

UN1121/1122/1123/1124/112X/112Y

Silicon PNP epitaxial planer transistor

For digital circuits

■ Features

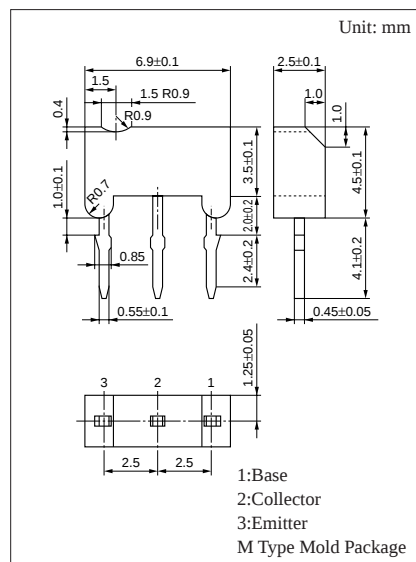
- Costs can be reduced through downsizing of the equipment and reduction of the number of parts.
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

■ Resistance by Part Number

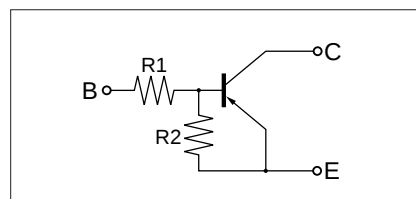
	(R ₁)	(R ₂)
• UN1121	2.2k Ω	2.2k Ω
• UN1122	4.7k Ω	4.7k Ω
• UN1123	10k Ω	10k Ω
• UN1124	2.2k Ω	10k Ω
• UN112X	0.27k Ω	5k Ω
• UN112Y	3.1k Ω	4.6k Ω

■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V _{CBO}	-50	V
Collector to emitter voltage	V _{CEO}	-50	V
Collector current	I _C	-500	mA
Total power dissipation	P _T	600	mW
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C



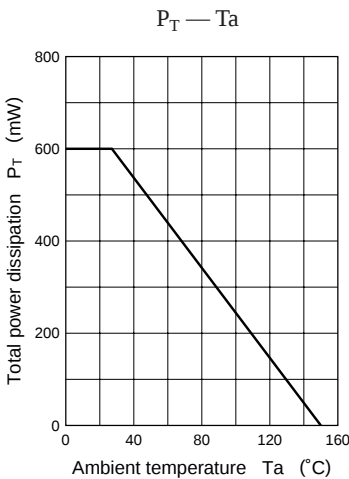
Internal Connection



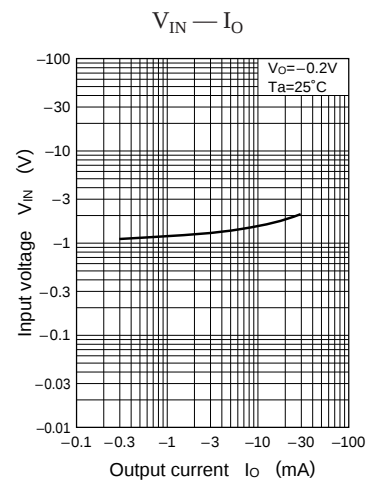
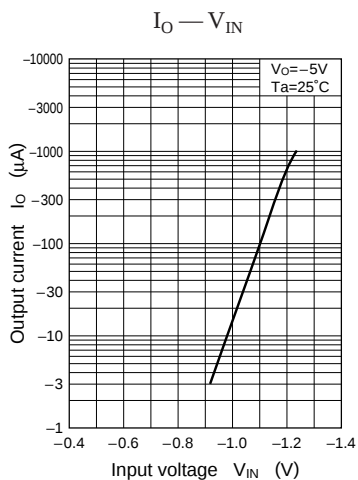
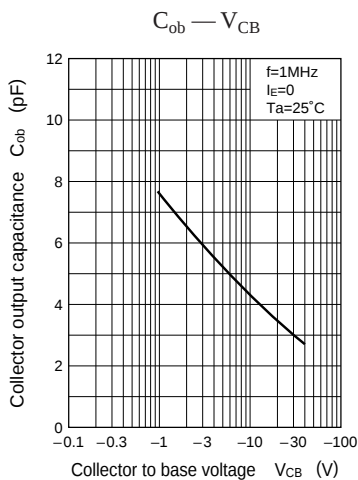
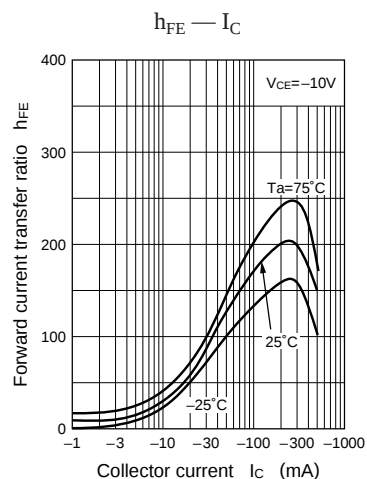
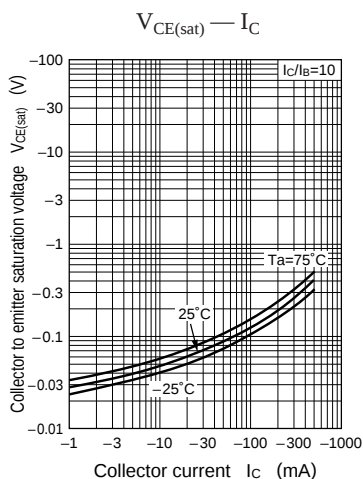
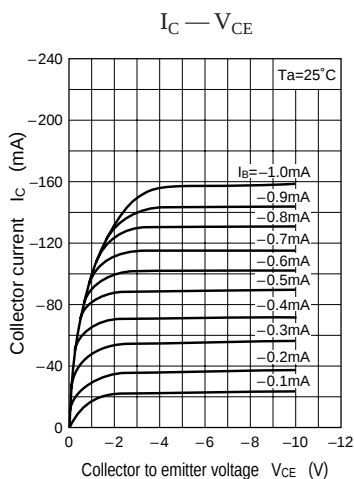
■ Electrical Characteristics (Ta=25°C)

Parameter		Symbol	Conditions	min	typ	max	Unit	
Collector cutoff current		I _{CBO}	V _{CB} = -50V, I _E = 0			-1	μA	
		UN112X	I _{CBO}	V _{CB} = -50V, I _E = 0				- 0.1
Collector cutoff current		I _{CEO}	V _{CE} = -50V, I _B = 0			-1	μA	
		UN112X	I _{CEO}	V _{CE} = -50V, I _B = 0				- 0.5
Emitter cutoff current	UN1121	I _{EBO}	V _{EB} = -6V, I _C = 0			-5	mA	
	UN1122/112X/112Y					-2		
	UN1123/1124					-1		
Collector to base voltage		V _{CBO}	I _C = -10μA, I _E = 0	-50			V	
Forward current transfer ratio	UN1121	h _{FE}	V _{CE} = -10V, I _C = -100mA	40				
	UN1122/112Y			50				
	UN1123/1124			60				
	UN112X			20				
Collector to emitter saturation voltage		V _{CE(sat)}	I _C = -100mA, I _B = -5mA			- 0.25	V	
		UN112X	V _{CE(sat)}	I _C = -10mA, I _B = - 0.3mA				- 0.25
		UN112Y	V _{CE(sat)}	I _C = -50mA, I _B = -5mA				- 0.15
Output voltage high level		V _{OH}	V _{CC} = -5V, V _B = - 0.5V, R _L = 500Ω	-4.9			V	
Output voltage low level		V _{OL}	V _{CC} = -5V, V _B = -3.5V, R _L = 500Ω			- 0.2	V	
Transition frequency		f _T	V _{CB} = -10V, I _E = 50mA, f = 200MHz		200		MHz	
Input resistance	UN1121	R ₁		(-30%)	2.2	(+30%)	kΩ	
	UN1122				4.7			
	UN1123				10			
	UN112X				0.27			
	UN112Y				3.1			
Resistance ratio		R ₁ /R ₂		0.8	1.0	1.2		
					0.22			
					0.054			
					0.67			

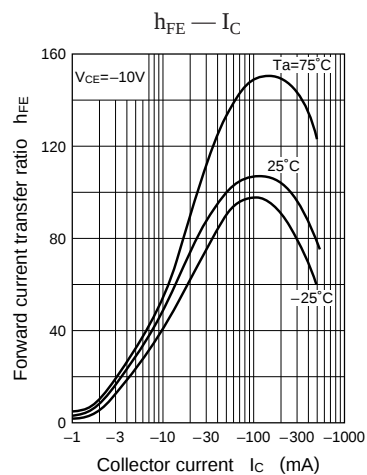
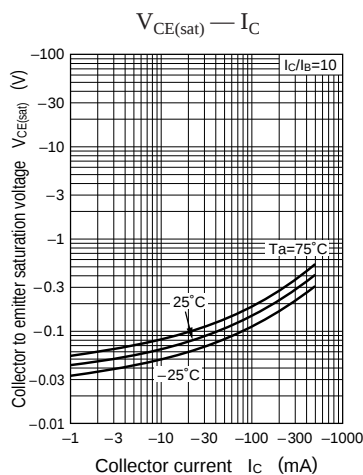
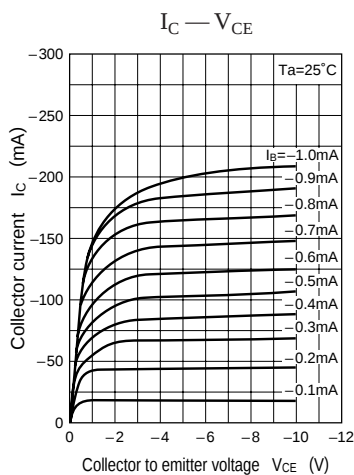
Common characteristics chart

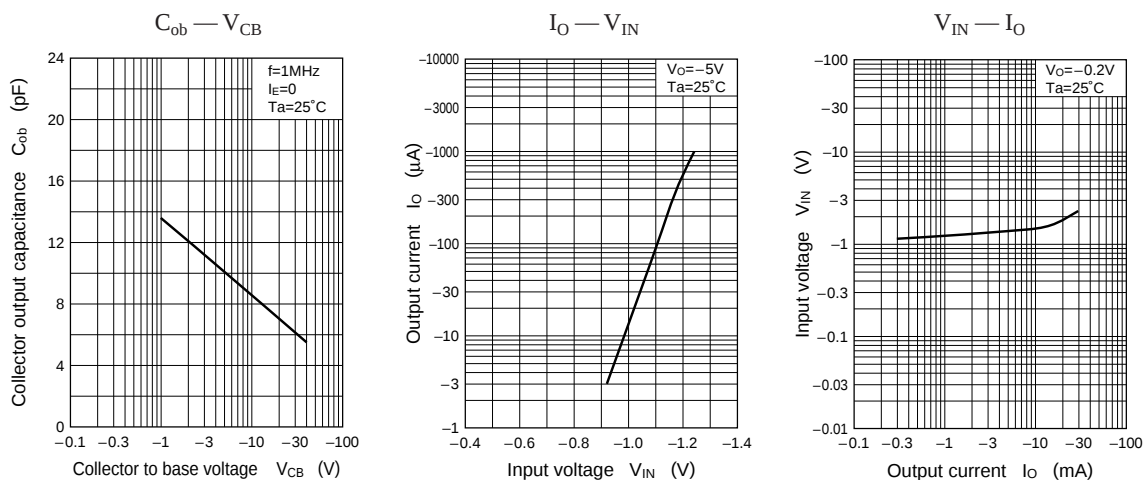


Characteristics charts of UN1121

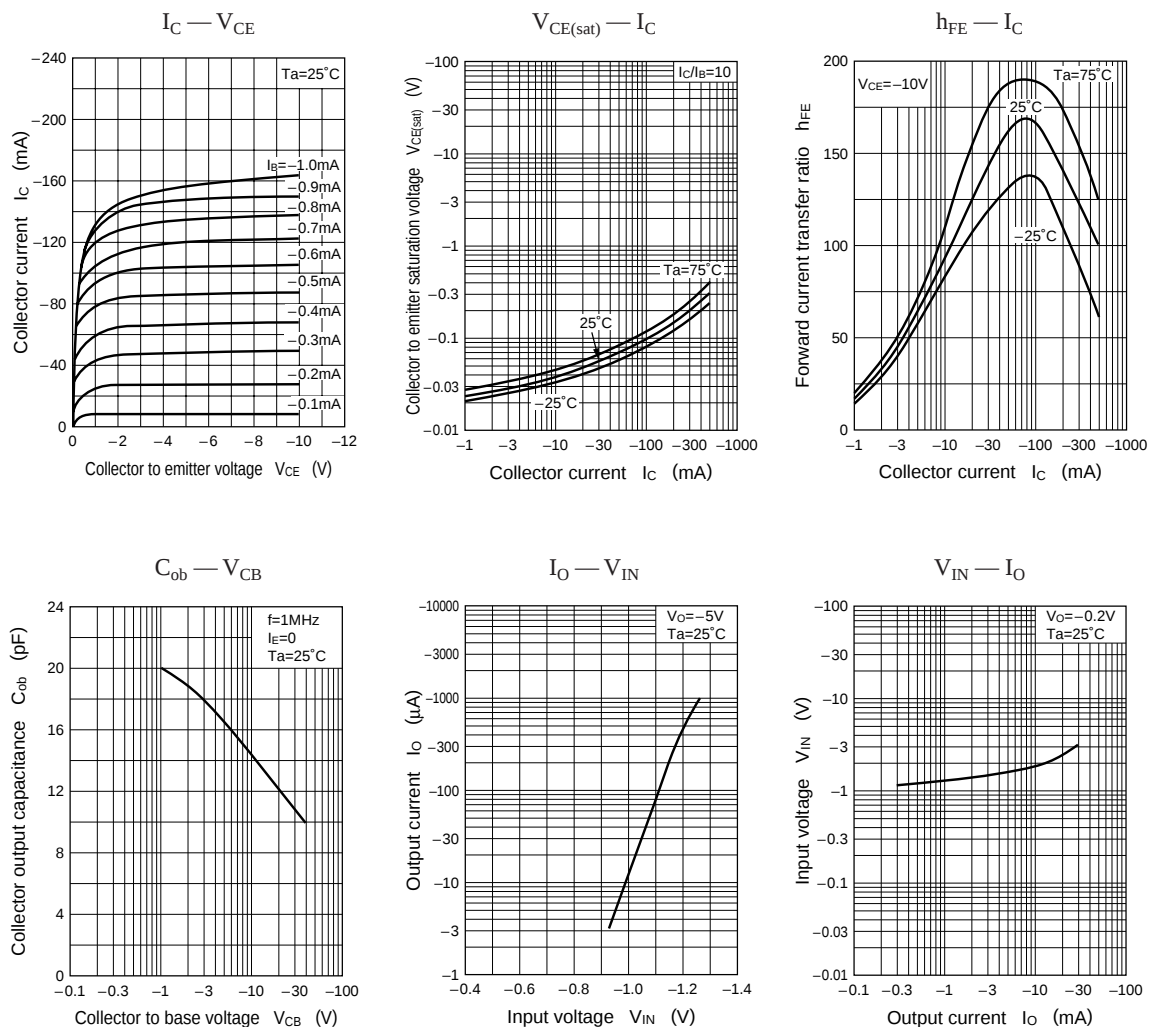


Characteristics charts of UN1122

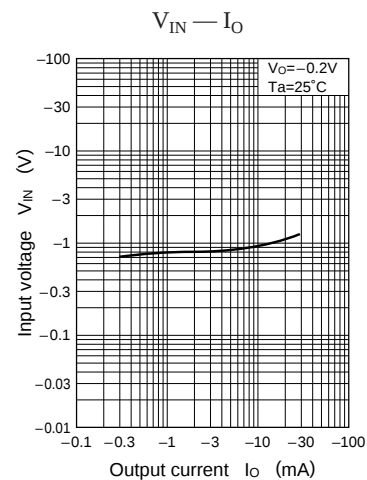
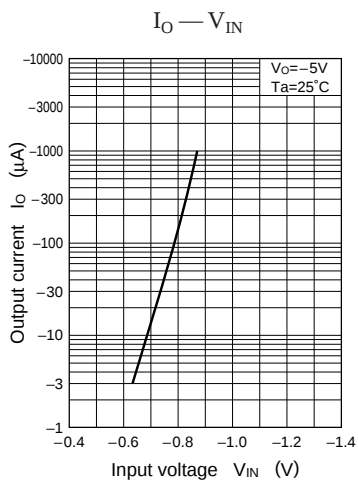
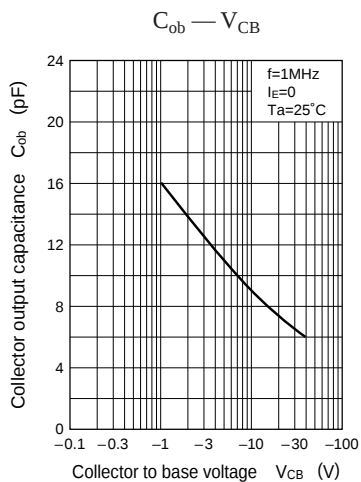
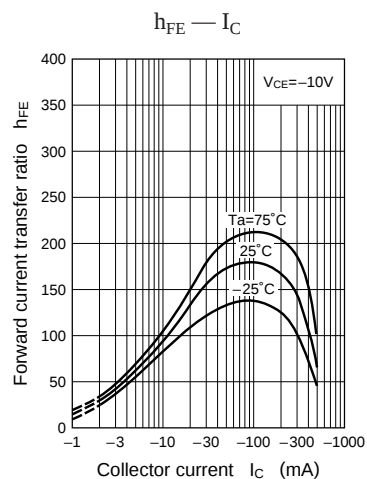
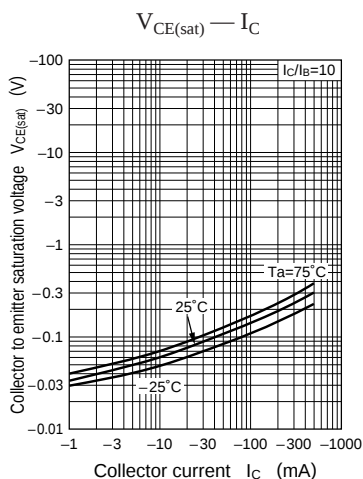
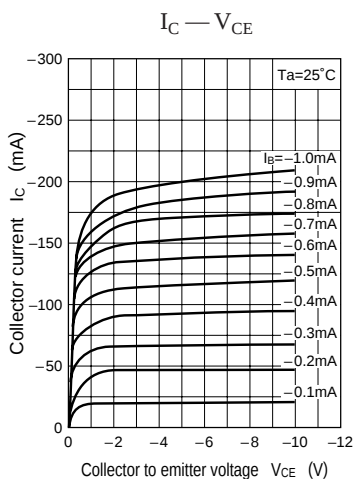




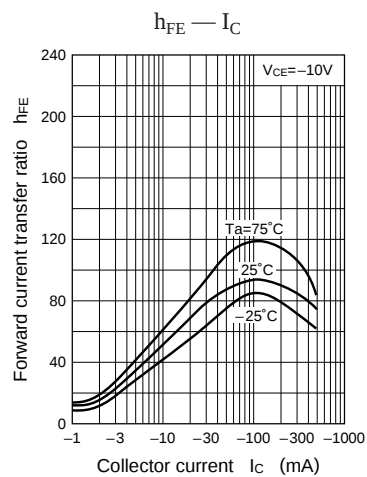
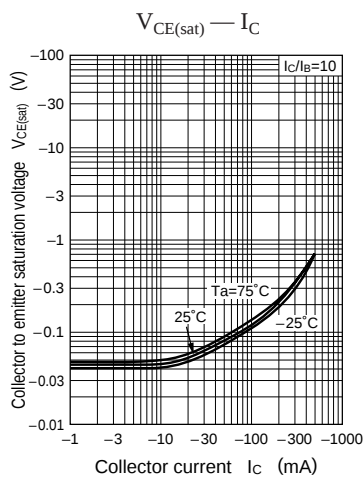
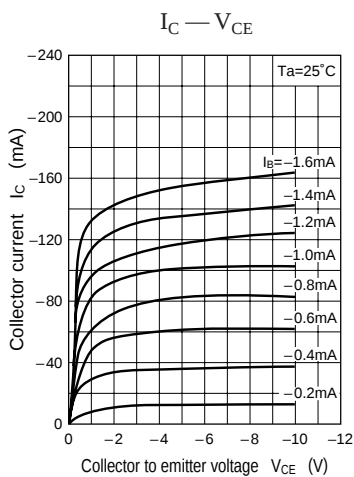
Characteristics charts of UN1123

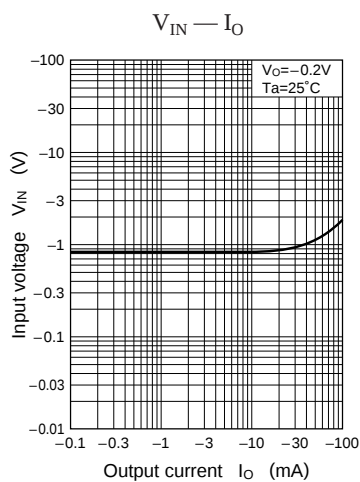
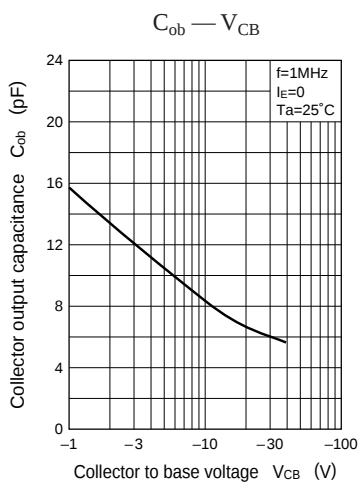


Characteristics charts of UN1124



Characteristics charts of UN112X





Characteristics charts of UN112Y

