

2SC5024

Silicon NPN Epitaxial

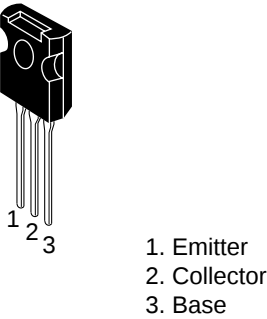
Application

High frequency amplifier

Features

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

TO-126FM



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rating	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
Collector power dissipation	P_C^{*1}	8	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

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

2SC5024**Electrical Characteristics** ($T_a = 25^\circ\text{C}$)

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.

