
2SC5225

Silicon NPN Epitaxial Transistor

HITACHI

ADE-208-393
1st. Edition

Application

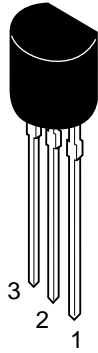
- Wide band video output amplifier for color CRT monitor.
- High frequency high voltage amplifier.
- High speed power switching.
- Complementary pair with 2SA1960.

Features

- High voltage large current operation.
 $V_{CEO} = 80 \text{ V}$, $I_C = 300 \text{ mA}$
- High f_T .
 $f_T = 1.4 \text{ GHz}$
- Small output capacitance.
 $C_{ob} = 3 \text{ pF}$

Outline

TO-92 (1)



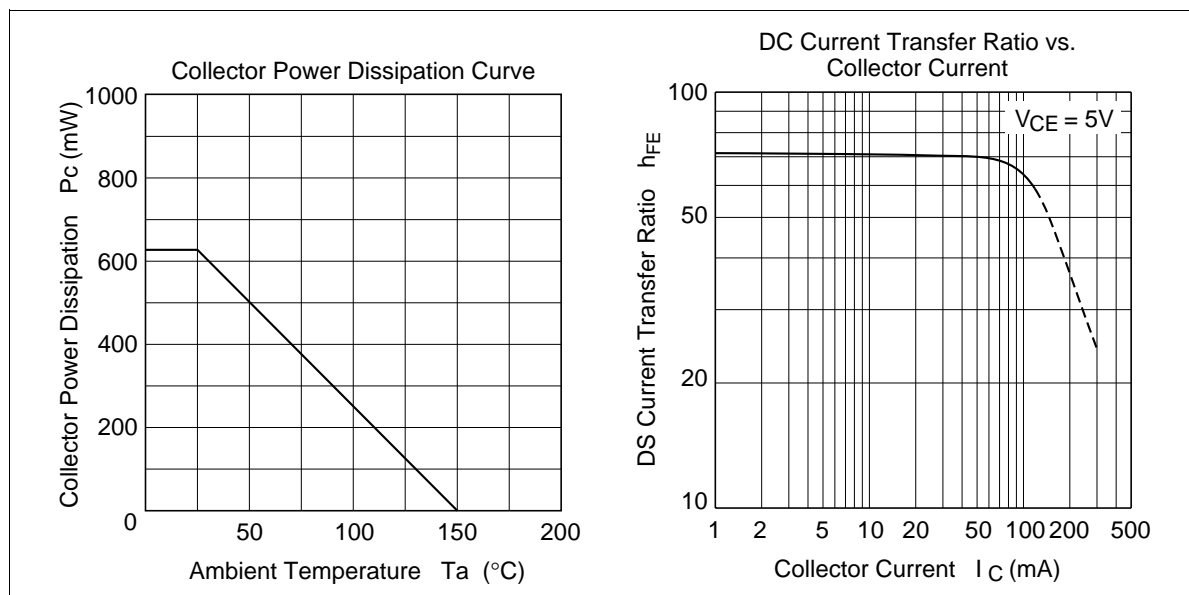
- 1. Emitter
- 2. Collector
- 3. Base

Absolute Maximum Ratings ($T_a = 25^{\circ}\text{C}$)

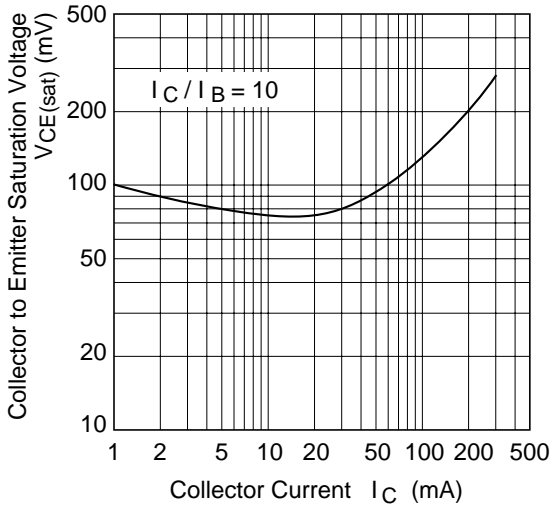
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	100	V
Collector to emitter voltage	V_{CEO}	80	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_{C}	300	mA
Collector power dissipation	P_{C}	625	mW
Junction temperature	T_{j}	150	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics (Ta = 25°C)

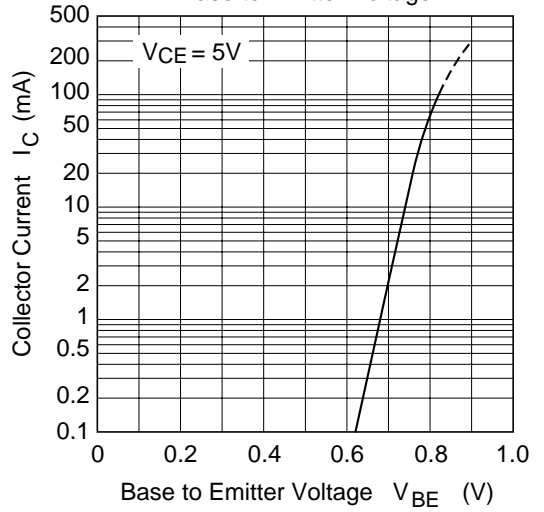
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	100	—	—	V	$I_C = 100 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	80	—	—	V	$I_C = 1 \text{ mA}, R_{BE} = \infty$
Collector to base cutoff current	I_{CBO}	—	—	1	μA	$V_{CB} = 80 \text{ V}, I_E = 0$
Emitter to base cutoff current	I_{EBO}	—	—	10	μA	$V_{EB} = 3 \text{ V}, I_C = 0$
DC current transfer ratio	h_{FE}	20	70	—		$V_{CE} = 5 \text{ V}, I_C = 50 \text{ mA}$ Pulse test
Gain bandwidth product	f_T	1.2	1.4	—	GHz	$V_{CE} = 10 \text{ V}, I_C = 50 \text{ mA}$
Emitter input capacitance	C_{ib}	—	13	19	pF	$V_{EB} = 0, I_C = 0, f = 1 \text{ MHz}$
Collector output capacitance	C_{ob}	—	3	4	pF	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$



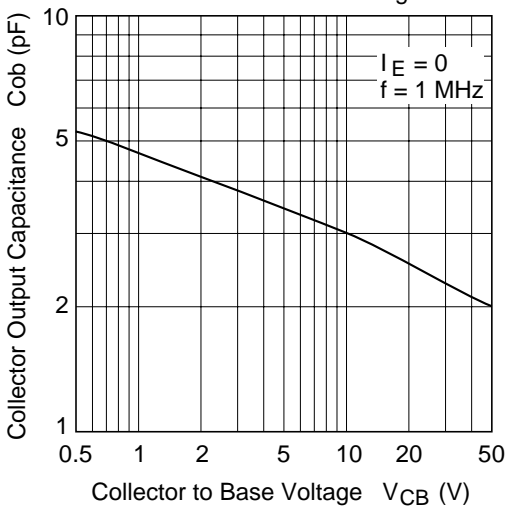
Collector to Emitter Saturation Voltage vs. Collector Current



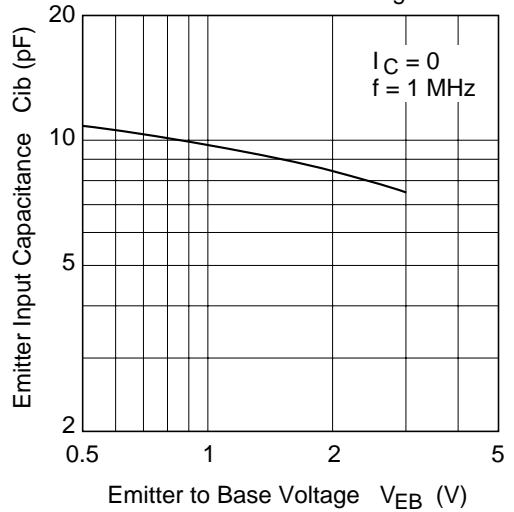
Collector Current vs. Base to Emitter Voltage

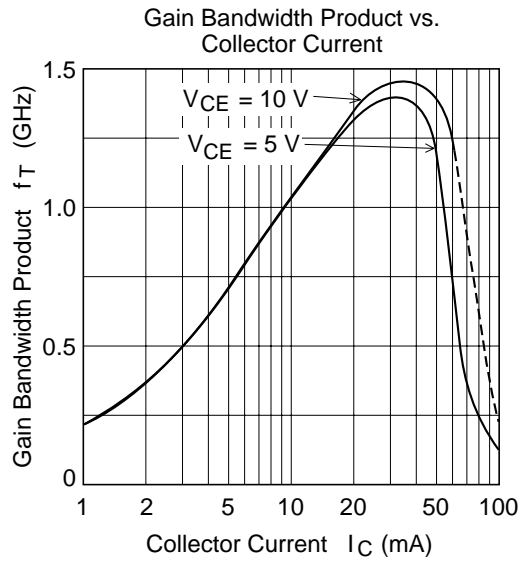


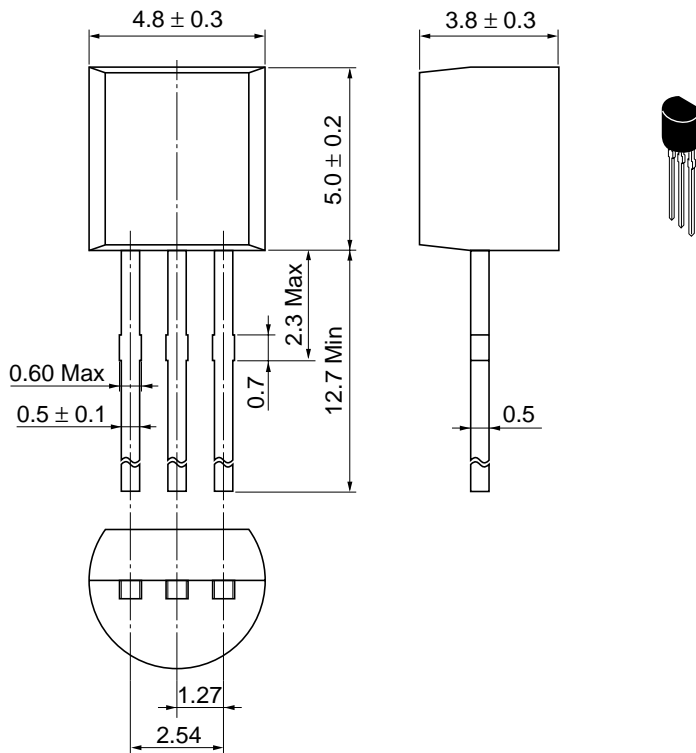
Collector Output Capacitance vs. Collector to Base Voltage



Emitter Input Capacitance vs. Emitter to Base Voltage







Hitachi Code	TO-92 (1)
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	0.25 g

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