Silicon PNP Epitaxial

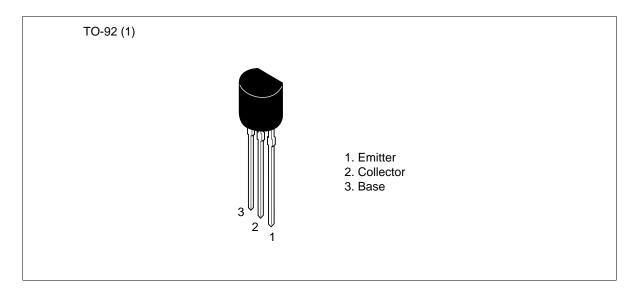
HITACHI

ADE-208-1007A (Z) 2nd. Edition Mar. 2001

Application

• Low frequency low noise amplifier

Outline





Absolute Maximum Ratings $(Ta = 25^{\circ}C)zz$

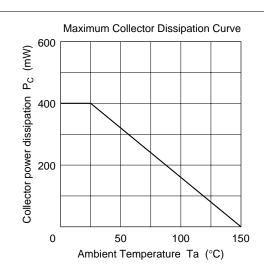
Item	Symbol	2SA1084	2SA1085	Unit
Collector to base voltage	V_{CBO}	-90	-120	V
Collector to emitter voltage	V _{CEO}	-90	-120	V
Emitter to base voltage	V _{EBO}	- 5	- 5	V
Collector current	I _c	-100	-100	mA
Emitter current	I _E	100	100	mA
Collector power dissipation	P _c	400	400	mW
Junction temperature	Tj	150	150	°C
Storage temperature	Tstg	-55 to +150	-55 to +150	°C

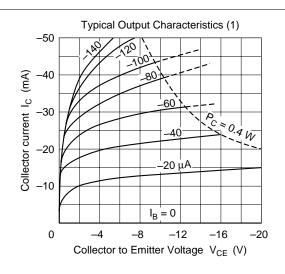
Electrical Characteristics ($Ta = 25^{\circ}C$)

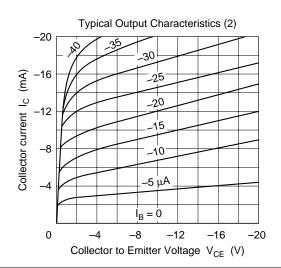
		2SA1084			2SA1085				
Item	Symbol	Min	Тур	Max	Min	Тур	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-90	_	_	-120	_	_	V	$I_{C} = -10 \mu A, I_{E} = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-90	_	_	-120	_	_	V	$I_{C} = -1 \text{ mA},$ $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	- 5	_	_	- 5	_	_	V	$I_E = -10 \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	_	_	-0.1	_	_	-0.1	μΑ	$V_{CB} = -50 \text{ V}, I_E = 0$
Emitter cutoff current	I _{EBO}	_	_	-0.1	_	_	-0.1	μΑ	$V_{EB} = -2 \text{ V}, I_{C} = 0$
DC current transfer ratio	h _{FE} *1	250	_	800	250	_	800		$V_{CE} = -12 \text{ V},$ $I_C = -2 \text{ mA}$
Collector to emitter saturation voltage	$V_{\text{CE(sat)}}$	_	-	-0.2	-	_	-0.2	V	$I_C = -10 \text{ mA},$ $I_B = -1 \text{ mA}$
Base to emitter voltage	V_{BE}	_	-0.6	_	_	-0.6	_	V	$V_{CE} = -12 \text{ V},$ $I_C = -2 \text{ mA}$
Gain bandwidth product	f _T	_	90	_	_	90	_	MHz	$V_{CE} = -12 \text{ V},$ $I_C = -2 \text{ mA}$
Collector output capacitance	Cob	_	3.5	_	_	3.5	_	pF	$V_{CB} = -10 \text{ V}, I_{E} = 0,$ f = 1 MHz
Noise voltage reffered to input	e _n	_	0.5	_	_	0.5	_	nV/ √Hz	$V_{CE} = -6V,$ $I_{C} = -10 \text{ mA},$ $f = 1 \text{ kHz},$ $R_{g} = 0, \Delta f = 1 \text{Hz}$

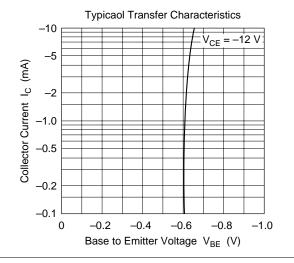
Note: 1. The 2SA1084 and 2SA1085 are grouped by h_{FE} as follows.

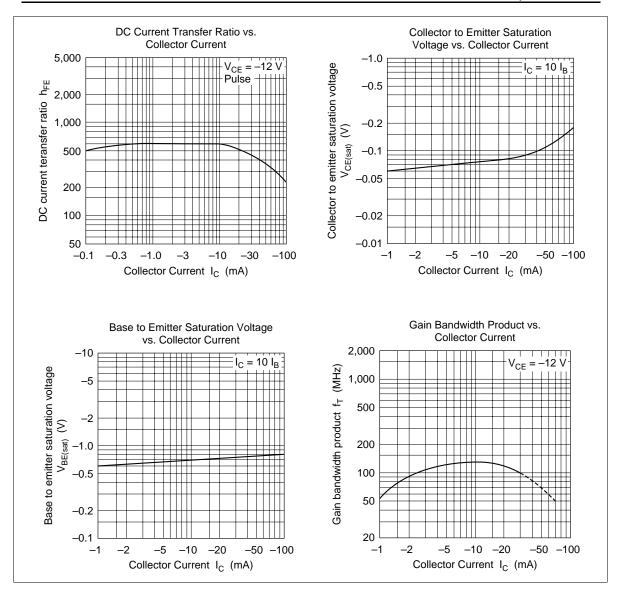
D E 250 to 500 400 to 800

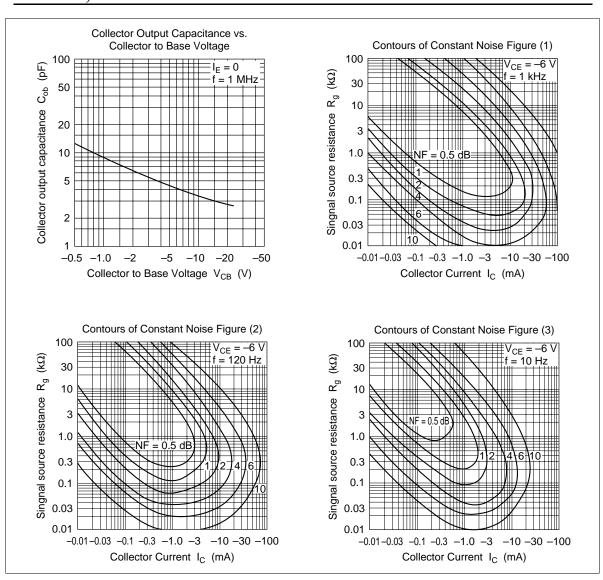




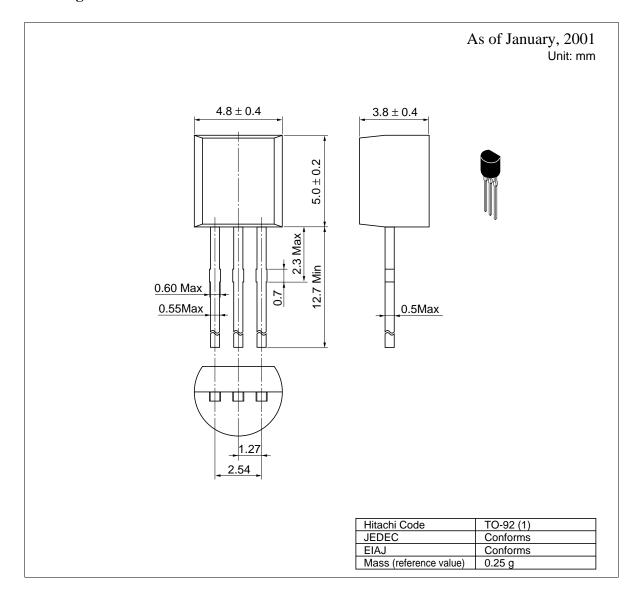








Package Dimensions



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