
2SD1366

Silicon NPN Epitaxial

HITACHI

Application

Low frequency power amplifier

Outline

UPAK



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

2SD1366

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	25	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I_C	1	A
Collector peak current	$i_{C(\text{peak})}^{*1}$	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 10 ms, Duty cycle 20%.

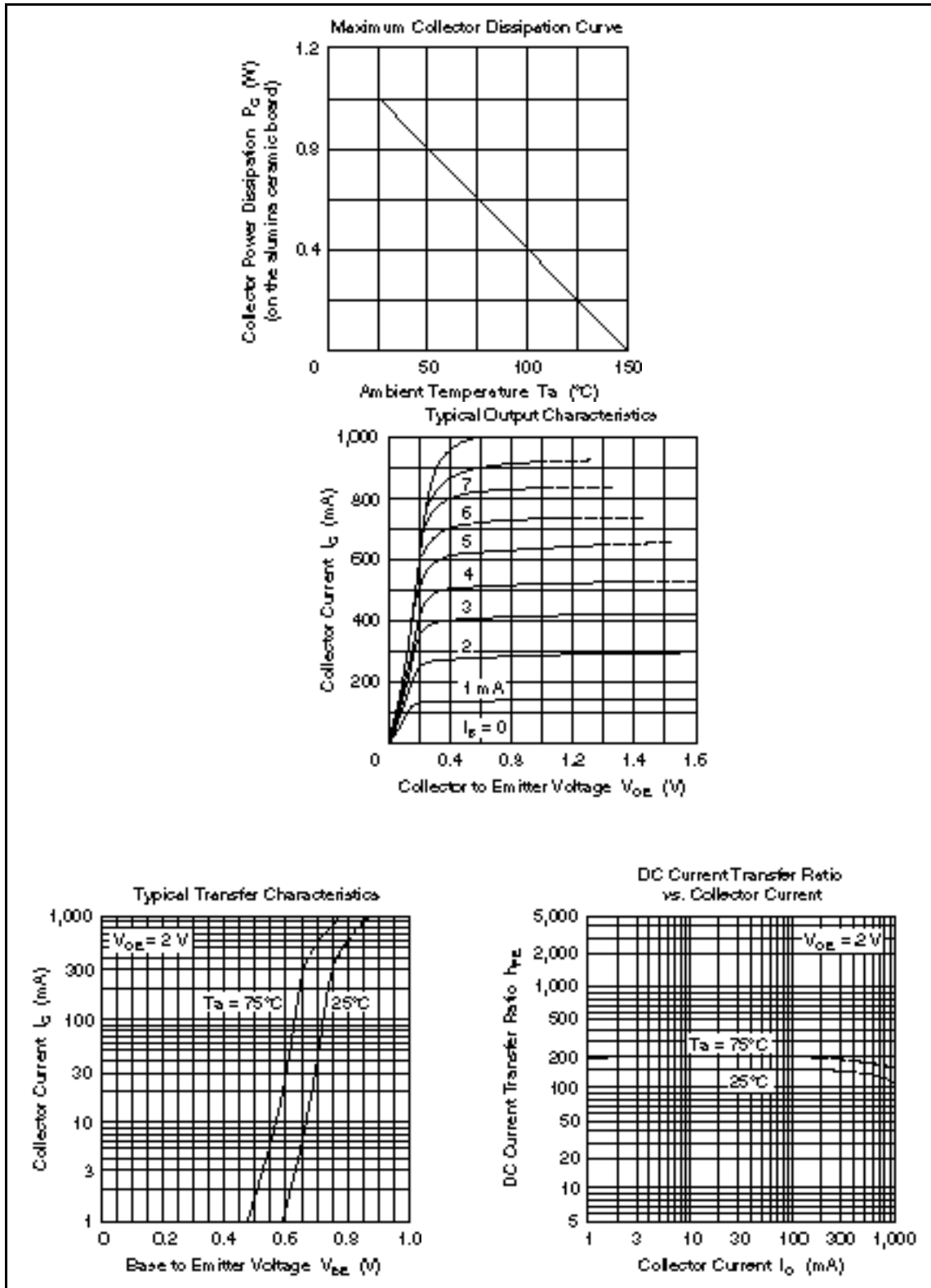
2. Value on the alumina ceramic board (12.5 × 20 × 0.7 mm)

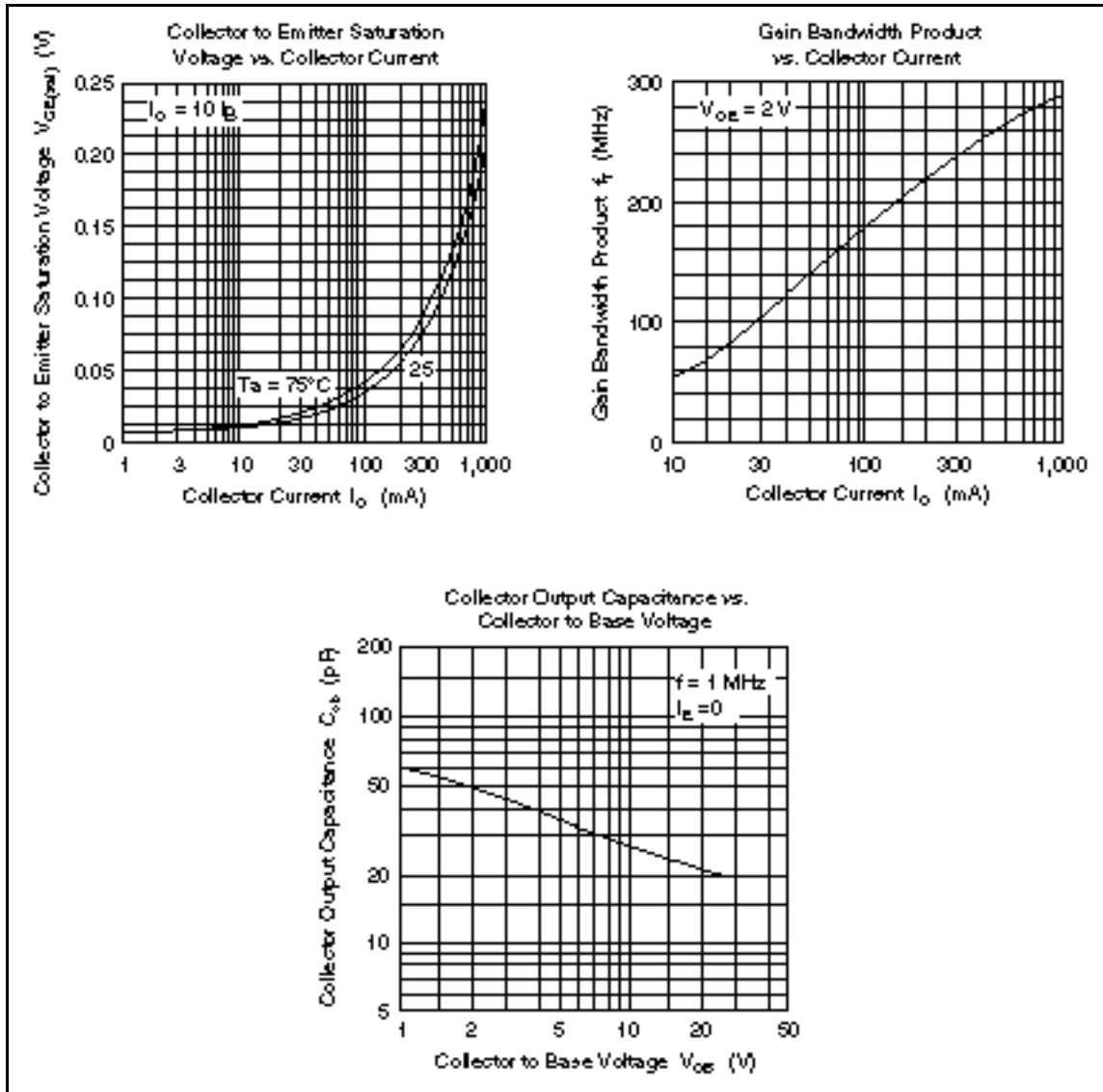
Electrical Characteristics (Ta = 25°C)

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

Note: 1. The 2SD1366 is grouped by h_{FE} as follows.

Mark	AA	AB
h_{FE}	85 to 170	120 to 240





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