

2SD1970

Silicon NPN Epitaxial

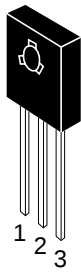
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Application

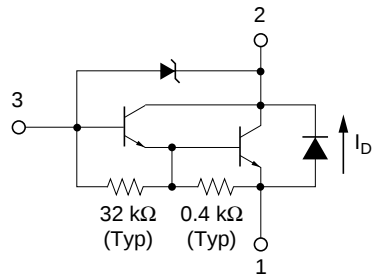
Low frequency power amplifier

Outline

TO-126 MOD



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



Absolute Maximum Ratings (Ta = 25°C)

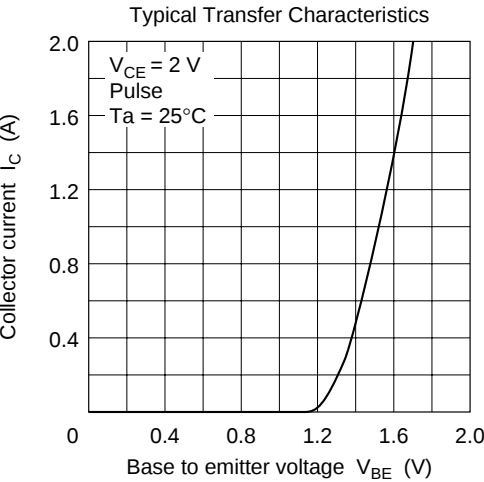
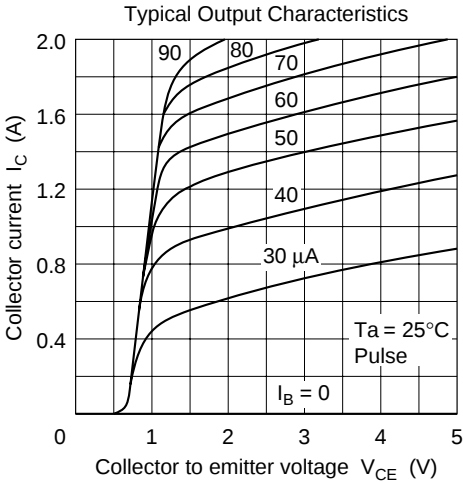
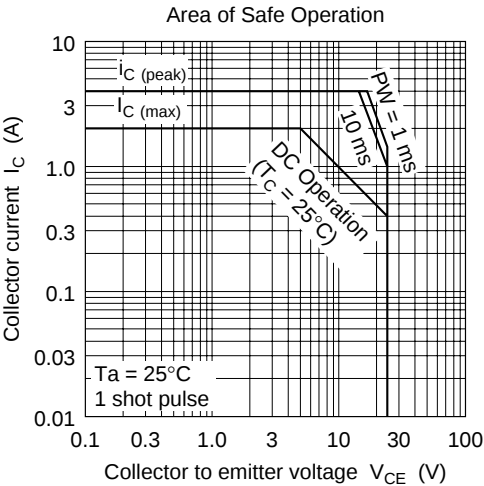
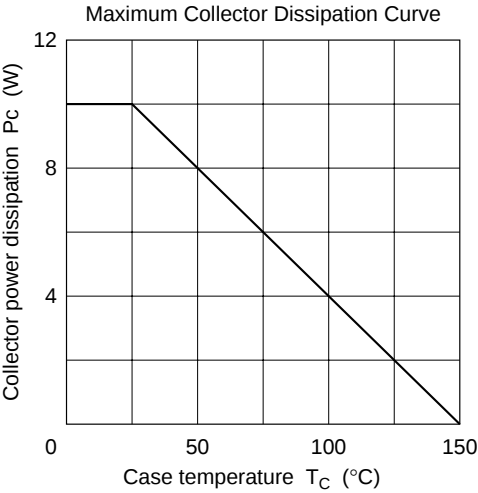
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	24	V
Collector to emitter voltage	V_{CEO}	24	V
Emitter to base voltage	V_{EBO}	7	V
Collector current	I_C	2	A
Collector peak current	$I_{C(peak)}$	4	A
C to E diode forward current	I_D	2	A
Collector power dissipation	P_C^{*1}	10	W
Junction temperature	T_j	150	°C
Storage temperature	Tstg	−55 to +150	°C

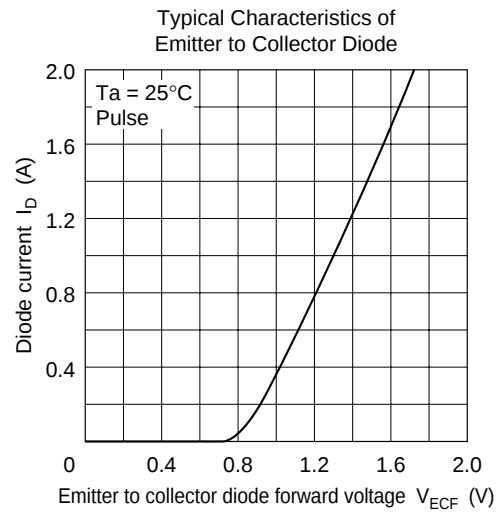
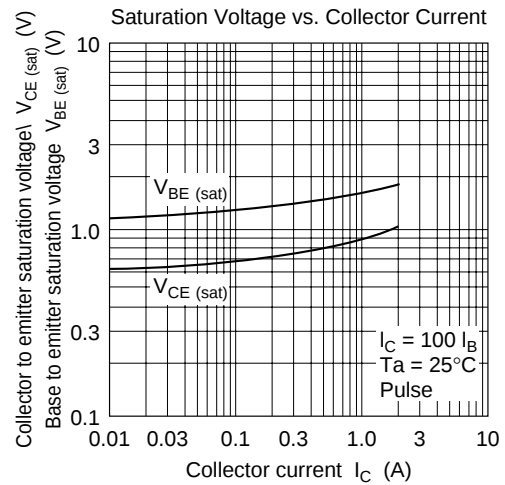
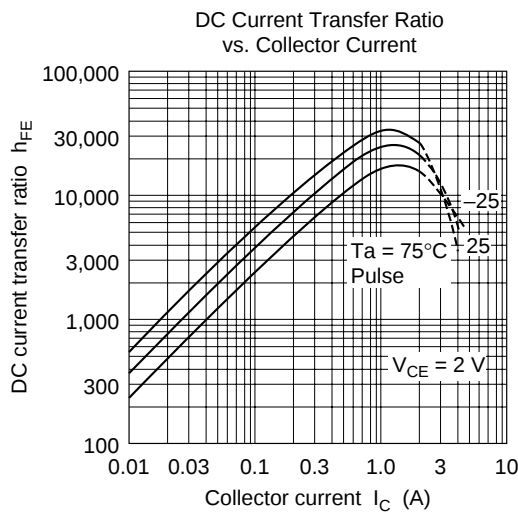
Note: 1. Value at $T_c = 25^{\circ}\text{C}$.

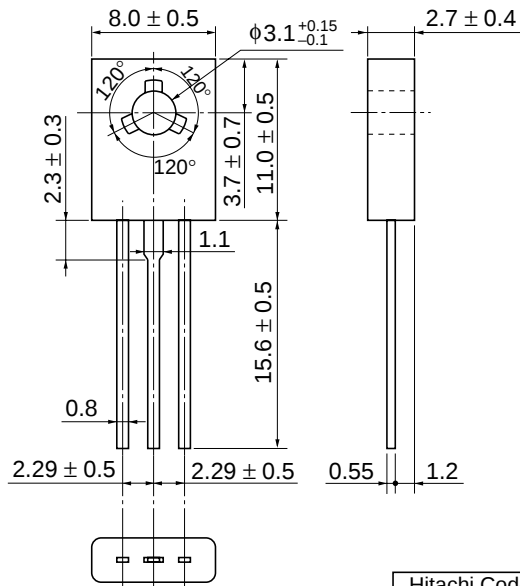
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CEO}$	24	—	32	V	$I_C = 1\text{ mA}$, $I_E = 0$
Collector to emitter sustain voltage	$V_{CEO(sus)}$	25	—	33	V	$I_C = 1\text{ A}$, $L = 20\text{ mH}$, $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	7	—	—	V	$I_E = 5\text{ mA}$, $I_C = 0$
Collector cutoff current	I_{CBO}	—	—	1	μA	$V_{CB} = 20\text{ V}$, $I_E = 0$
	I_{CEO}	—	—	5	μA	$V_{CE} = 20\text{ V}$, $R_{BE} = \infty$
DC current transfer ratio	h_{FE}	7000	—	30000		$V_{CE} = 2\text{ V}$, $I_C = 0.5\text{ A}^{*1}$
	h_{FE}	2000	—	—	—	$V_{CE} = 2\text{ V}$, $I_C = 2\text{ A}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.5	V	$I_C = 2\text{ A}$, $I_B = 2\text{ mA}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	2.0	V	$I_C = 2\text{ A}$, $I_B = 2\text{ mA}^{*1}$
C to E diode forward voltage	V_D	—	—	2.0	V	$I_D = 2\text{ A}^{*1}$

Note: 1. Pulse test.







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

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