

2SB745, 2SB745A

Silicon PNP epitaxial planer type

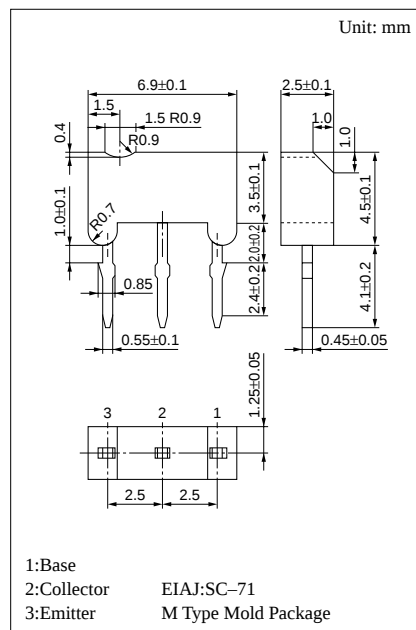
For low-frequency and low-noise amplification
Complementary to 2SD661 and 2SD661A

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 (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V _{CBO}	2SB745 -35	V
2SB745A		-55	
Collector to emitter voltage	V _{CEO}	2SB745 -35	V
2SB745A		-55	
Emitter to base voltage	V _{EBO}	-5	V
Peak collector current	I _{CP}	-200	mA
Collector current	I _C	-50	mA
Collector power dissipation	P _C	400	mW
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 ~ +150	°C

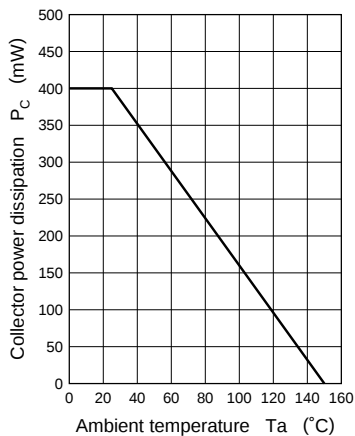
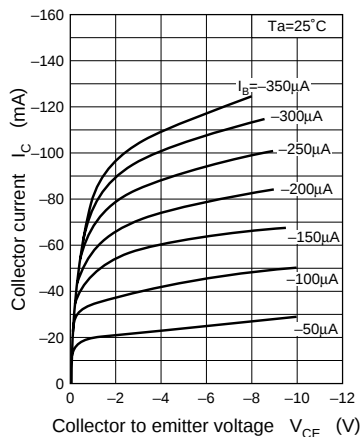
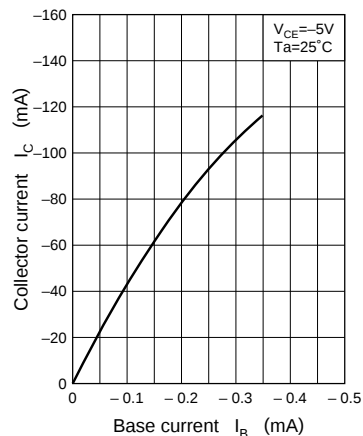
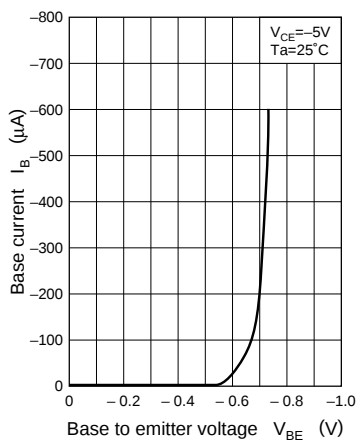
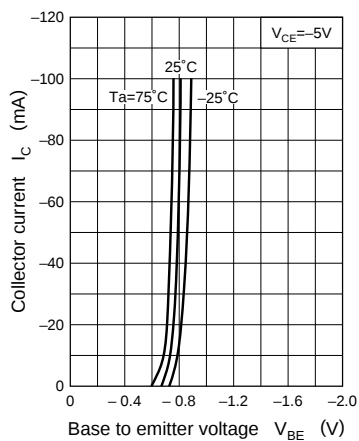
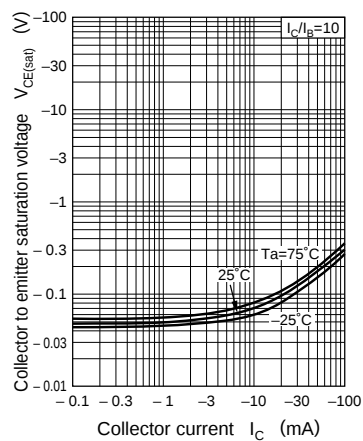
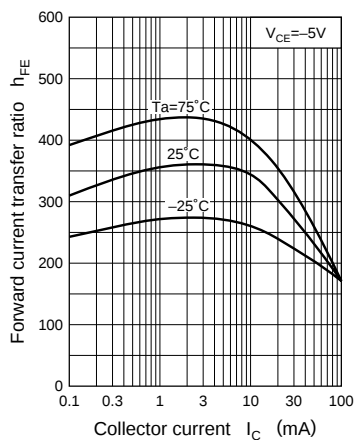
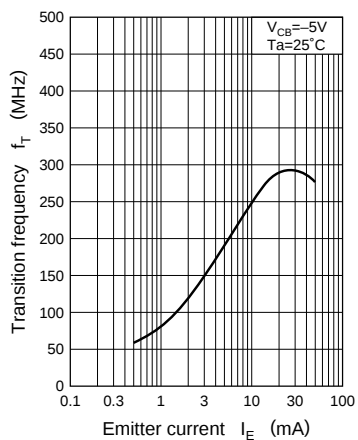
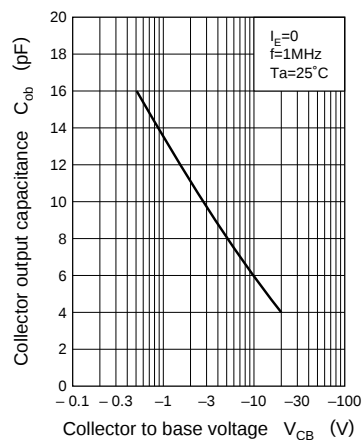


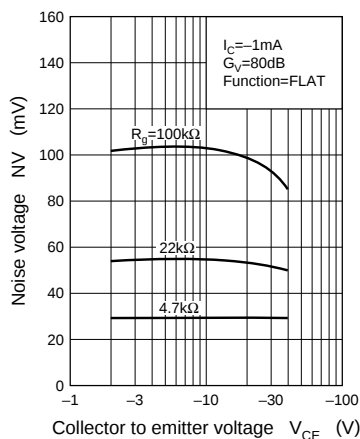
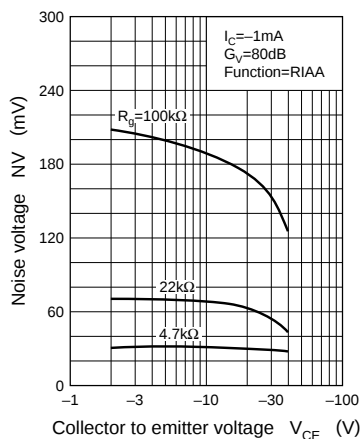
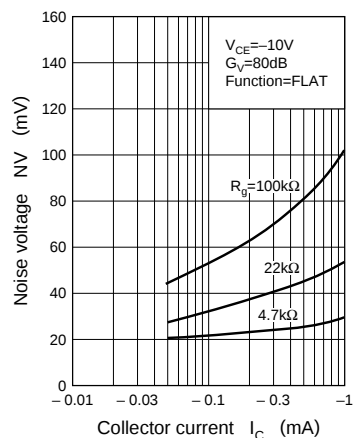
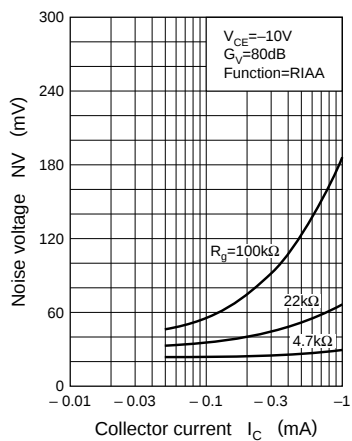
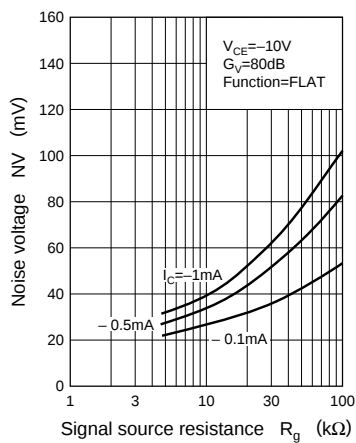
Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I _{CBO}	V _{CB} = -10V, I _E = 0			-100	nA
	I _{CEO}	V _{CE} = -10V, I _B = 0			-1	μA
Collector to base voltage	V _{CBO}	I _C = -10μA, I _E = 0	2SB745 -35			V
			2SB745A -55			
Collector to emitter voltage	V _{CEO}	I _C = -2mA, I _B = 0	2SB745 -35			V
			2SB745A -55			
Emitter to base voltage	V _{EBO}	I _E = -10μA, I _C = 0	-5			V
Forward current transfer ratio	h _{FE} *	V _{CB} = -5V, I _E = 2mA	180		700	
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = -100mA, I _B = -10mA			-0.6	V
Base to emitter voltage	V _{BE}	V _{CE} = -1V, I _C = -100mA		-0.7	-1	V
Transition frequency	f _T	V _{CB} = -5V, I _E = 2mA, f = 200MHz		150		MHz
Noise voltage	NV	V _{CE} = -10V, I _C = -1mA, G _v = 80dB R _g = 100kΩ, Function = FLAT			150	mV

*h_{FE} Rank classification

Rank	R	S	T
h _{FE}	180 ~ 360	260 ~ 520	360 ~ 700

$P_C - T_a$  $I_C - V_{CE}$  $I_C - I_B$  $I_B - V_{BE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $C_{ob} - V_{CB}$ 

NV — V_{CE} NV — V_{CE} NV — I_C NV — I_C NV — R_g NV — R_g 