

# 2SB1012(K)

Silicon PNP Epitaxial

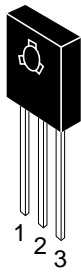
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## Application

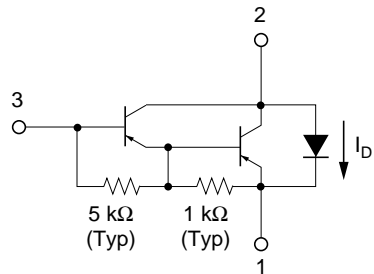
Low frequency power amplifier complementary pair with 2SD1376(K)

## Outline

TO-126 MOD



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



## 2SB1012(K)

### Absolute Maximum Ratings (Ta = 25°C)

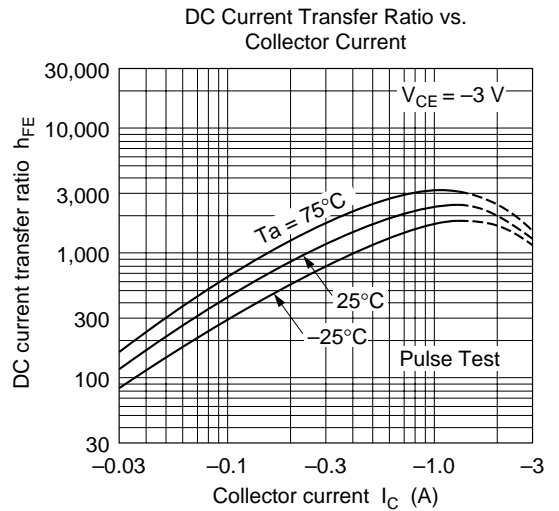
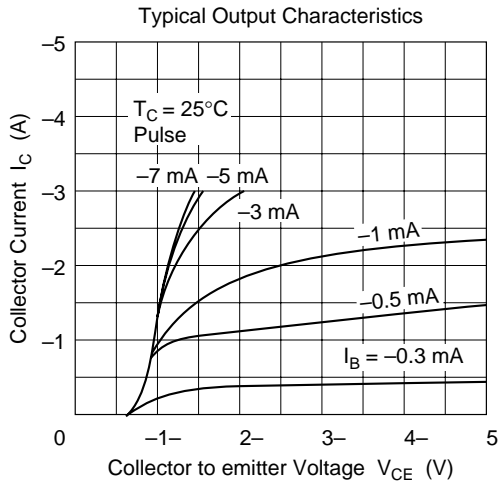
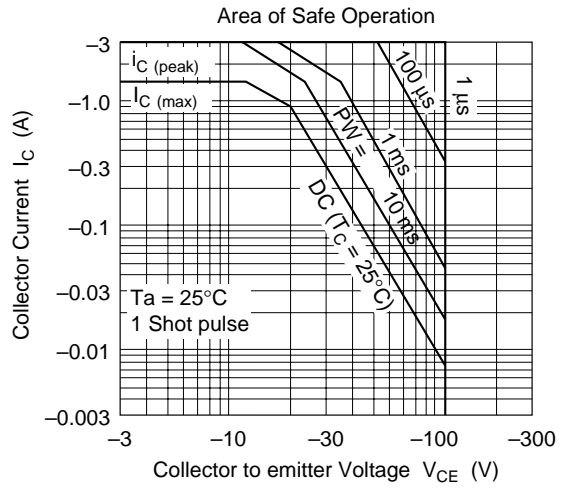
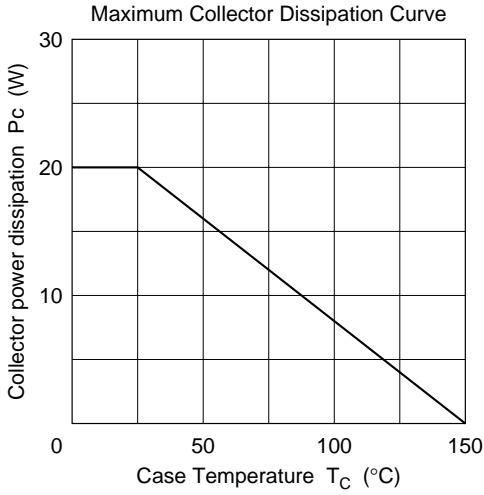
Item	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	-120	V
Collector to emitter voltage	$V_{CEO}$	-120	V
Emitter to base voltage	$V_{EBO}$	-7	V
Collector current	$I_C$	-1.5	A
Collector peak current	$I_{C(peak)}$	-3.0	A
Collector power dissipation	$P_C^{*1}$	20	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C
C to E diode forward current	$I_D^{*1}$	1.5	A

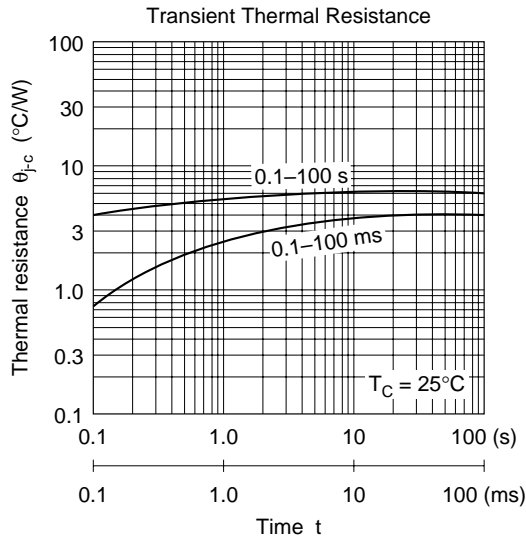
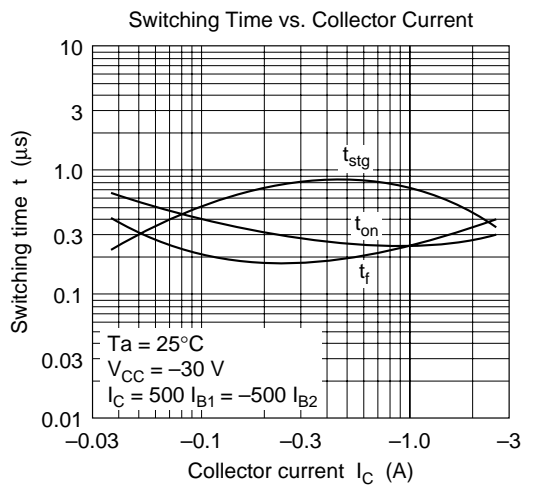
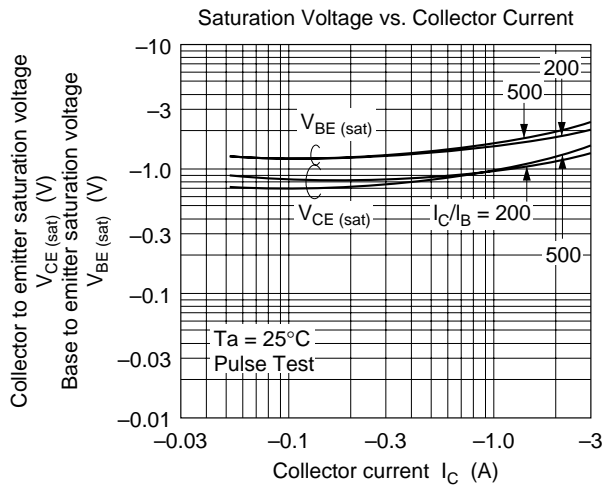
Note: 1. Value at  $T_C = 25^\circ\text{C}$

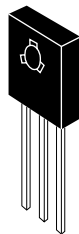
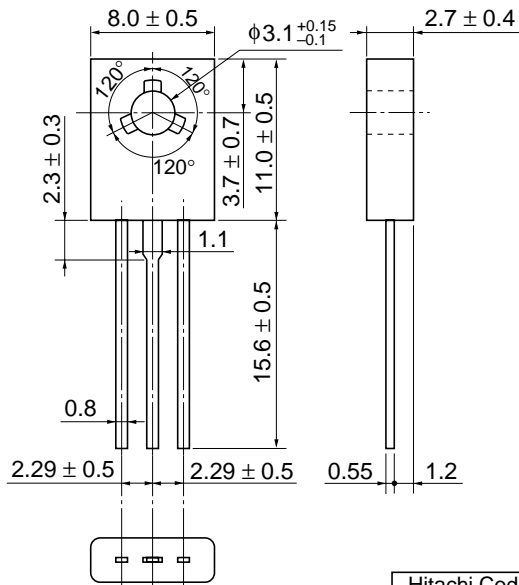
### Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-120	—	—	V	$I_C = -10\text{ mA}$ , $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-7	—	—	V	$I_E = -50\text{ mA}$ , $I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	-100	$\mu\text{A}$	$V_{CB} = -120\text{ V}$ , $I_E = 0$
	$I_{CEO}$	—	—	-10	$\mu\text{A}$	$V_{CE} = -100\text{ V}$ , $R_{BE} = \infty$
DC current transfer ratio	$h_{FE}$	2000	—	30000		$V_{CE} = -3\text{ V}$ , $I_C = -1\text{ A}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)1}$	—	—	-1.5	V	$I_C = -1\text{ A}$ , $I_B = -1\text{ mA}^{*1}$
	$V_{CE(sat)2}$	—	—	-2.0	V	$I_C = -1.5\text{ A}$ , $I_B = -1.5\text{ mA}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)1}$	—	—	-2.0	V	$I_C = -1\text{ A}$ , $I_B = -1\text{ mA}^{*1}$
	$V_{BE(sat)2}$	—	—	-2.5	V	$I_C = -1.5\text{ A}$ , $I_B = -1.5\text{ mA}^{*1}$
C to E diode forward voltage	$V_D$	—	—	3.0	V	$I_D = 1.5\text{ A}^{*1}$
Turn on time	$t_{on}$	—	0.5	—	$\mu\text{s}$	$I_C = -1\text{ A}$ , $I_{B1} = -I_{B2} = -1\text{ mA}$
Turn off time	$t_{off}$	—	2.0	—	$\mu\text{s}$	

Note: 1. Pulse test







Hitachi Code	TO-126 Mod
JEDEC	—
EIAJ	—
Weight (reference value)	0.67 g

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