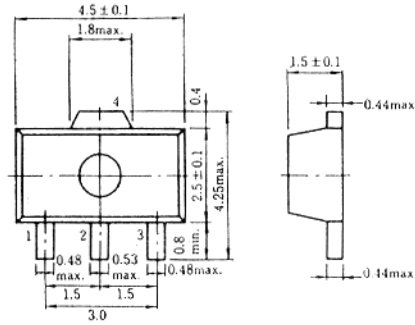


2SB1002

SILICON PNP EPITAXIAL

LOW FREQUENCY POWER AMPLIFIER

Complementary pair with 2SD1368



(UPAK)

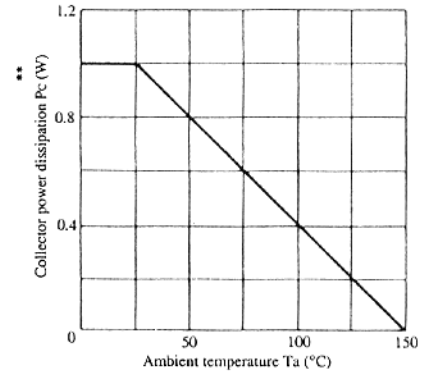
■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SB1002	Unit
Collector to base voltage	V _{CB0}	-70	V
Collector to emitter voltage	V _{CEO}	-50	V
Emitter to base voltage	V _{EBO}	-6	V
Collector current	I _C	-1	A
Collector peak current	i _{C(peak)} *	-1.5	A
Collector power dissipation	P _C **	1	W
Junction temperature	T _J	150	°C
Storage temperature	T _{sig}	-55 to +150	°C

* PW ≤ 10ms, Duty cycle ≤ 20%

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

MAXIMUM COLLECTOR DISSIPATION CURVE



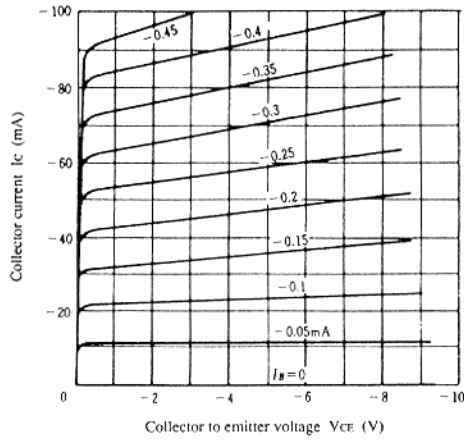
■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	V _{(BR)CBO}	I _C = -10μA, I _E = 0	-70	—	—	V
Collector to emitter breakdown voltage	V _{(BR)CEO}	I _C = -1mA, R _{BE} = ∞	-50	—	—	V
Emitter to base breakdown voltage	V _{(BR)EBO}	I _E = -10μA, I _C = 0	-6	—	—	V
Collector cutoff current	I _{CB0}	V _{CB} = -50V, I _E = 0	—	—	-0.1	μA
Emitter cutoff current	I _{EBO}	V _{EB} = -4V, I _C = 0	—	—	-0.1	μA
DC current transfer ratio	h _{FE} *	V _{CE} = -2V, I _C = -0.1A	100	—	320	
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = -1A, I _B = -0.1A, (Pulse test)	—	—	-0.6	V
Base to emitter saturation voltage	V _{BE(sat)}	I _C = -1A, I _B = -0.1A, (Pulse test)	—	—	-1.2	V
Gain bandwidth product	f _T	V _{CE} = -2V, I _C = -10mA, (Pulse test)	—	150	—	MHz
Collector output capacitance	C _{ob}	V _{CB} = -10V, I _E = 0, f = 1MHz	—	35	—	pF

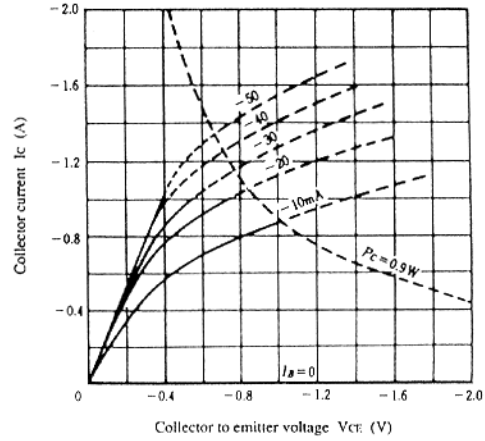
* The 2SB1002 is grouped by h_{FE} as follows.

Mark	CH	CJ
h _{FE}	100 to 200	160 to 320

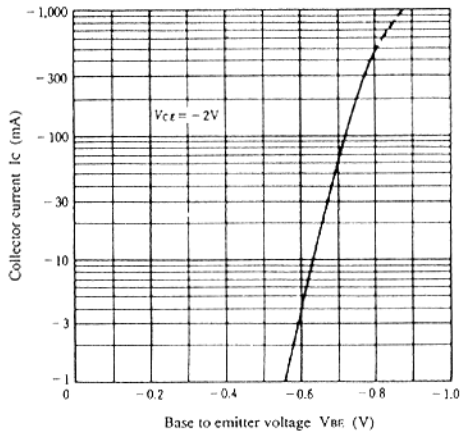
TYPICAL OUTPUT CHARACTERISTICS



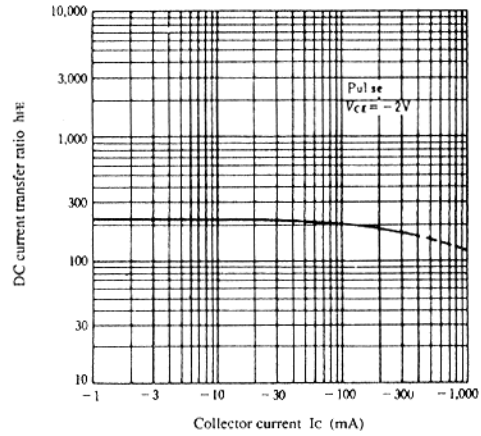
TYPICAL OUTPUT CHARACTERISTICS



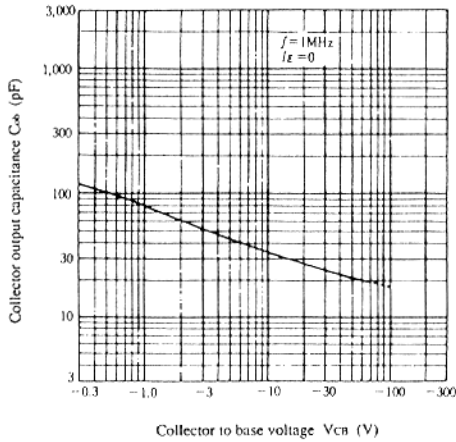
TYPICAL TRANSFER CHARACTERISTICS



DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE



SATURATION VOLTAGE VS. COLLECTOR CURRENT

