
2SB1688

Silicon PNP Epitaxial
High voltage amplifier

HITACHI

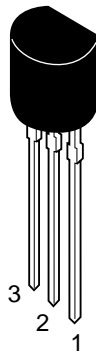
ADE-208-975A (Z)
2nd. Edition
Mar. 2001

Features

- High breakdown voltage
 $V_{CEO} = -300V$ min

Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

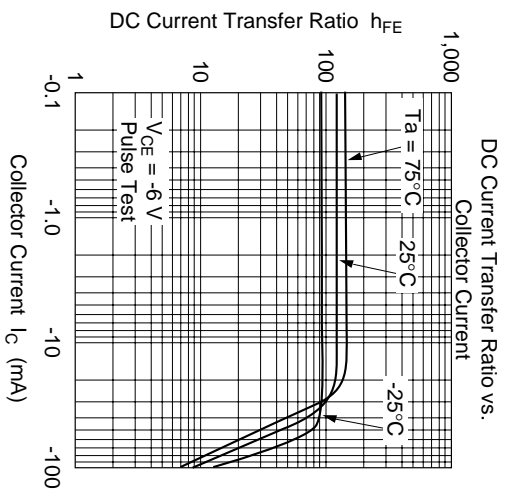
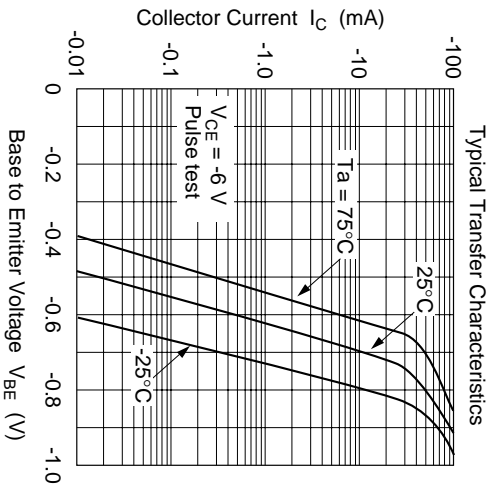
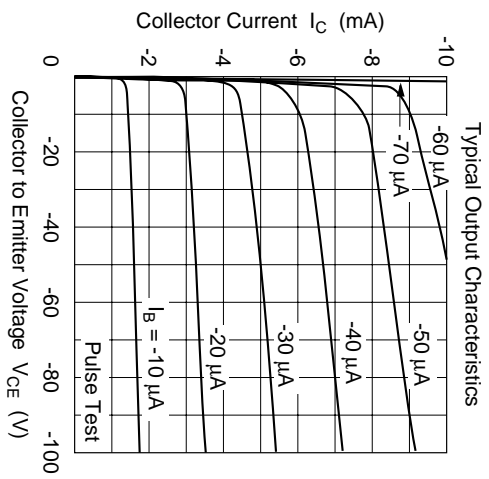
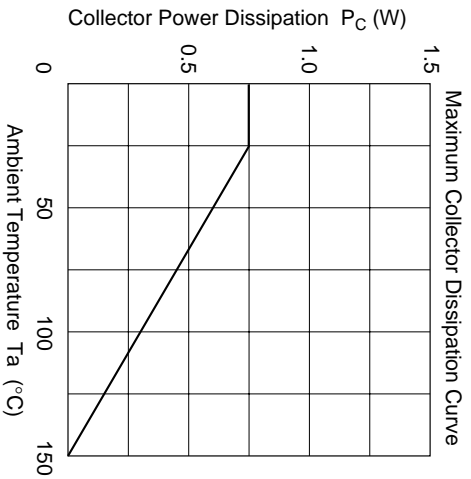
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-300	V
Collector to emitter voltage	V_{CEO}	-300	V
Emitter to base voltage	V_{EBO}	-5	V
Collector current	I_{C}	-50	mA
Collector power dissipation	P_{C}	750	mW
Junction temperature	T_{j}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

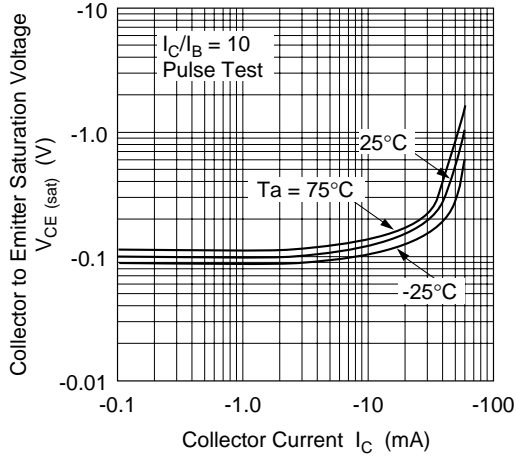
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector cutoff current	I_{CBO}	—	—	-0.1	μA	$V_{\text{CB}} = -300\text{V}, I_{\text{E}} = 0$
	I_{CEO}	—	—	-0.1	μA	$V_{\text{CE}} = -300\text{V}, R_{\text{BE}} = \infty$
Emitter cutoff current	I_{EBO}	—	—	-10	μA	$V_{\text{EB}} = -5\text{V}, I_{\text{C}} = 0$
Base to emitter voltage	V_{BE}	—	—	-0.75	V	$V_{\text{CE}} = -6\text{V}, I_{\text{C}} = -1\text{mA}$
DC current transfer ratio	h_{FE}	80	—	160	—	$V_{\text{CE}} = -6\text{V}, I_{\text{C}} = -2\text{mA}$
Collector to emitter saturation voltage	$V_{\text{CE(sat)}}$	—	—	-0.9	V	$I_{\text{C}} = -30\text{mA}, I_{\text{B}} = -3\text{mA}$

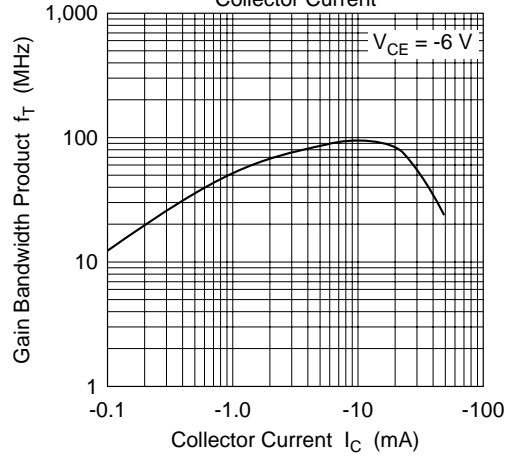
Main Characteristics



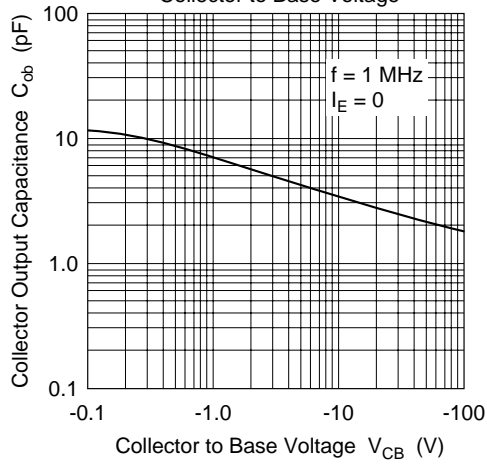
Collector to Emitter Saturation Voltage vs. Collector Current



Gain Bandwidth Product vs. Collector Current

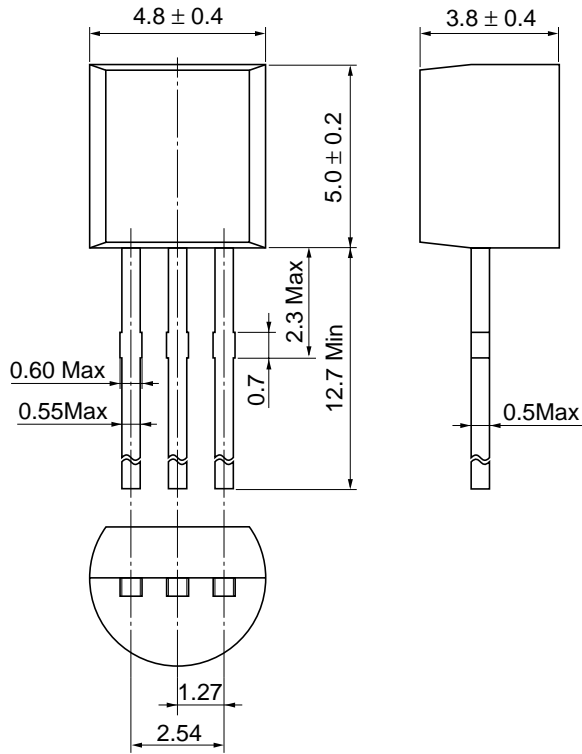


Collector Output Capacitance vs. Collector to Base Voltage



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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