2SA1194(K)

Silicon PNP Epitaxial

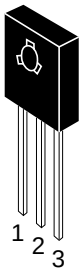
HITACHI

Application

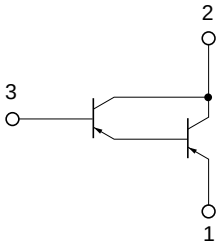
High gain amplifier

Outline

TO-126 MOD



1. Emitter
2. Collector
3. Base



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rating	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	1	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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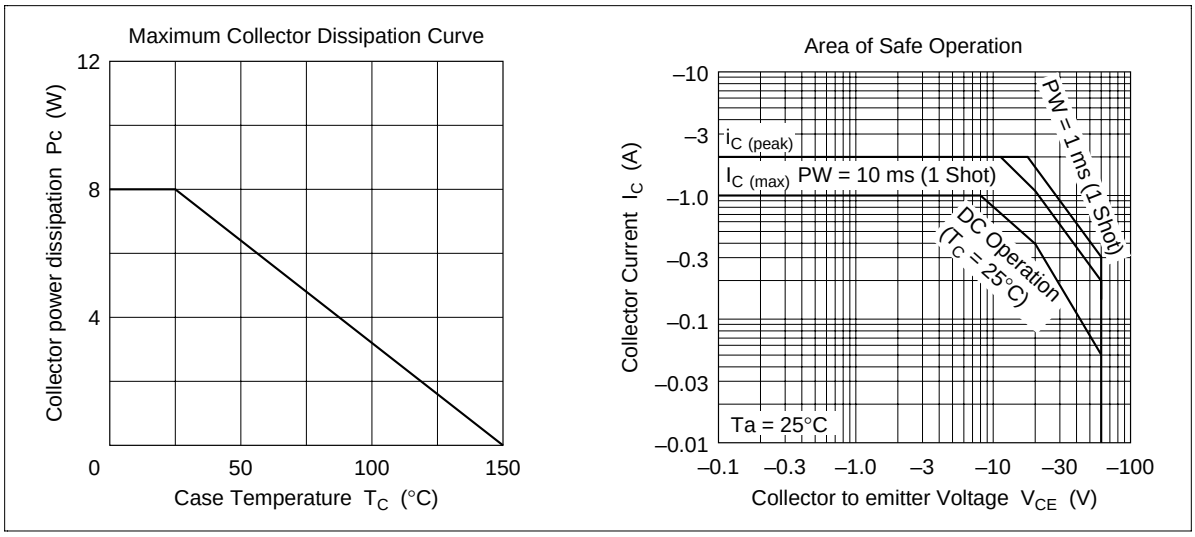
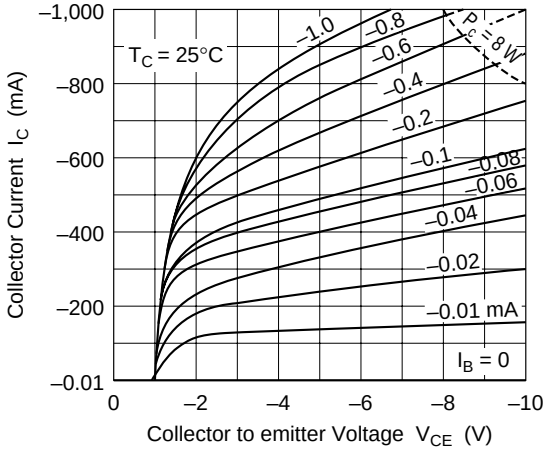
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	–60	—	—	V	I_C = –1 mA, R_{BE} =
Collector cutoff current	I_{CBO}	—	—	–1.0	µA	V_{CB} = –60 V, I_E = 0
Emitter cutoff current	I_{EBO}	—	—	–1.0	µA	V_{EB} = –7 V, I_C = 0
DC current transfer ratio	h_{FE}	1000	—	—		V_{CE} = –3 V, I_C = –500 mA*[1]
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	–2.0	V	I_C = –500 mA, I_B = –1 mA*[1]
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	–2.0	V	
Turn on time	t_{on}	—	0.7	—	µs	I_C = –500 mA
Turn off time	t_{off}	—	0.8	—	µs	I_{B1} = $-I_{B2}$ = –1 mA

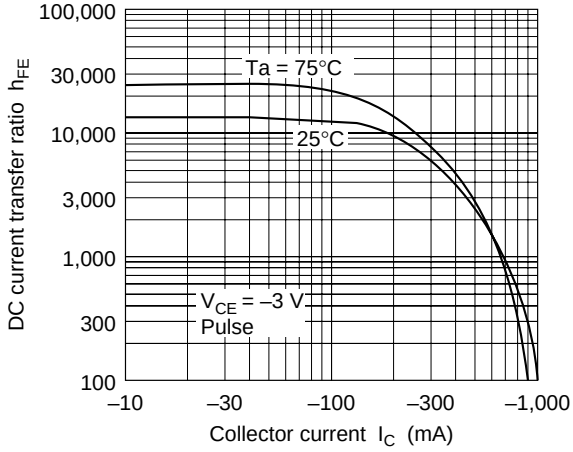
Note: 1. Pulse test



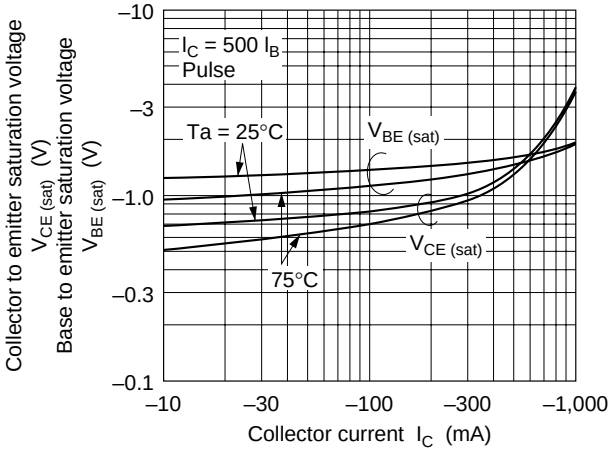
Typical Output Characteristics



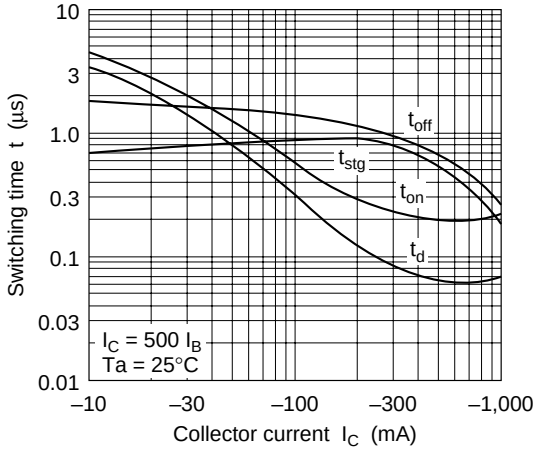
DC Current Transfer Ratio vs. Collector Current



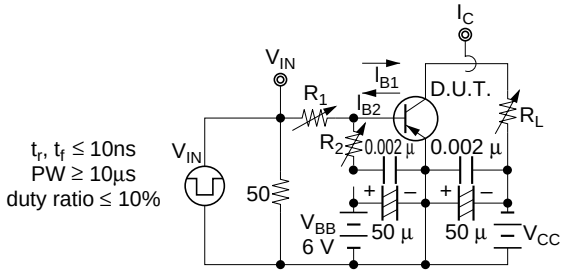
Saturation Voltage vs. Collector Current



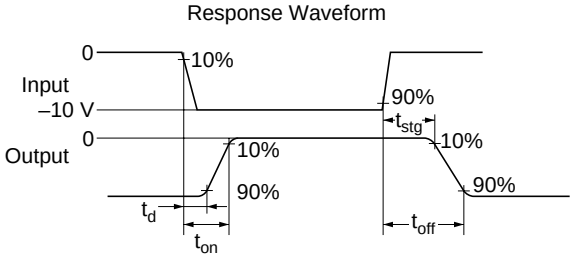
Switching Time vs. Collector Current



Switching Time Test Circuit



Response Waveform



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