
2SD1306

Silicon NPN Epitaxial

HITACHI

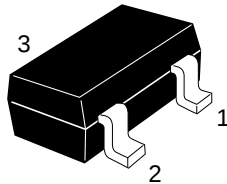
ADE-208-1144 (Z)
1st. Edition
Mar. 2001

Application

Low frequency amplifier, Muting

Outline

MPAK



- 1. Emitter
- 2. Base
- 3. Collector

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	15	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I_C	0.7	A
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

Electrical Characteristics (Ta = 25°C)

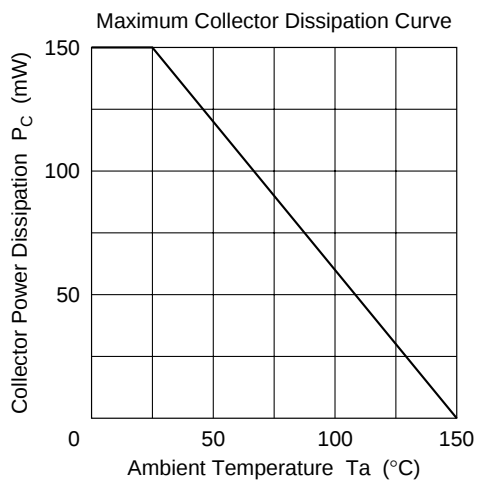
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	$I_C = 10\text{ }\mu\text{A}$, $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	15	—	—	V	$I_C = 1\text{ mA}$, $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	V	$I_E = 10\text{ }\mu\text{A}$, $I_C = 0$
Collector cutoff current	I_{CBO}	—	—	1.0	μA	$V_{CB} = 20\text{ V}$, $I_E = 0$
DC current transfer ratio	h_{FE}^{*1}	250	—	800		$V_{CE} = 1\text{ V}$, $I_C = 150\text{ mA}^{*2}$
Base to emitter voltage	V_{BE}	—	—	1.0	V	$V_{CE} = 1\text{ V}$, $I_C = 150\text{ mA}^{*2}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	0.5	V	$I_C = 500\text{ mA}$, $I_B = 50\text{ mA}^{*2}$
Gain bandwidth product	f_T	—	250	—	MHz	$V_{CE} = 1\text{ V}$, $I_C = 150\text{ mA}^{*2}$

Notes: 1. The 2SD1306 is grouped by h_{FE} as follows.

2. Pulse test

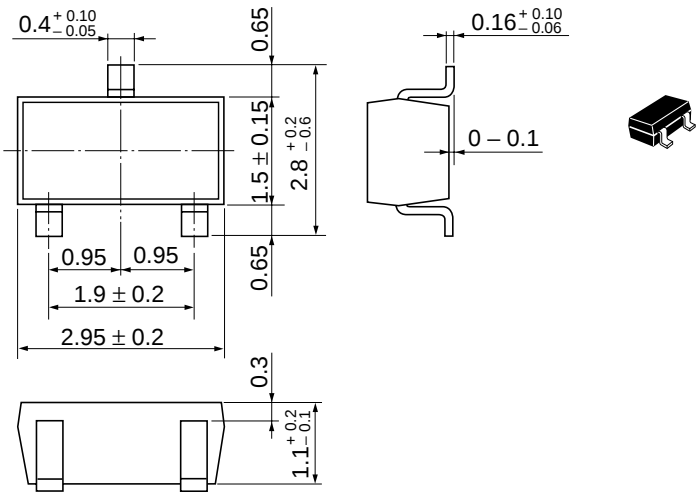
Grade	D	E
Mark	ND	NE
h_{FE}	250 to 500	400 to 800

See characteristic curves of 2SD1504.



Package Dimensions

As of January, 2001
Unit: mm



Hitachi Code	MPAK
JEDEC	—
EIAJ	Conforms
Mass (reference value)	0.011 g

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