

2SC4708

Silicon NPN Epitaxial
High Resolution Monitor Video Output

Feature

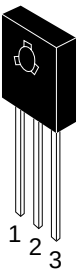
- Excellent high frequency characteristics
 $f_T = 1.1 \text{ GHz typ}$
 $C_{ob} = 4.2 \text{ pF typ}$
- High gain bandwidth product
- Low collector output capacitance
- High breakdown voltage
 $V_{CEO} = 100 \text{ V}$

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	100	V
Collector to emitter voltage	V_{CEO}	100	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	0.2	A
Collector peak current	$i_{C(\text{peak})}$	0.5	A
Collector power dissipation	P_C	1	W
	P_C^{*1}	5	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

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

TO-126 MOD



- 1. Emitter
- 2. Collector
- 3. Base

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test condition
Collector to base breakdown voltage	$V_{(BR)CBO}$	100	—	—	V	$I_C = 10 \mu\text{A}, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	100	—	—	V	$I_C = 1 \text{ mA}, R_{BE} = \infty$
Collector cutoff current	I_{CBO}	—	—	1.0	μA	$V_{CB} = 80 \text{ V}, I_E = 0$
Emitter cutoff Current	I_{EBO}	—	—	10	μA	$V_{EB} = 3 \text{ V}, I_C = 0$
DC current transfer ratio	h_{FE}^{*1}	60	—	200		$V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}$

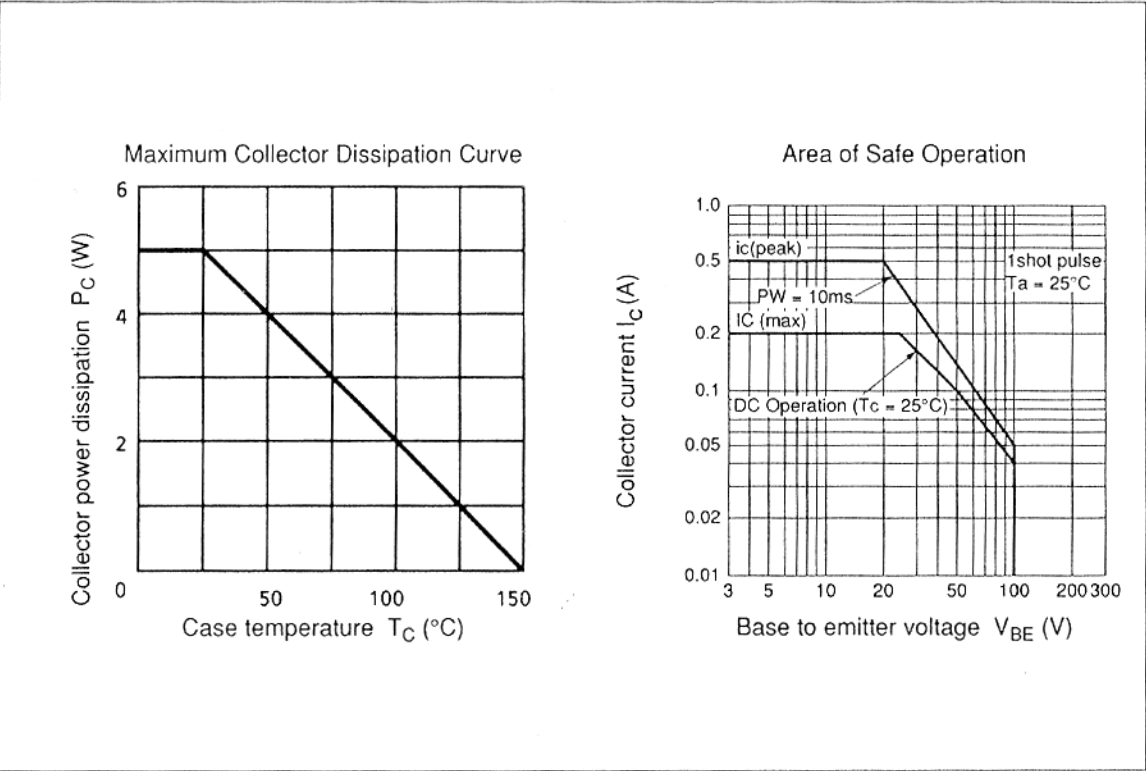
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Electrical Characteristics (Ta = 25°C) (cont)

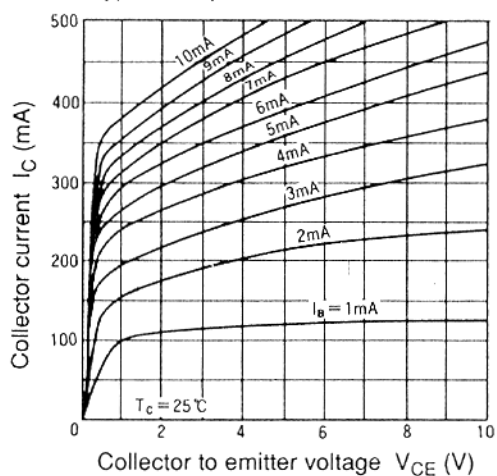
Item	Symbol	Min	Typ	Max	Unit	Test condition
Base to emitter voltage	V_{BE}	—	—	1.0	V	$V_{CE} = 10\text{ V}, I_C = 10\text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.0	V	$I_C = 100\text{ mA}, I_B = 10\text{ mA}$
Gain bandwidth product	f_T	800	1100	—	MHz	$V_{CE} = 10\text{ V}, I_C = 100\text{ mA}$
Collector output capacitance	C_{ob}	—	4.2	6.0	pF	$V_{CB} = 30\text{ V}, I_E = 0, f = 1\text{ MHz}$

Note: 1. The 2SC4708 is grouped by h_{FE} , and its specification is as follows.

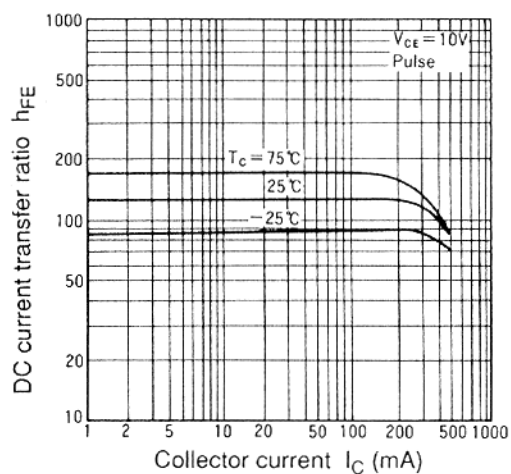
B	C
60 to 120	100 to 200



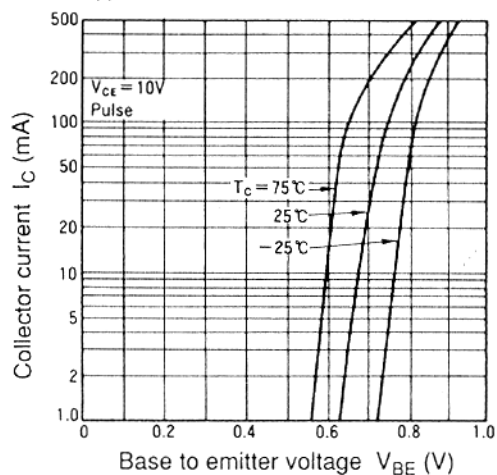
Typical Output Characteristics



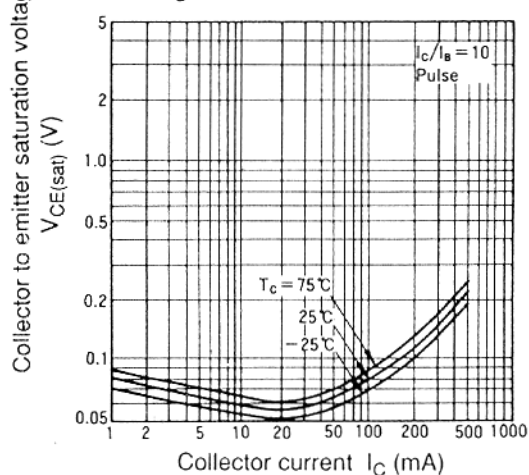
DC Current Transfer Ratio vs. Collector Current



Typical Transfer Characteristics



Collector to Emitter Saturation Voltage vs. Collector Current



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