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# 2SC5225

Silicon NPN Epitaxial Transistor

## HITACHI

ADE-208-393

1st. Edition

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### Application

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

### Features

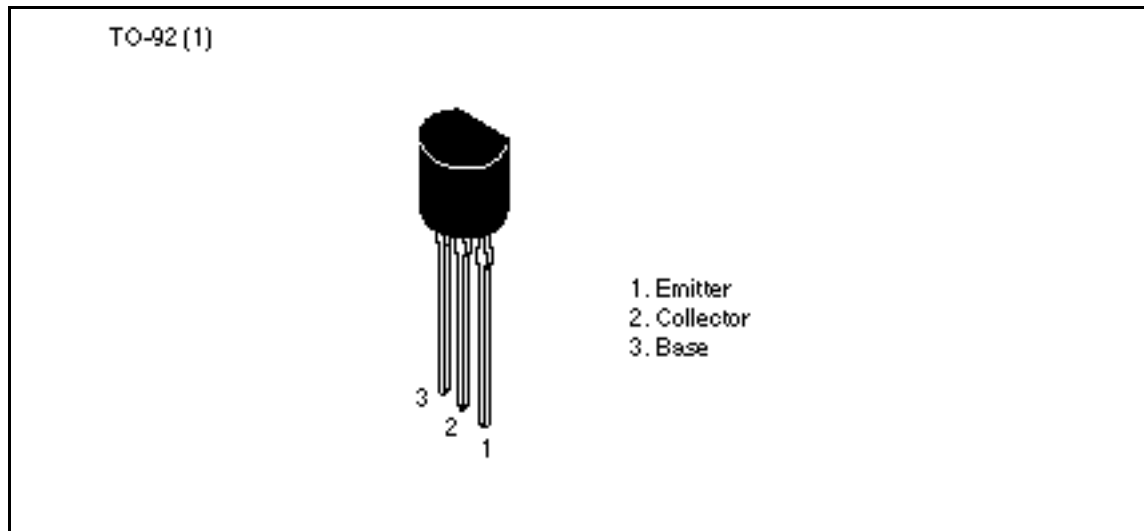
- High voltage large current operation.  
 $V_{CEO} = 80\text{ V}$ ,  $I_C = 300\text{ mA}$
- High  $f_T$ .  
 $f_T = 1.4\text{ GHz}$
- Small output capacitance.  
 $C_{ob} = 3\text{ pF}$

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### Outline

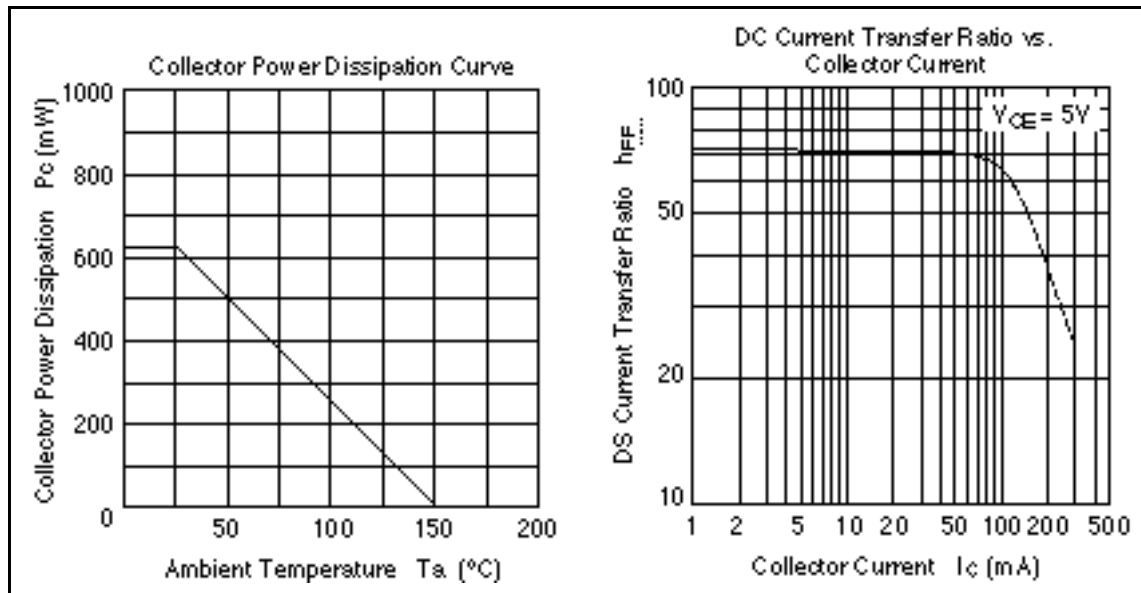


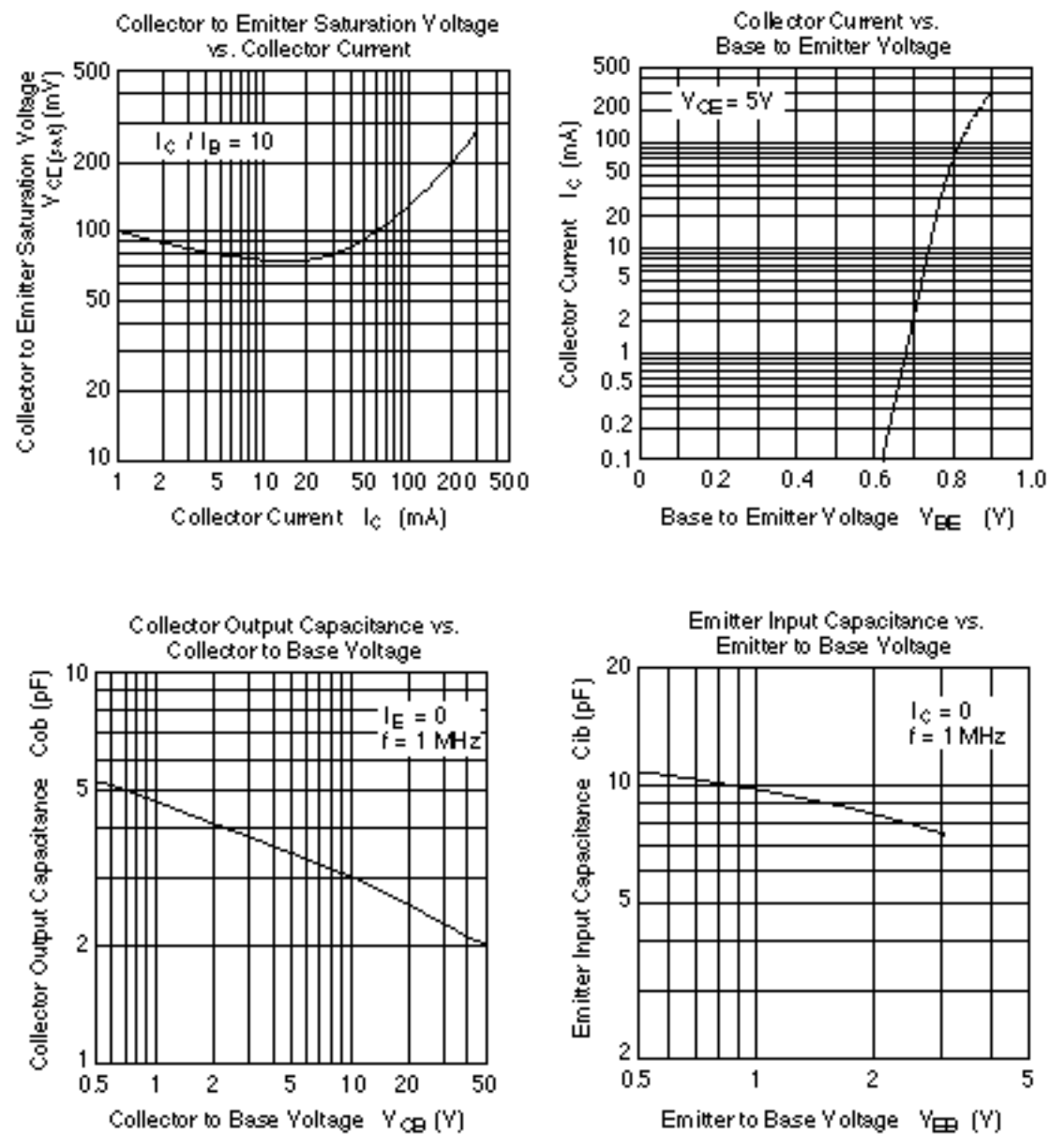
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

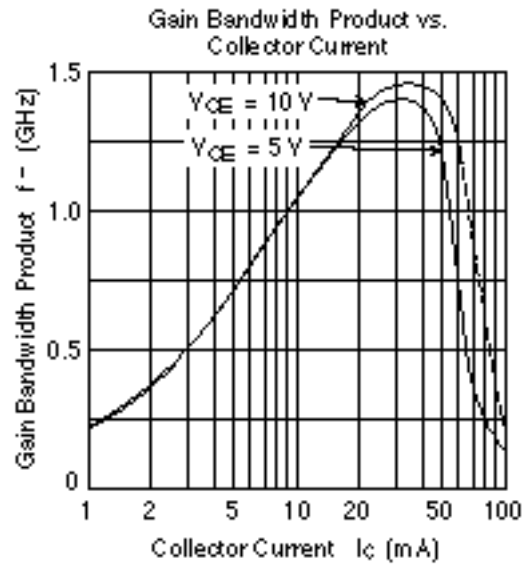
Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{\text{CBO}}$	100	V
Collector to emitter voltage	$V_{\text{CEO}}$	80	V
Emitter to base voltage	$V_{\text{EBO}}$	3	V
Collector current	$I_{\text{C}}$	300	mA
Collector power dissipation	$P_{\text{C}}$	625	mW
Junction temperature	$T_{\text{j}}$	150	$^\circ\text{C}$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

### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

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







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