
2SC5024

Silicon NPN Epitaxial

HITACHI

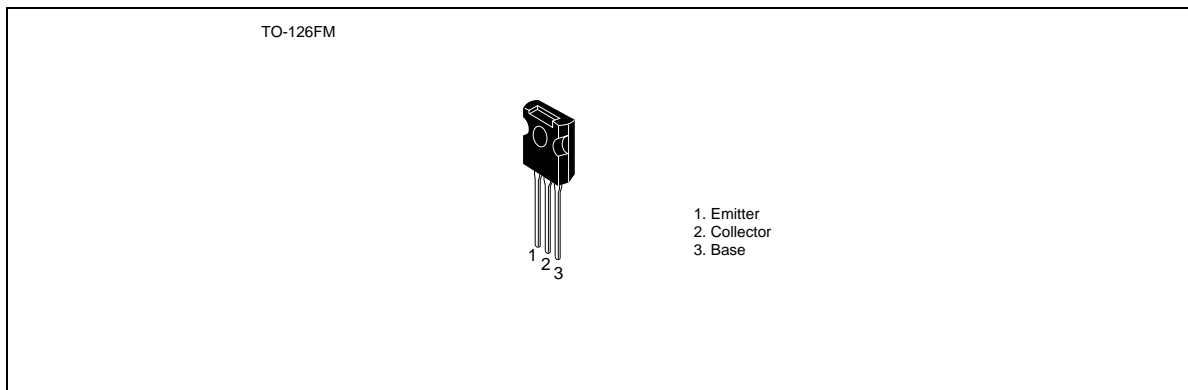
Application

High frequency amplifier

Features

- Excellent high frequency characteristics $f_T = 300$ MHz typ
- High breakdown voltage and low output capacitance $V_{CE0} = 200$ V, $C_{ob} = 5.0$ pF typ
- Suitable for wide band video amplifier
- Complimentary pair of 2SA1889

Outline



2SC5024

Absolute Maximum Ratings (Ta = 25°C)

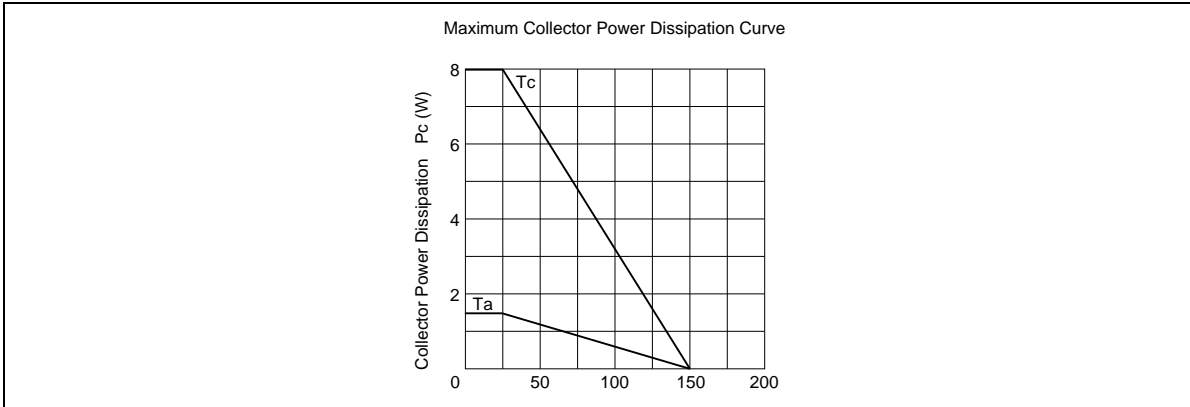
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	200	V
Collector to emitter voltage	V_{CEO}	200	V
Emitter to base voltage	V_{EBO}	4	V
Collector current	I_C	0.2	A
Collector peak current	$I_{C(peak)}$	0.5	A
Collector power dissipation	P_C	1.4	W
	P_C^{*1}	8	
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-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	$I_C = 1 \text{ mA}$, $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	4	—	—	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	2SC5024B h_{FE}	60	—	120		$V_{CE} = 5 \text{ V}$, $I_C = 10 \text{ mA}$
	2SC5024C h_{FE}	100	—	200		
Base to emitter voltage	V_{BE}	—	—	1.0	V	$V_{CE} = 5 \text{ V}$, $I_C = 30 \text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	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	C_{ob}	—	5.0	—	pF	$V_{CB} = 30 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$

See characteristic curves of 2SC4704.



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