
2SA1052

Silicon PNP Epitaxial

HITACHI

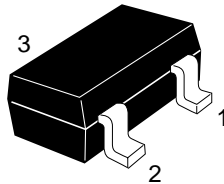
ADE-208-1006A (Z)
2nd. Edition
Mar. 2001

Application

Low frequency amplifier

Outline

MPAK



1. Emitter
2. Base
3. Collector

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

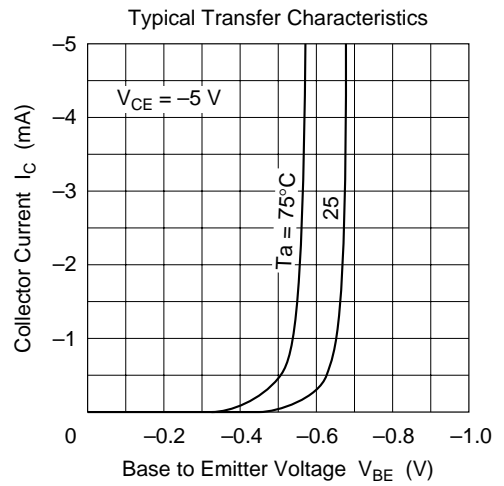
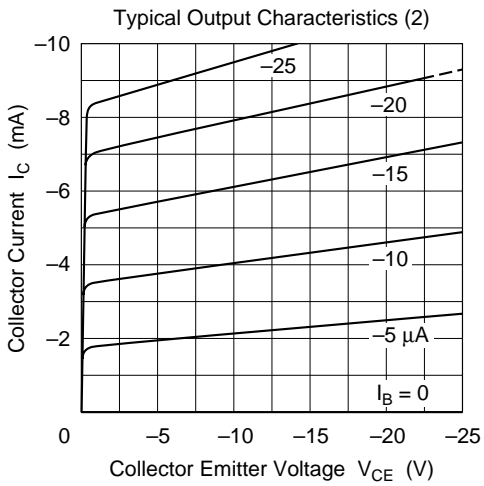
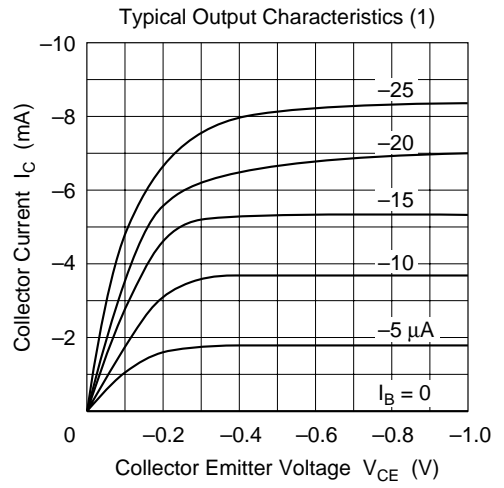
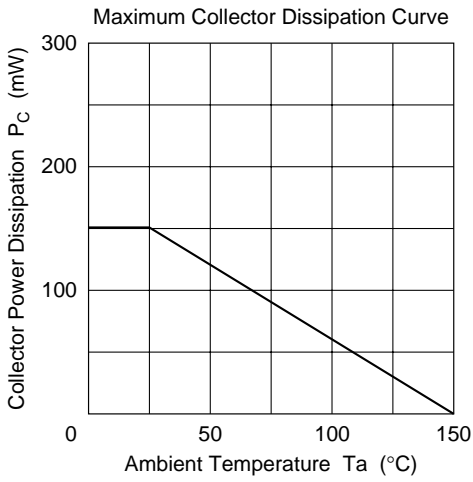
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-30	V
Collector to emitter voltage	V_{CEO}	-30	V
Emitter to base voltage	V_{EBO}	-5	V
Collector current	I_{C}	-100	mA
Emitter current	I_{E}	100	mA
Collector power dissipation	P_{C}	150	mW
Junction temperature	T_{j}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

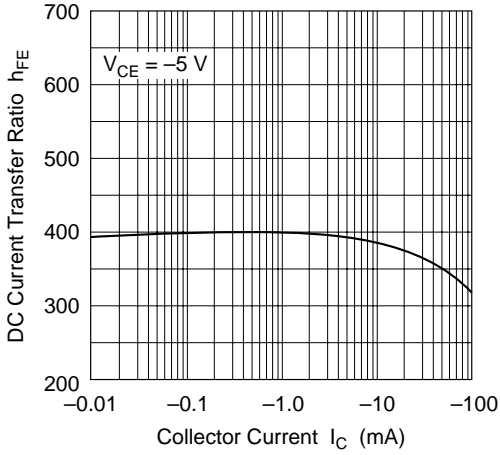
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(\text{BR})\text{CBO}}$	-30	—	—	V	$I_{\text{C}} = -10 \mu\text{A}$, $I_{\text{E}} = 0$
Collector to emitter breakdown voltage	$V_{(\text{BR})\text{CEO}}$	-30	—	—	V	$I_{\text{C}} = -1 \text{ mA}$, $R_{\text{BE}} = \infty$
Emitter to base breakdown voltage	$V_{(\text{BR})\text{EBO}}$	-5	—	—	V	$I_{\text{E}} = -10 \mu\text{A}$, $I_{\text{C}} = 0$
Collector cutoff current	I_{CBO}	—	—	-0.5	μA	$V_{\text{CB}} = -20 \text{ V}$, $I_{\text{E}} = 0$
Emitter cutoff current	I_{EBO}	—	—	-0.5	μA	$V_{\text{EB}} = -2 \text{ V}$, $I_{\text{C}} = 0$
DC current transfer ratio	h_{FE}^{*1}	100	—	500		$V_{\text{CE}} = -12 \text{ V}$, $I_{\text{C}} = -2 \text{ mA}$
Collector to emitter saturation voltage	$V_{\text{CE}(\text{sat})}$	—	—	-0.2	V	$I_{\text{C}} = -10 \text{ mA}$, $I_{\text{B}} = -1 \text{ mA}$
Base to emitter voltage	V_{BE}	—	—	-0.75	V	$V_{\text{CE}} = -12 \text{ V}$, $I_{\text{C}} = -2 \text{ mA}$

Note: 1. The 2SA1052 is grouped by h_{FE} as follows.

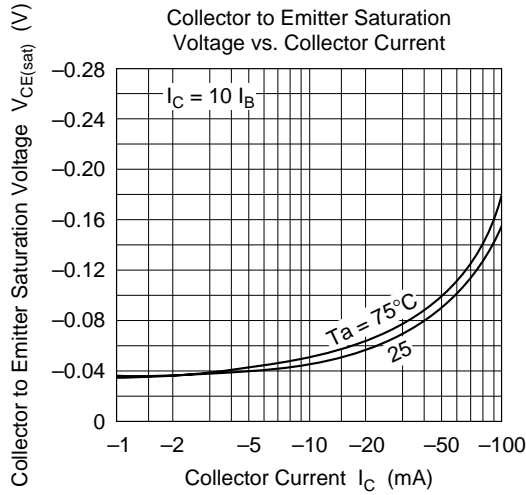
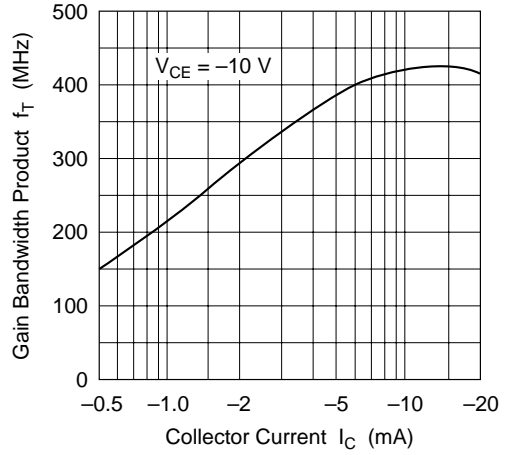
Grade	B	C	D
Mark	MB	MC	MD
h_{FE}	100 to 200	160 to 320	250 to 500



DC Current Transfer Ratio vs. Collector Current



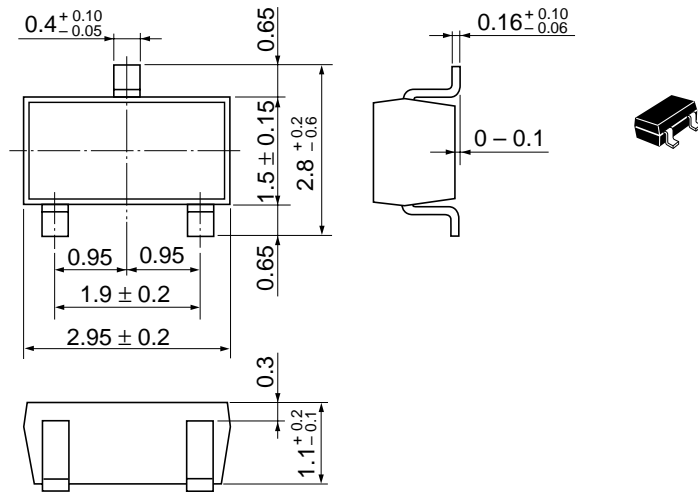
Gain Bandwidth Product vs. Collector Current



Package Dimensions

As of January, 2001

Unit: mm



Hitachi Code	MPAK
JEDEC	—
EIAJ	Conforms
Mass (reference value)	0.011 g

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