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# 2SC4693

Silicon NPN Epitaxial Planar

# HITACHI

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## Application

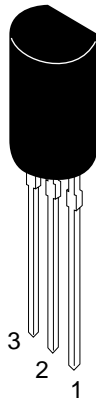
VHF Wide band amplifier

## Features

- High gain bandwidth product  
 $f_T = 2.5 \text{ GHz Typ.}$
- Large collector power dissipation  
 $P_C = 900 \text{ mW}$

## Outline

TO-92MOD



1. Emitter
2. Collector
3. Base

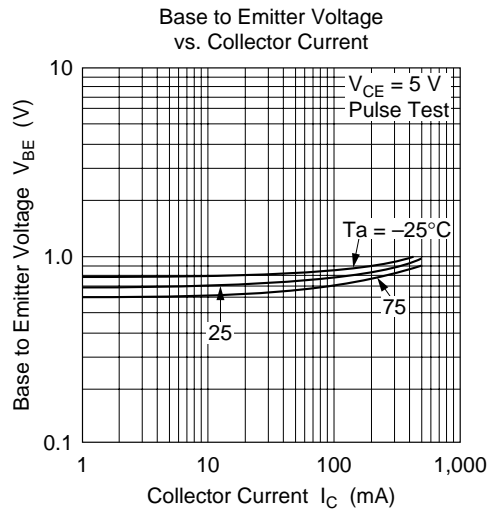
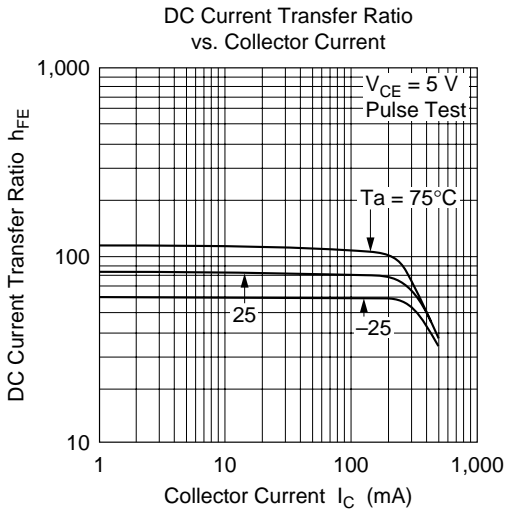
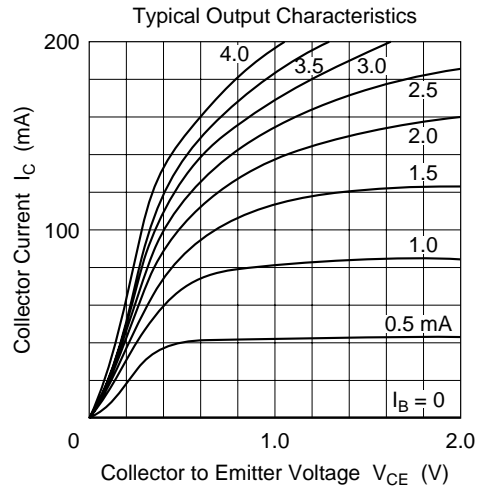
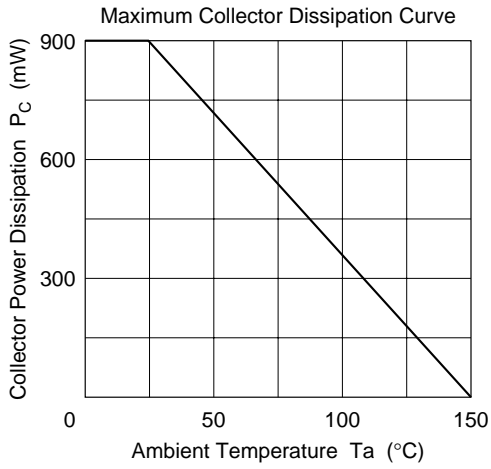
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### Absolute Maximum Ratings (Ta = 25°C)

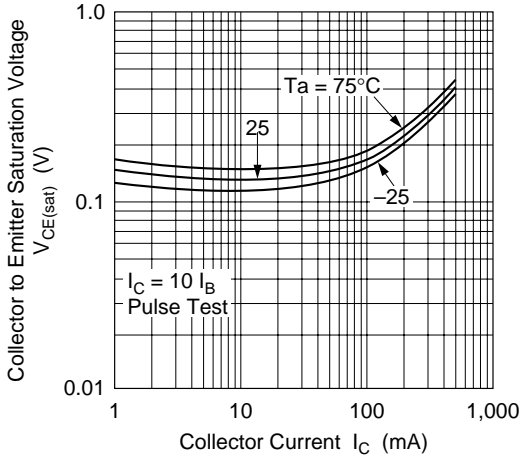
Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	30	V
Collector to emitter voltage	$V_{CEO}$	20	V
Emitter to base voltage	$V_{EBO}$	3	V
Collector current	$I_C$	300	mA
Collector peak current	$i_{C(\text{peak})}$	500	mA
Collector power dissipation	$P_C$	900	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{\text{stg}}$	-55 to +150	°C

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

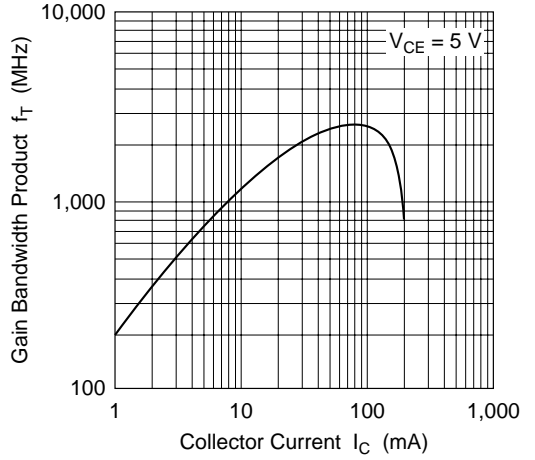
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	$I_C = 100 \mu\text{A}$ , $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	20	—	—	V	$I_C = 1 \text{ mA}$ , $R_{BE} = \infty$
Collector cutoff current	$I_{CBO}$	—	—	1.0	$\mu\text{A}$	$V_{CB} = 25 \text{ V}$ , $I_E = 0$
Emitter cutoff current	$I_{EBO}$	—	—	10	$\mu\text{A}$	$V_{EB} = 3 \text{ V}$ , $I_C = 0$
DC current transfer ratio	$h_{FE}$	50	—	200		$V_{CE} = 5 \text{ V}$ , $I_C = 50 \text{ mA}$
Gain bandwidth product	$f_T$	1.5	2.5	—	GHz	$V_{CE} = 5 \text{ V}$ , $I_C = 50 \text{ mA}$
Collector output capacitance	$C_{ob}$	—	4.5	—	pF	$V_{CB} = 10 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$



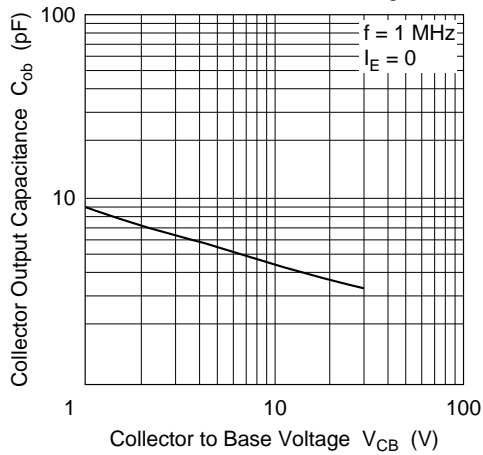
Collector to Emitter Saturation Voltage vs. Collector Current

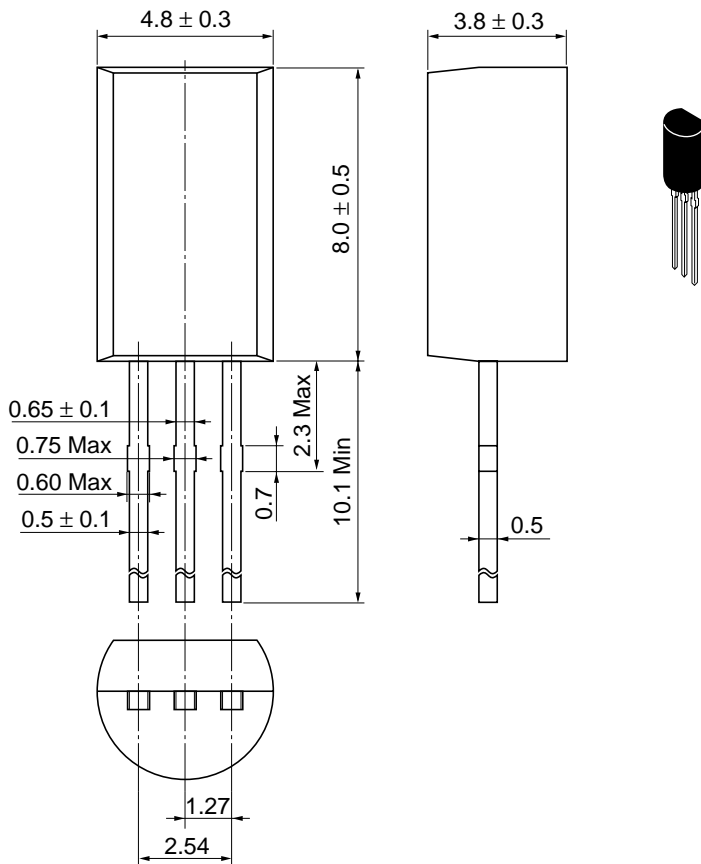


Gain Bandwidth Product vs. Collector Current



Collector Output Capacitance vs. Collector to Base Voltage





Hitachi Code	TO-92 Mod
JEDEC	—
EIAJ	Conforms
Weight (reference value)	0.35 g

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