2SC2324(K)

Silicon NPN Epitaxial

HITACHI

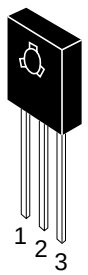
ADE-208-883 (Z)
1st. Edition
Sep. 2000

Application

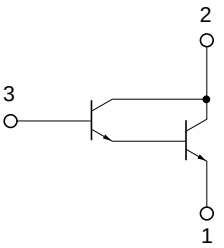
Low frequency power amplifier

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}	60	V
Collector to emitter voltage	V_{CEO}	60	V
Emitter to base voltage	V_{EBO}	7	V
Collector current	I_C	1	A
Collector peak current	$I_{C(peak)}$	2	A
Collector power dissipation	P_C	0.8	W
	P_C*[1]	8	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

Note: 1. Value at T_C = 25°C.

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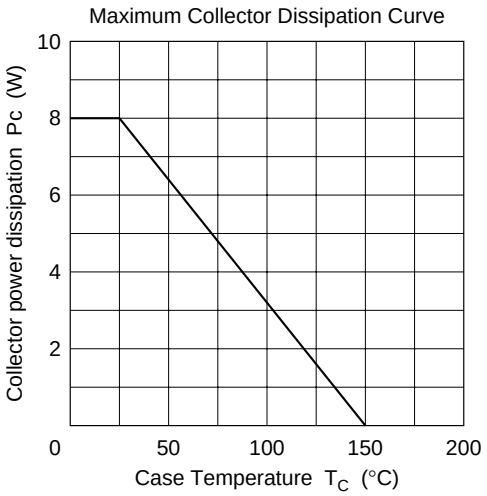
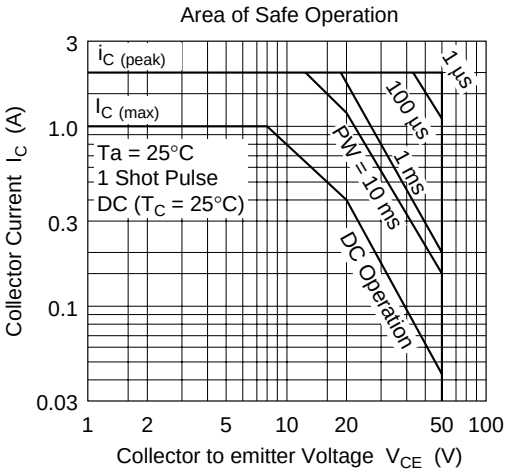
Electrical Characteristics (Ta = 25°C)

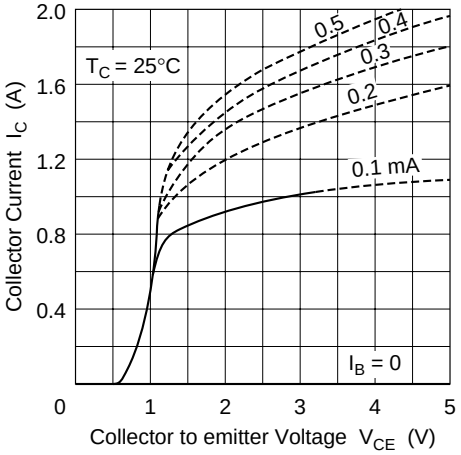
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	60	—	—	V	I_C = 1 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	7	—	—	V	I_E = 0.1 mA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	10	µA	V_{CB} = 60 V, I_E = 0
DC current transfer ratio	h_{FE}	2000	—	—		V_{CE} = 10 V, I_C = 500 mA*[1]
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.5	V	I_C = 500 mA, I_B = 0.5 mA*[1]
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	2.0	V	
Turn on time	t_{on}	—	100	—	ns	V_{CC} = 12 V
Turn off time	t_{off}	—	600	—	ns	I_C = 250 mA, I_{B1} = $-I_{B2}$ = 5 mA

Note: 1. Pulse test.

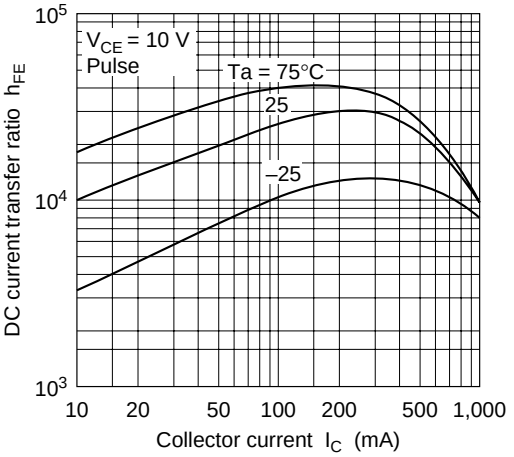




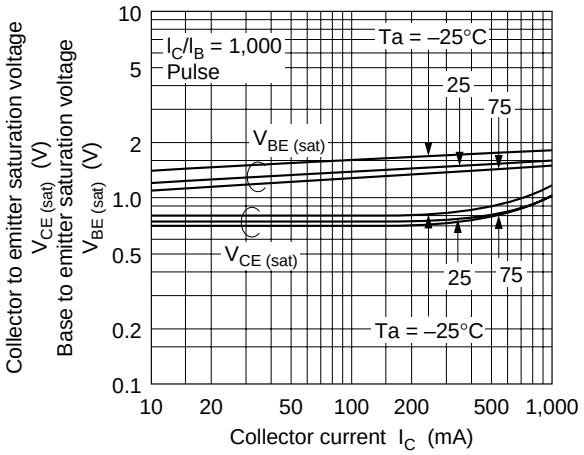
Typical Output Characteristics



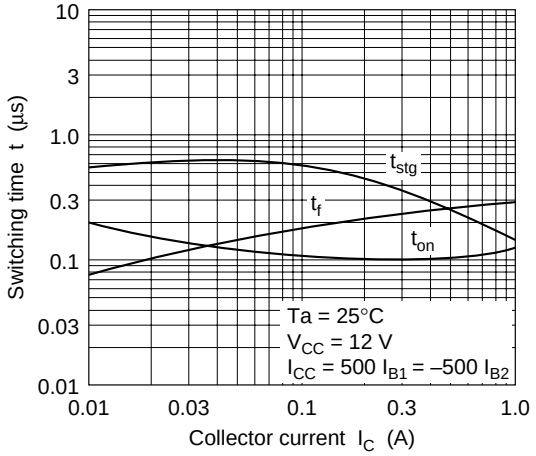
DC Current Transfer Ratio vs. Collector Current

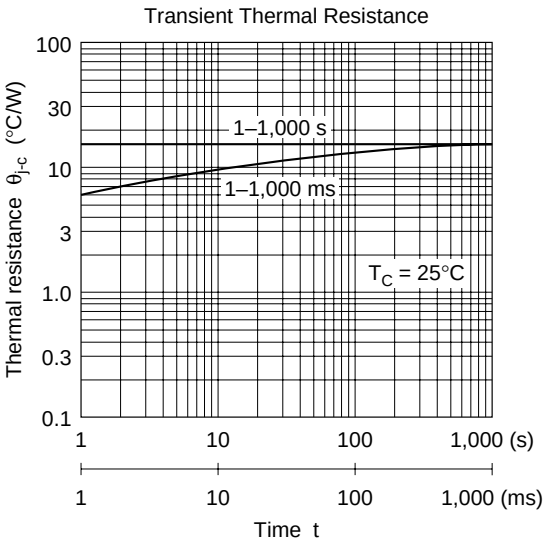


Saturation Voltage vs. Collector Current



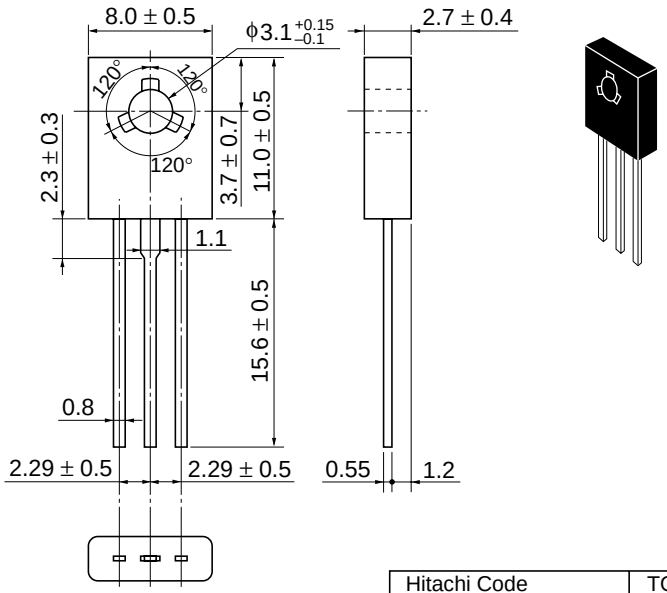
Switching Time vs. Collector Current




Transient Thermal Resistance
100
30
10
3
1.0
0.3
0.1
Thermal resistance θj-c (°C/W)
1–1,000 s
1–1,000 ms
TC = 25°C
1
10
100
1,000 (s)
1
10
100
1,000 (ms)
Time t

Package Dimensions

Unit: mm



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

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