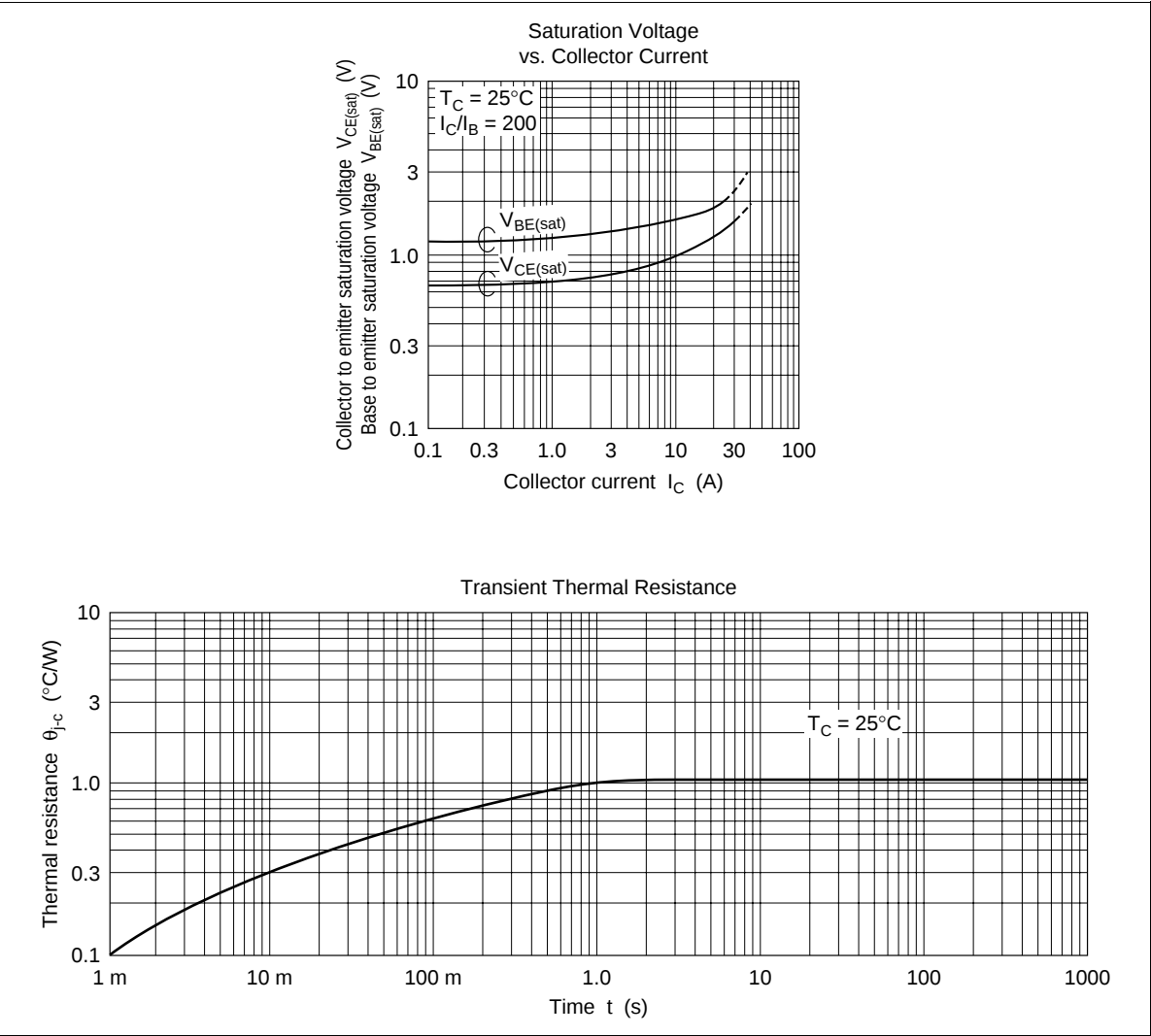


Typical Output Characteristics



DC Current Transfer Ratio vs. Collector Current





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