

# 2SD1366A

Silicon NPN Epitaxial

**RENESAS**

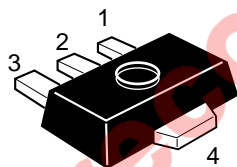
ADE-208-1146 (Z)  
1st. Edition  
Mar. 2001

## Application

Low frequency power amplifier

## Outline

UPAK



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

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	30	V
Collector to emitter voltage	$V_{CEO}$	25	V
Emitter to base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	1	A
Collector peak current	$i_{C(peak)}^{*1}$	1.5	A
Collector power dissipation	$P_C^{*2}$	1	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

Notes: 1.  $PW \leq 10$  ms, Duty cycle  $\leq 20\%$ .  
2. Value on the alumina ceramic board (12.5 × 20 × 0.7 mm)

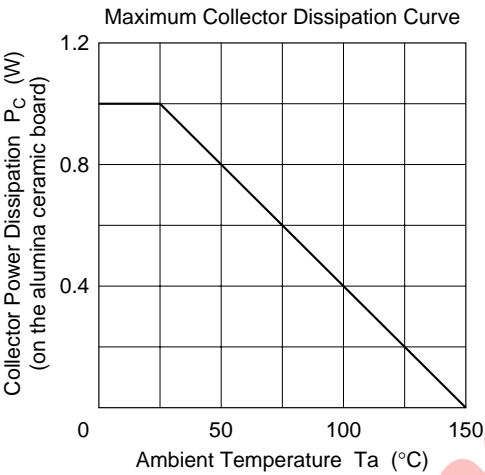
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	25	—	—	V	$I_C = 1$ mA, $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	V	$I_E = 10 \mu A, I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	0.1	$\mu A$	$V_{CB} = 20$ V, $I_E = 0$
Emitter cutoff current	$I_{EBO}$	—	—	0.1	$\mu A$	$V_{EB} = 4$ V, $I_C = 0$
DC current transfer ratio	$h_{FE}^{*1}$	85	—	240		$V_{CE} = 2$ V, $I_C = 0.5$ A, Pulse
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	0.15	0.3	V	$I_C = 0.8$ A, $I_B = 0.08$ A, Pulse
Base to emitter saturation voltage	$V_{BE(sat)}$	—	0.9	1.0	V	$I_C = 0.8$ A, $I_B = 0.08$ A, Pulse
Gain bandwidth product	$f_T$	—	240	—	MHz	$V_{CE} = 2$ V, $I_C = 0.5$ A, Pulse
Collector output capacitance	$C_{ob}$	—	22	—	pF	$V_{CB} = 10$ V, $I_E = 0, f = 1$ MHz

Note: 1. The 2SD1366A is grouped by  $h_{FE}$  as follows.

Mark	AC	AD
$h_{FE}$	85 to 170	120 to 240

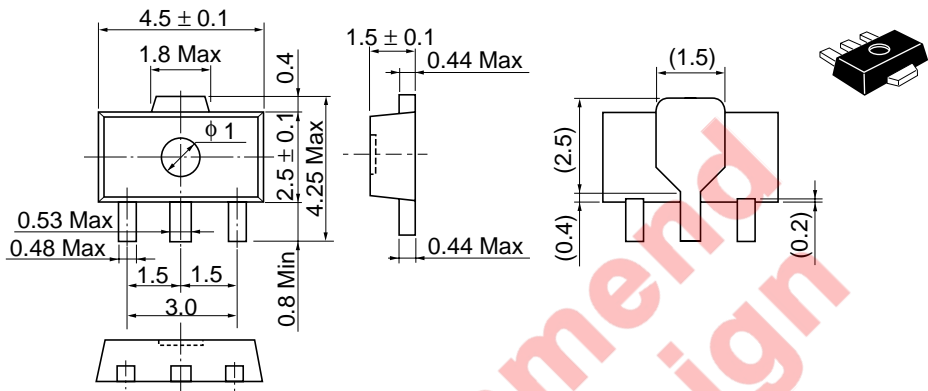
See characteristic curves of 2SD1366.



Not recommend  
for new design

Package Dimensions

As of January, 2001  
Unit: mm



Hitachi Code	UPAK
JEDEC	—
EIAJ	Conforms
Mass (reference value)	0.050 g

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