2SD1306

Silicon NPN Epitaxial

HITACHI

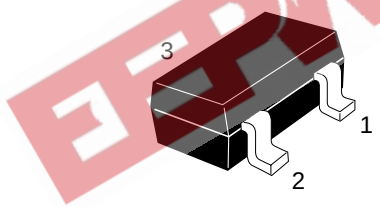
ADE-208-1144 (Z)
1st. Edition
Mar. 2001

Application

Low frequency amplifier, Muting

Outline

MPAK



1. Emitter
2. Base
3. Collector

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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	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

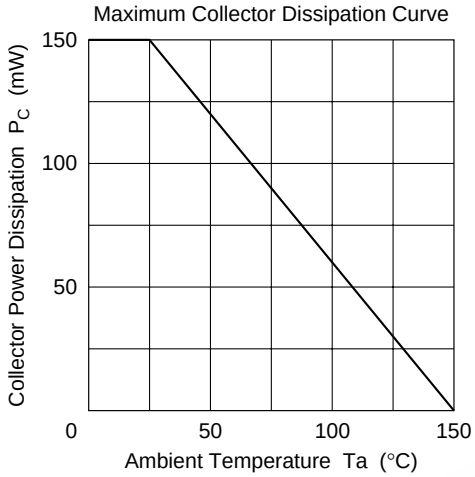
Electrical Characteristics (Ta = 25°C)

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

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

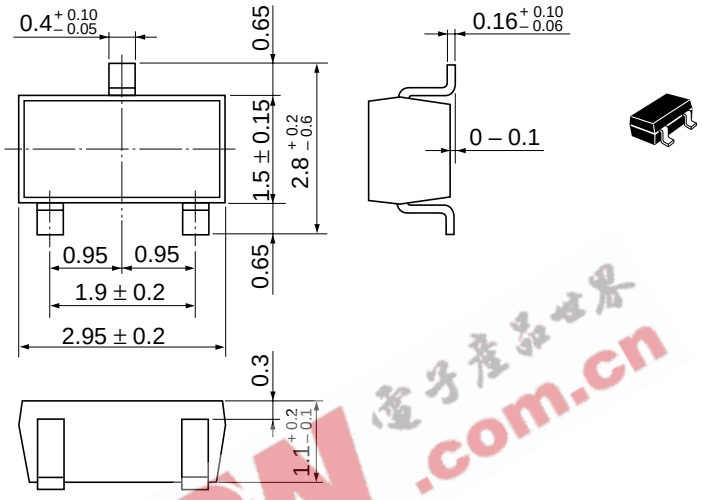
Grade	D	E
Mark	ND	NE
h_{FE}	250 to 500	400 to 800

See characteristic curves of 2SD1504.


Maximum Collector Dissipation Curve
Collector Power Dissipation P_C (mW)
150
100
50
0
50
100
150
Ambient Temperature Ta (°C)

Package Dimensions

As of January, 2001
Unit: mm



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

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