
2SA1810

Silicon PNP Epitaxial

HITACHI

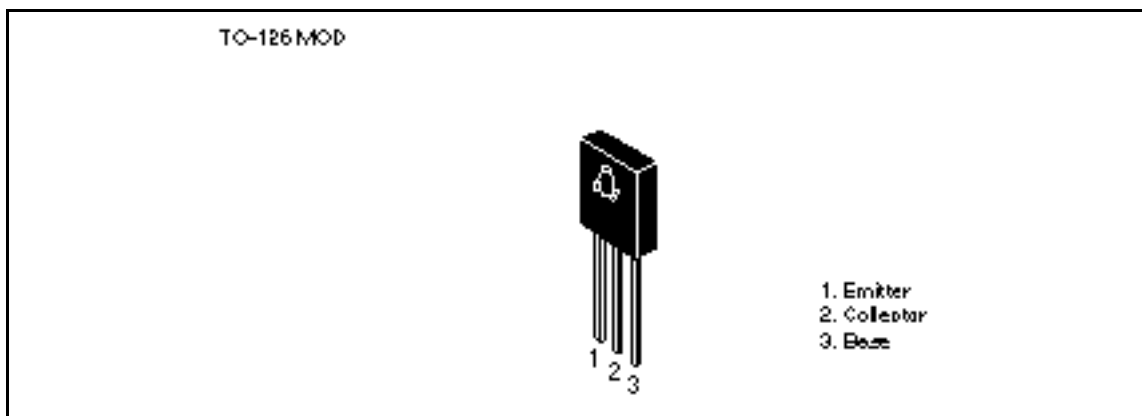
Application

High frequency amplifier

Features

- Excellent high frequency characteristics
 $f_T = 300$ MHz typ
- High voltage and low output capacitance
 $V_{CEO} = -200$ V, $C_{ob} = 5.0$ pF typ
- Suitable for wide band video amplifier

Outline



2SA1810

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-200	V
Collector to emitter voltage	V_{CEO}	-200	V
Emitter to base voltage	V_{EBO}	-5	V
Collector current	I_C	-0.2	A
Collector peak current	$I_{C(\text{peak})}$	-0.5	A
Collector power dissipation	P_C	1.25	W
	P_C^{*1}	10	
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

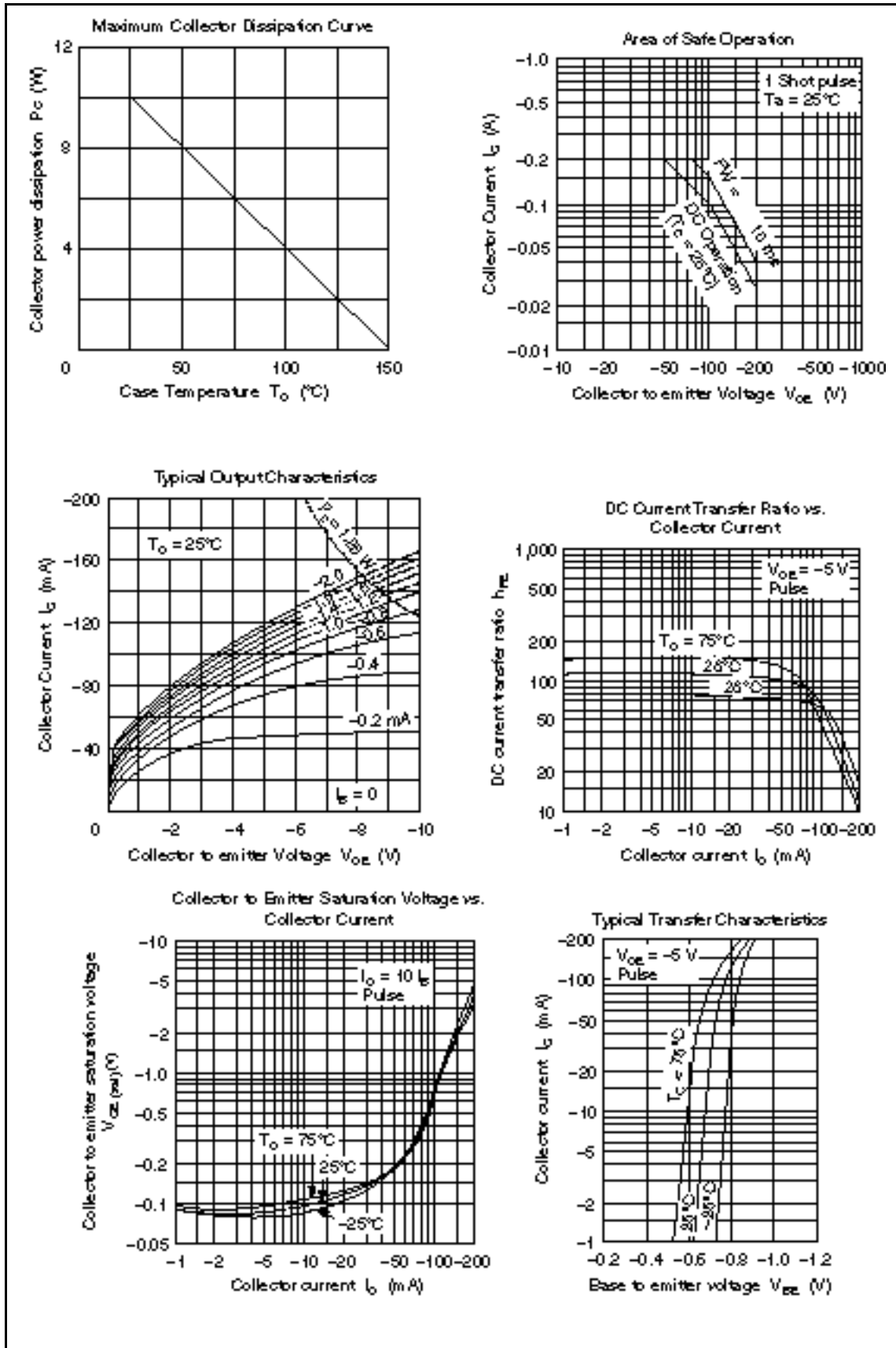
Note: 1. Value at $T_C = 25^\circ\text{C}$.

Electrical Characteristics (Ta = 25°C)

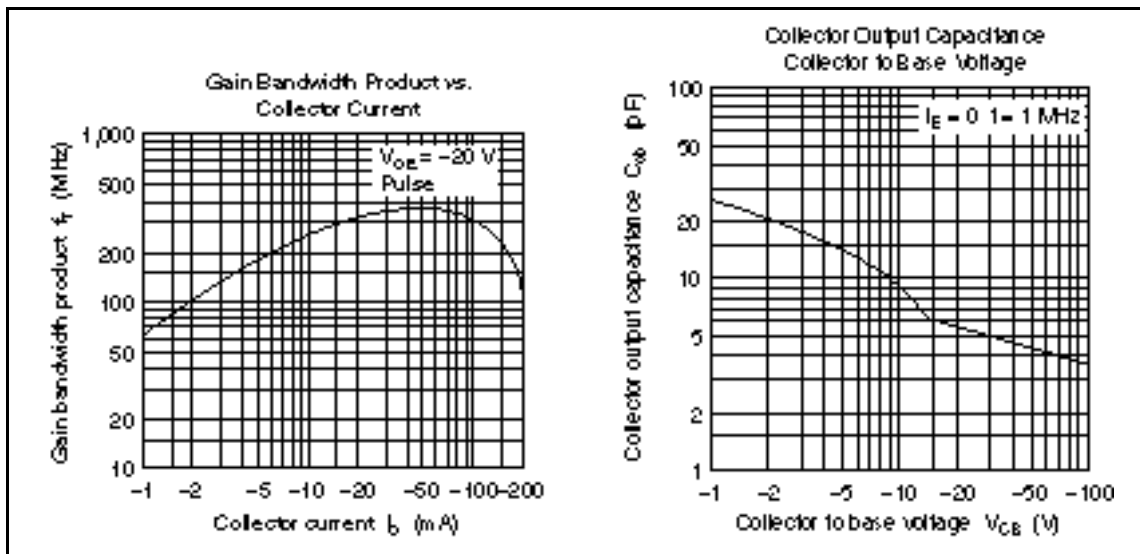
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-200	—	—	V	$I_C = -10 \mu\text{A}$, $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-200	—	—	V	$I_C = -1 \text{ mA}$, $R_{BE} =$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-5	—	—	V	$I_E = -10 \mu\text{A}$, $I_C = 0$
Collector cutoff current	I_{CBO}	—	—	-10	μA	$V_{CB} = -160 \text{ V}$, $I_E = 0$
DC current transfer ratio	h_{FE}^{*1}	60	—	200		$V_{CE} = -5 \text{ V}$, $I_C = -10 \text{ mA}$
Base to emitter voltage	V_{BE}	—	—	-1.0	V	$V_{CE} = -5 \text{ V}$, $I_C = -30 \text{ mA}$
Collector to emitter saturation voltage	$V_{CE(\text{sat})}$	—	—	-1.0	V	$I_C = -30 \text{ mA}$, $I_B = -3 \text{ mA}$
Gain bandwidth product	f_T	200	300	—	MHz	$V_{CE} = -20 \text{ V}$, $I_C = -30 \text{ mA}$
Collector output capacitance	Cob	—	5.0	—	pF	$V_{CB} = -30 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$

Note: 1. The 2SA1810 is grouped by h_{FE} as follows.

B	C
60 to 120	100 to 200



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