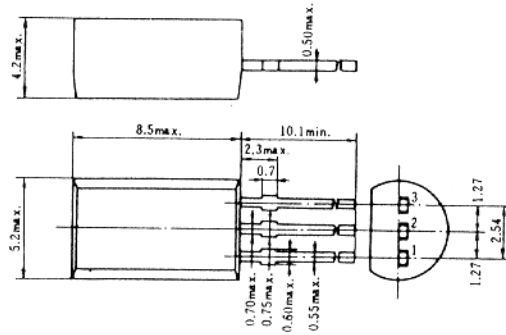


## 2SB1244, 2SB1245

SILICON PNP EPITAXIAL

LOW FREQUENCY HIGH VOLTAGE AMPLIFIER



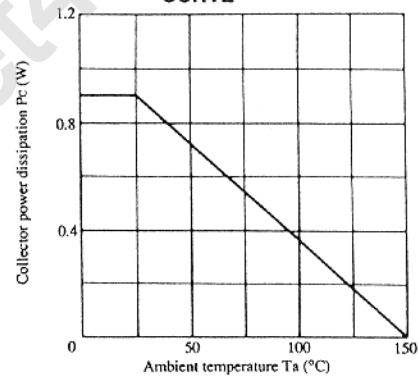
(JEDEC TO-92 MOD.)

1. Emitter
  2. Collector
  3. Base
- (Dimensions in mm)

### ■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SB1244	2SB1245	Unit
Collector to base voltage	V <sub>CB0</sub>	-160	-200	V
Collector to emitter voltage	V <sub>CEO</sub>	-160	-200	V
Emitter to base voltage	V <sub>EB0</sub>	-5	-5	V
Collector current	I <sub>c</sub>	-100	-100	mA
Collector power dissipation	P <sub>c</sub>	0.9	0.9	W
Junction temperature	T <sub>j</sub>	150	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	-55 to +150	°C

### MAXIMUM COLLECTOR DISSIPATION CURVE



### ■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

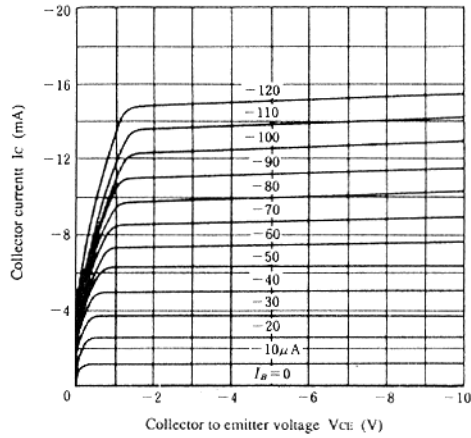
Item	Symbol	Test Condition		min.	typ.	max.	Unit
		2SB1244	2SB1245				
Collector to base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>c</sub> = -10μA, I <sub>E</sub> = 0		-160	—	—	V
		2SB1245	-200	—	—	V	
Collector to emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>c</sub> = -1mA, R <sub>BE</sub> = ∞		-160	—	—	V
		2SB1245	-200	—	—	V	
Emitter to base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -10μA, I <sub>c</sub> = 0		-5	—	—	V
Collector cutoff current	I <sub>CBO</sub>	2SB1244	V <sub>CB</sub> = -140V, I <sub>E</sub> = 0	—	—	-10	μA
		2SB1245	V <sub>CB</sub> = -160V, I <sub>E</sub> = 0	—	—	-10	μA
DC current transfer ratio	h <sub>FE1</sub> *	V <sub>CE</sub> = -5V, I <sub>c</sub> = -10mA		60	—	320	
	h <sub>FE2</sub>	V <sub>CE</sub> = -5V, I <sub>c</sub> = -1mA		30	—	—	
Base to emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> = -5V, I <sub>c</sub> = -10mA		—	—	-1.5	V
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> = -30mA, I <sub>B</sub> = -3mA		—	—	-0.5	V
Gain bandwidth product	f <sub>T</sub>	V <sub>CE</sub> = -5V, I <sub>c</sub> = -10mA		—	140	—	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10V, I <sub>E</sub> = 0, f = 1MHz		—	5.5	—	pF

\* The 2SB1244 and 2SB1245 are grouped by h<sub>FE1</sub> as follows.

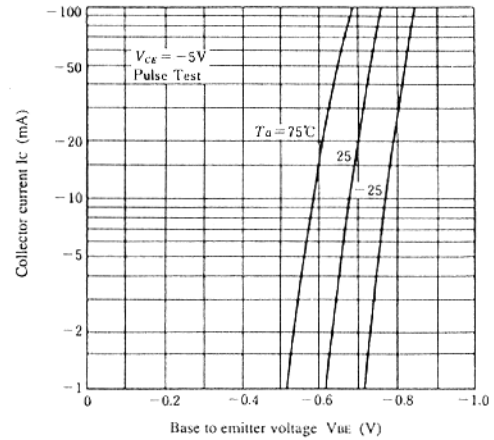
Grade	B	C	D
h <sub>FE1</sub>	60 to 120	100 to 200	160 to 320

## 2SB1244, 2SB1245

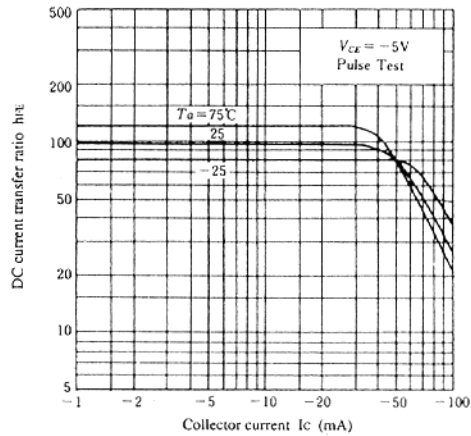
TYPICAL OUTPUT CHARACTERISTICS



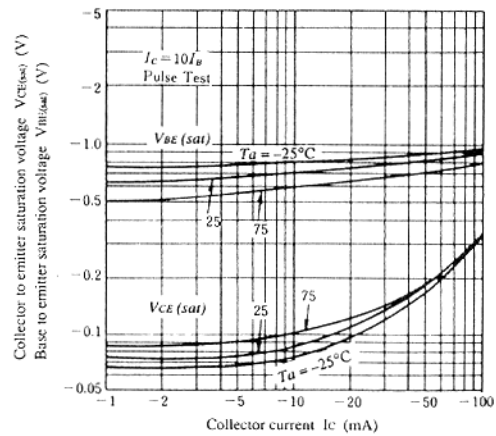
TYPICAL TRANSFER CHARACTERISTICS



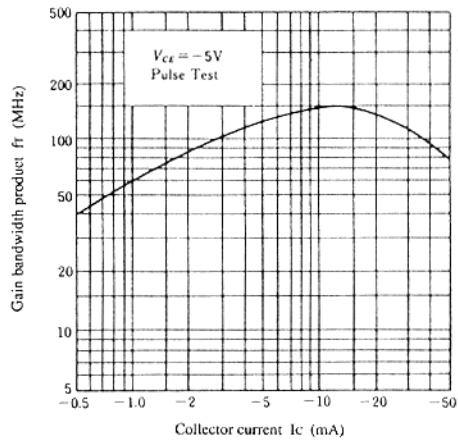
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT VS. COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE

