2SC5225

Silicon NPN Epitaxial Transistor

HITACHI

ADE-208-393A (Z)
2nd. Edition
Mar. 2001

Application

- Wide band video output amplifier for color CRT monitor.
- High frequency high voltage amplifier.
- High speed power switching.

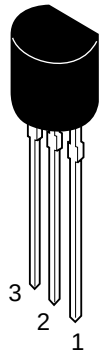
Features

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

Hitachi semiconductor

Outline

TO-92 (1)



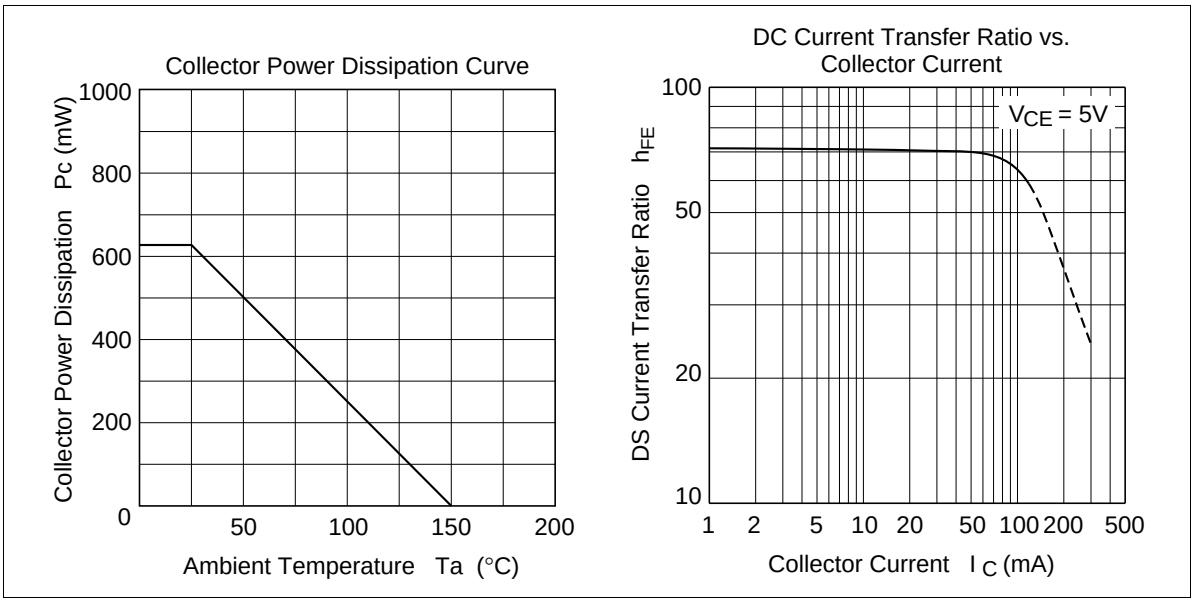
1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings (Ta = 25°C)

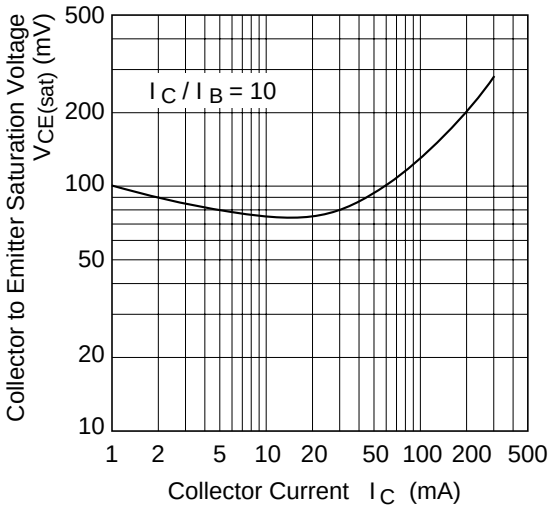
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	100	V
Collector to emitter voltage	V_{CEO}	80	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	300	mA
Collector power dissipation	P_C	625	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

Electrical Characteristics (Ta = 25°C)

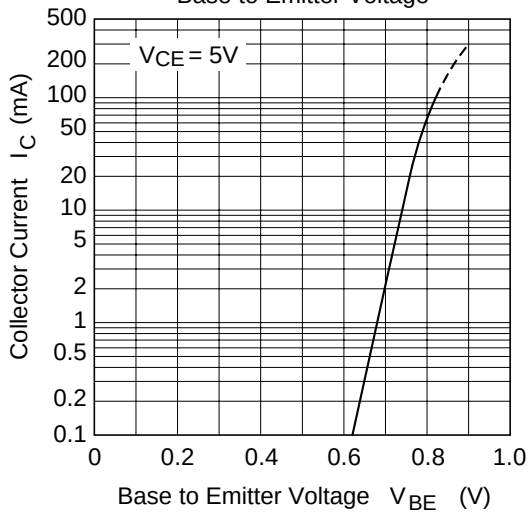
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	100	—	—	V	I_C = 100 µA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	80	—	—	V	I_C = 1 mA, R_{BE} = ∞
Collector to base cutoff current	I_{CBO}	—	—	1	µA	V_{CB} = 80 V, I_E = 0
Emitter to base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



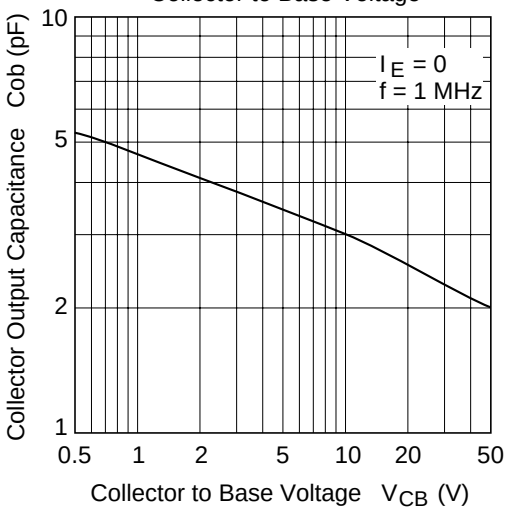
Collector to Emitter Saturation Voltage vs. Collector Current



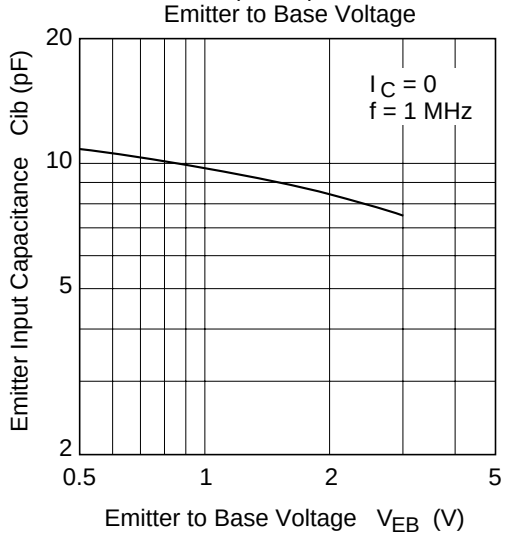
Collector Current vs. Base to Emitter Voltage



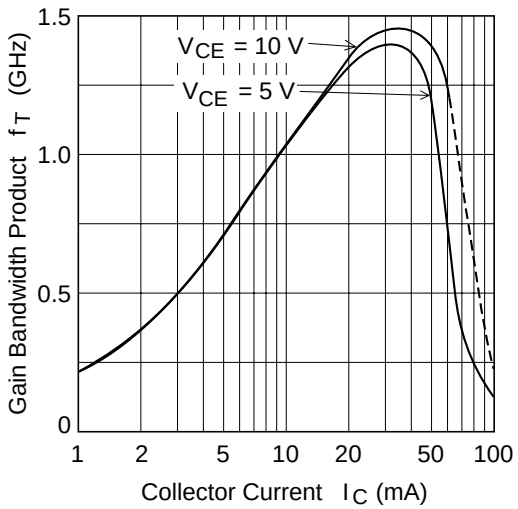
Collector Output Capacitance vs. Collector to Base Voltage



Emitter Input Capacitance vs. Emitter to Base Voltage

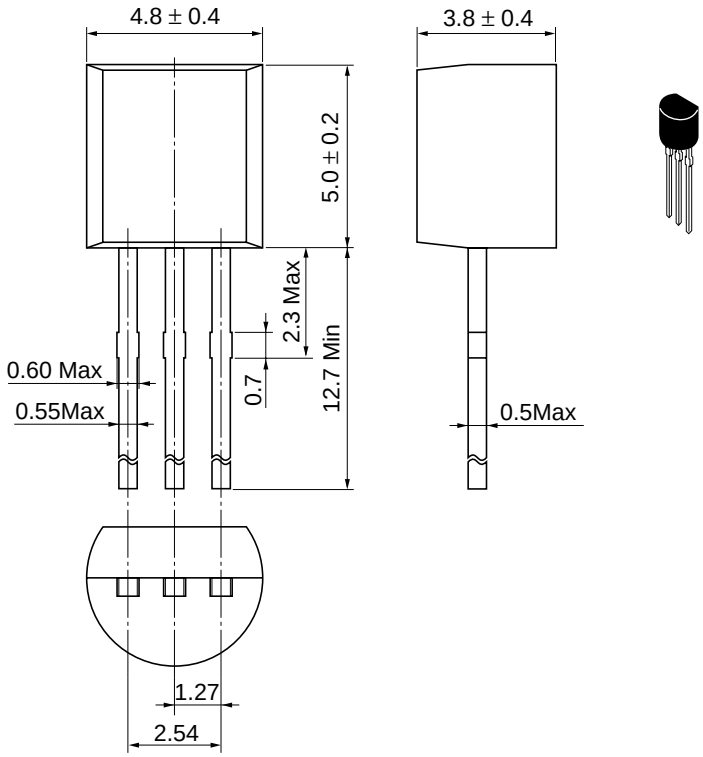


Gain Bandwidth Product vs.
Collector Current



Package Dimensions

As of January, 2001
Unit: mm



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

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