
2SC5120

Silicon NPN Epitaxial

HITACHI

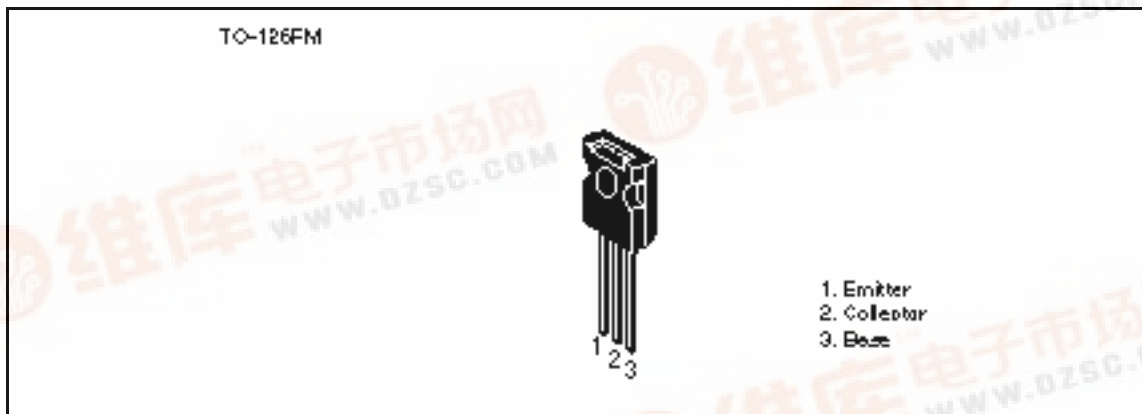
Application

High frequency amplifier

Features

- Excellent high frequency characteristics
 $f_T = 500$ MHz typ
- High voltage and low output capacitance
 $V_{CEO} = 150$ V, $C_{ob} = 5.0$ pF typ
- Suitable for wide band video amplifier
- Complementary pair with 2SA1958

Outline



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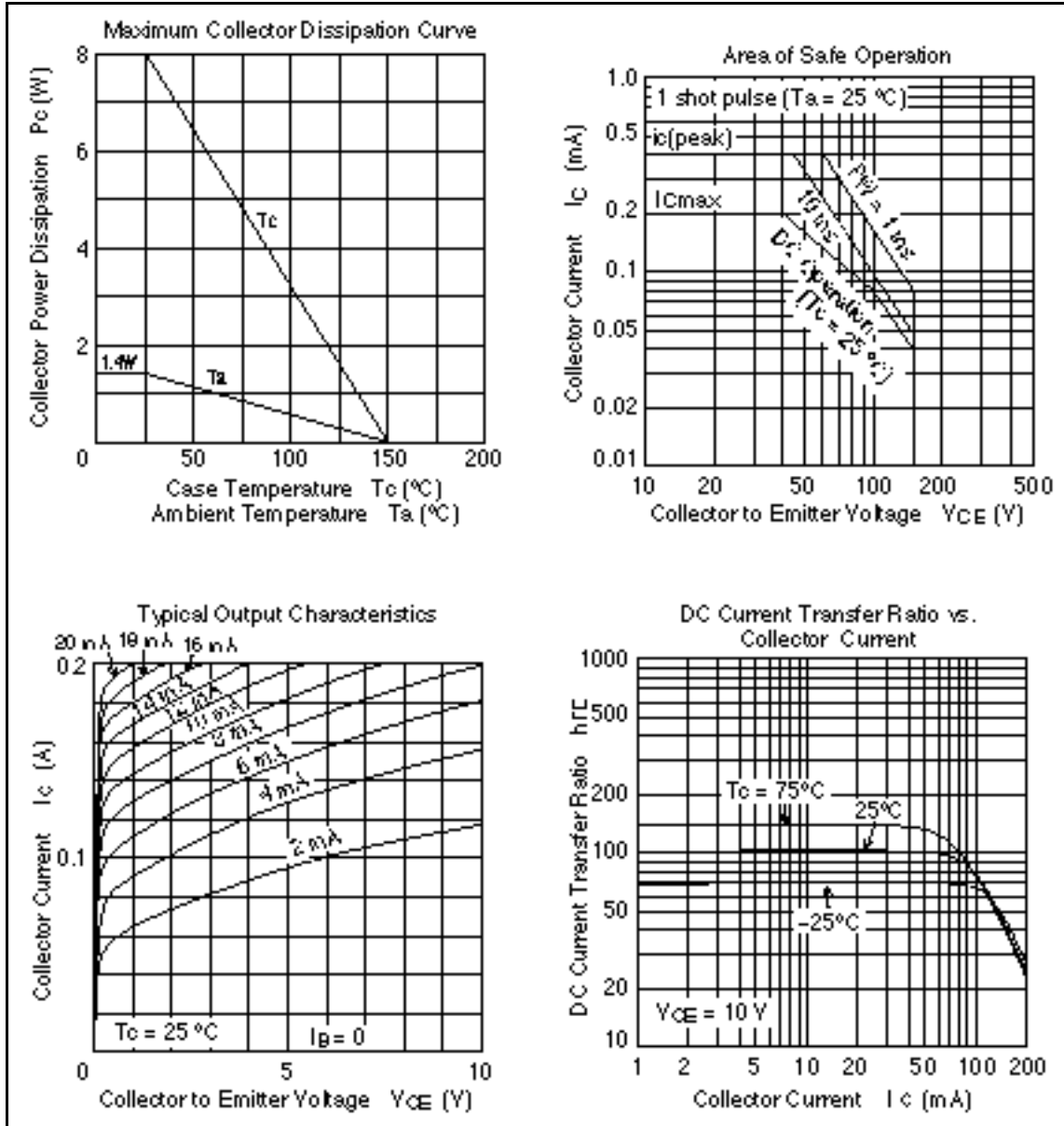
Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	150	V
Collector to emitter voltage	V_{CEO}	150	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	0.2	A
Collector peak current	$I_{C(peak)}$	0.4	A
Collector power dissipation	P_C	1.4 <hr/> 8*1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

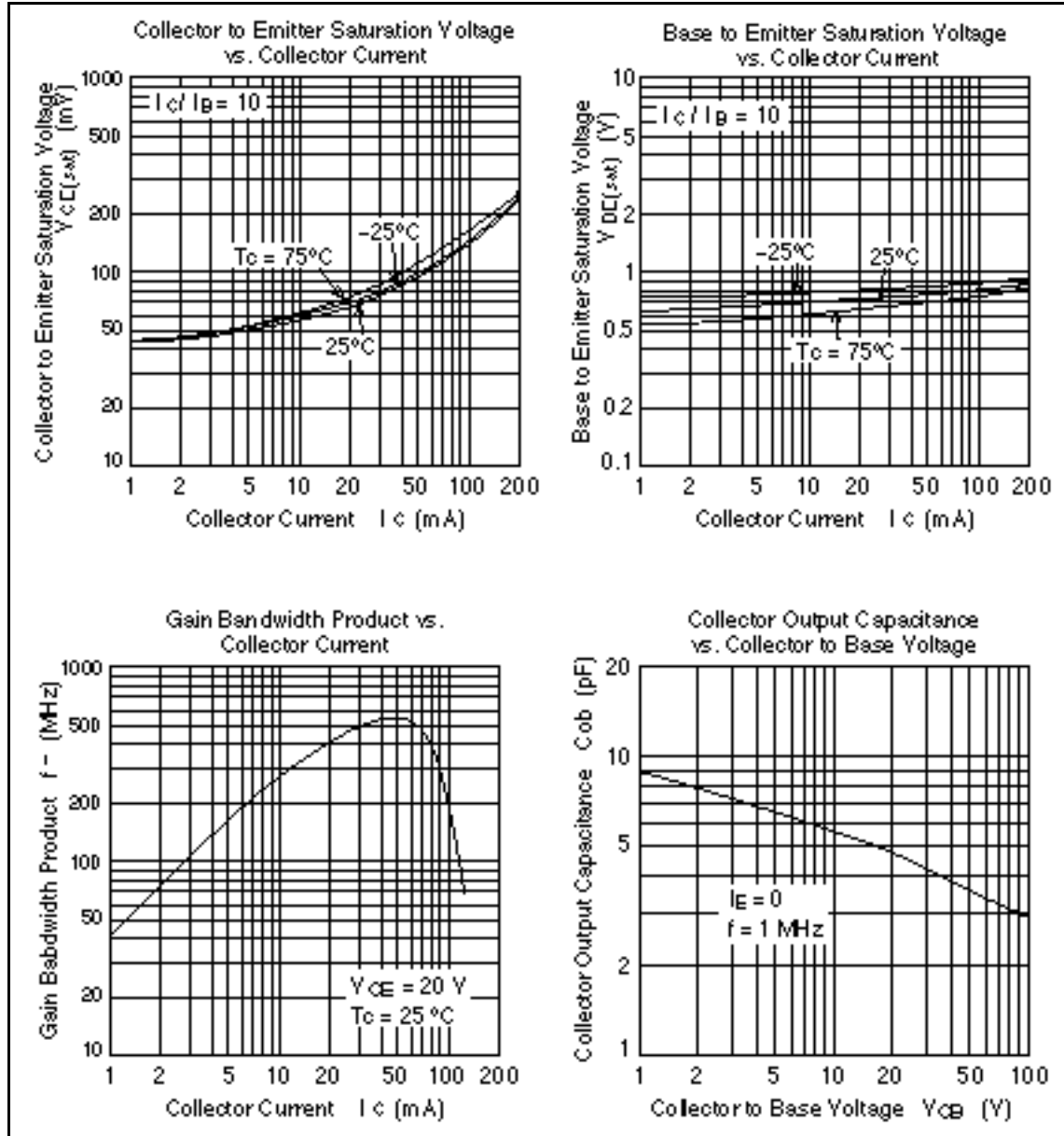
Note: 1. $T_C = 25^\circ\text{C}$

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	150	—	—	V	$I_C = 10 \mu\text{A}$, $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	150	—	—	V	$I_C = 1 \text{ mA}$, $R_{BE} =$
Collector cutoff current	I_{CBO}	—	—	10	μA	$V_{CB} = 100 \text{ V}$, $I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	10	μA	$V_{EB} = 3 \text{ V}$, $I_C = 0$
DC current transfer ratio	h_{FE}	50	—	150	—	$V_{CE} = 10 \text{ V}$, $I_C = 10 \text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.0	V	$I_C = 50 \text{ mA}$, $I_B = 5 \text{ mA}$
Gain bandwidth product	f_T	400	500	—	MHz	$V_{CE} = 20 \text{ V}$, $I_C = 50 \text{ mA}$
Collector output capacitance	C_{ob}	—	5.0	6.0	pF	$V_{CB} = 30 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$



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