

2SB0745, 2SB0745A (2SB745, 2SB745A)

Silicon PNP epitaxial planar type

For low-frequency and low-noise amplification

■ Features

- Low noise voltage NV
- High forward current transfer ratio h_{FE}
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

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

Parameter		Symbol	Rating	Unit
Collector-base voltage (Emitter open)	2SB0745	V_{CBO}	-35	V
	2SB0745A		-55	
Collector-emitter voltage (Base open)	2SB0745	V_{CEO}	-35	V
	2SB0745A		-55	
Emitter-base voltage (Collector open)		V_{EBO}	-5	V
Collector current		I_C	-50	mA
Peak collector current		I_{CP}	-200	mA
Collector power dissipation		P_C	400	mW
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	-55 to +150	°C

■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

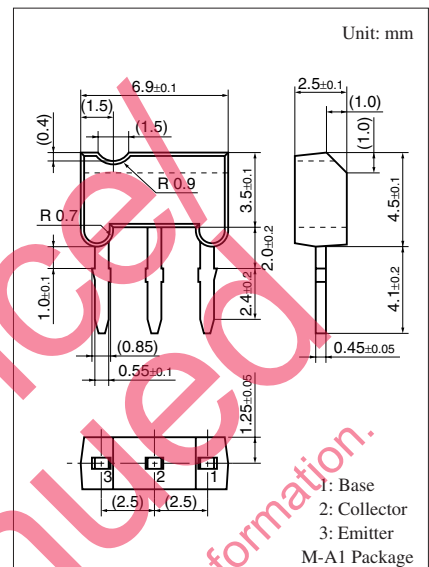
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	2SB0745 2SB0745A	V_{CBO} $I_C = -10\ \mu\text{A}$, $I_E = 0$	-35			V
			-55			
Collector-emitter voltage (Base open)	2SB0745 2SB0745A	V_{CEO} $I_C = -2\ \text{mA}$, $I_B = 0$	-35			V
			-55			
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = -10\ \mu\text{A}$, $I_C = 0$	-5			V
Base-emitter voltage	V_{BE}	$V_{CE} = -1\ \text{V}$, $I_C = -100\ \text{mA}$		-0.7	-1.0	V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -10\ \text{V}$, $I_E = 0$			-0.1	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = -10\ \text{V}$, $I_B = 0$			-1	μA
Forward current transfer ratio *	h_{FE}	$V_{CE} = -5\ \text{V}$, $I_C = -2\ \text{mA}$	180		700	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\ \text{mA}$, $I_B = -10\ \text{mA}$			-0.6	V
Transition frequency	f_T	$V_{CB} = -5\ \text{V}$, $I_E = 2\ \text{mA}$, $f = 200\ \text{MHz}$		150		MHz
Noise voltage	NV	$V_{CE} = -10\ \text{V}$, $I_C = -1\ \text{mA}$, $G_V = 80\ \text{dB}$ $R_g = 100\ \text{k}\Omega$, Function = FLAT			150	mV

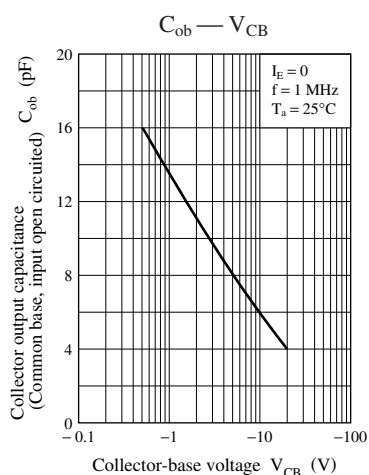
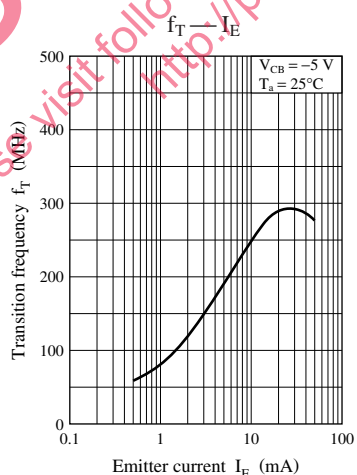
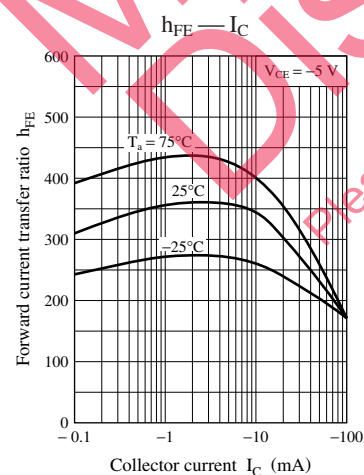
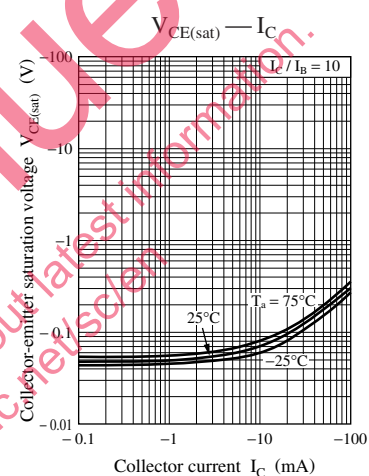
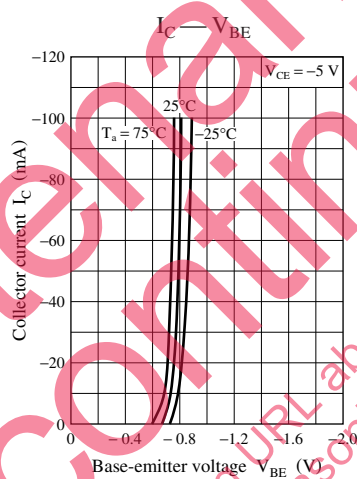
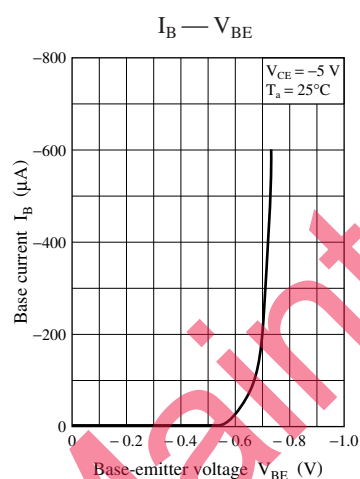
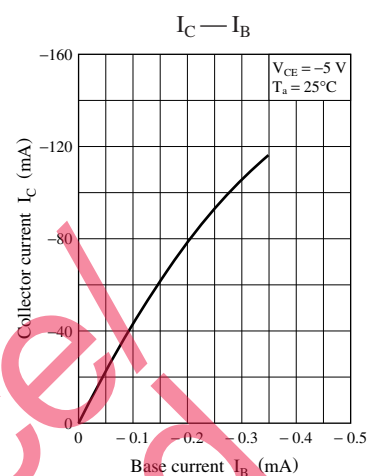
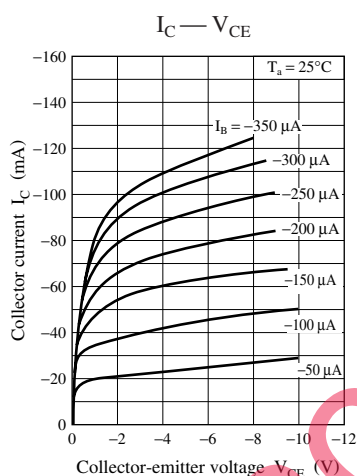
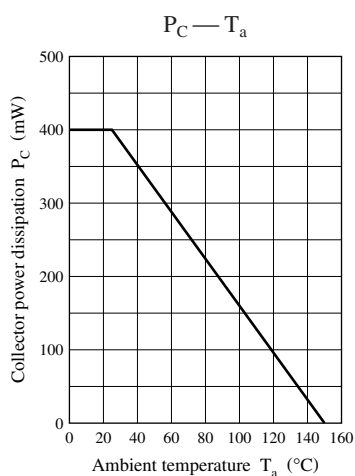
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

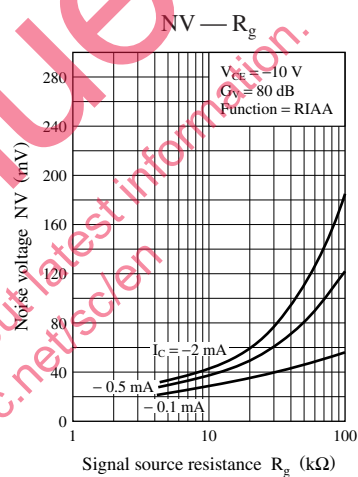
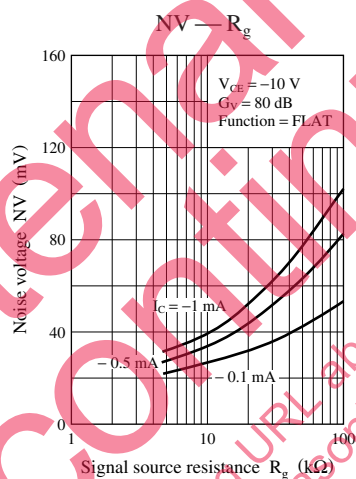
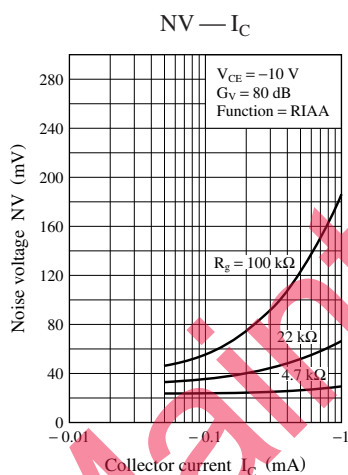
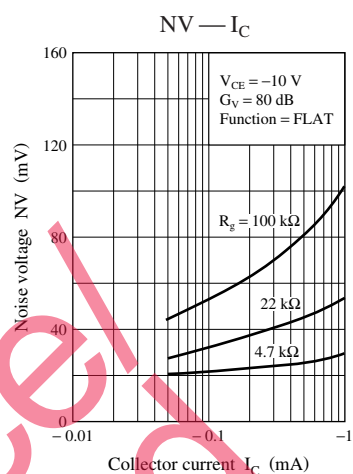
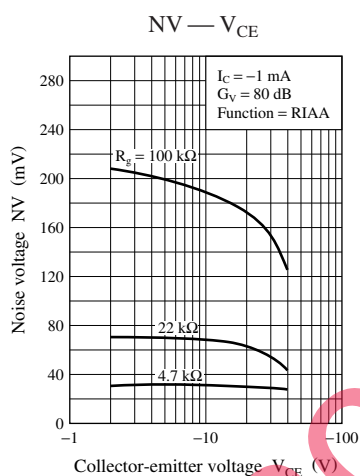
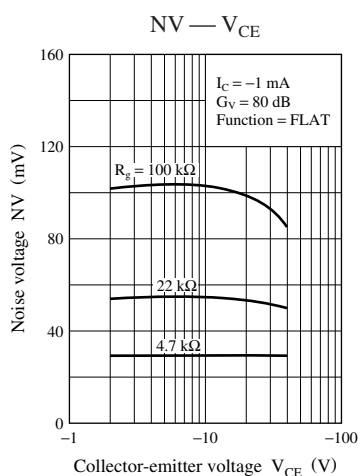
2. *: Rank classification

Rank	Q	R	S
h_{FE}	180 to 360	260 to 520	360 to 700

Note) The part numbers in the parenthesis show conventional part number.







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