

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

Silicon PNP epitaxial planer transistor

For digital circuits

■ Features

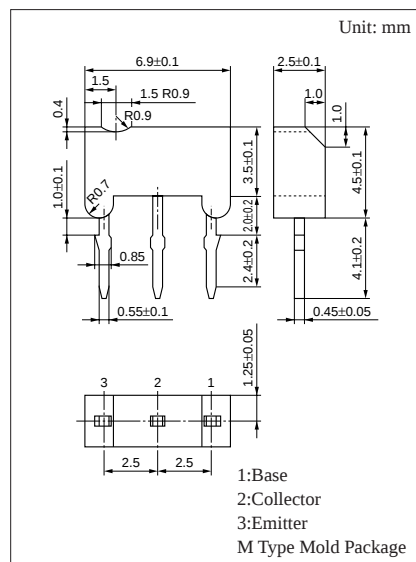
- Costs can be reduced through downsizing of the equipment and reduction of the number of parts.
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

■ Resistance by Part Number

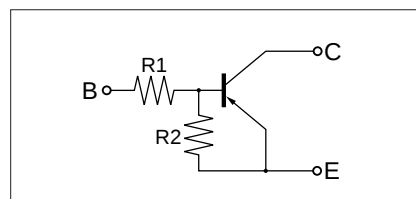
	(R ₁)	(R ₂)
• UN1121	2.2kΩ	2.2kΩ
• UN1122	4.7kΩ	4.7kΩ
• UN1123	10kΩ	10kΩ
• UN1124	2.2kΩ	10kΩ
• UN112X	0.27kΩ	5kΩ
• UN112Y	3.1kΩ	4.6kΩ

■ 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



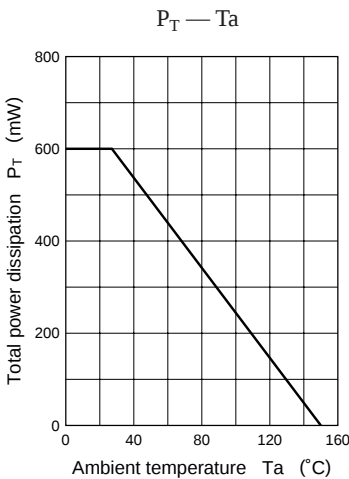
Internal Connection



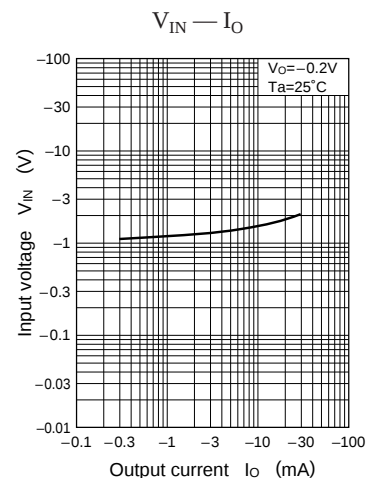
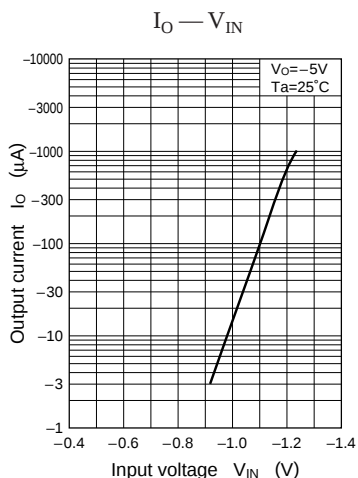
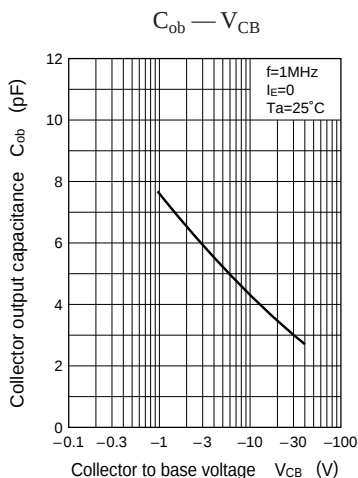
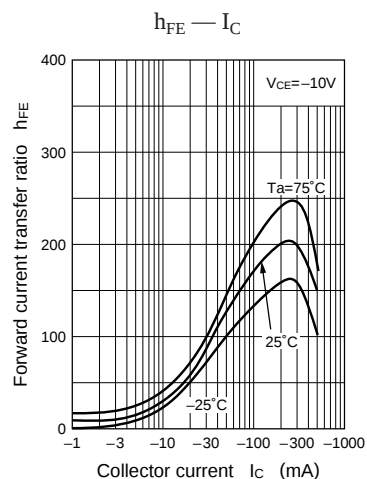
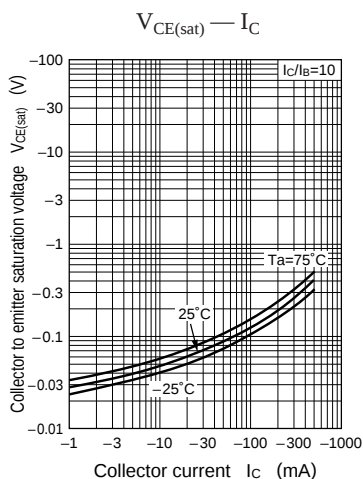
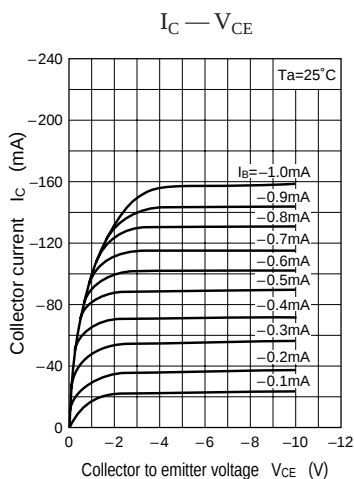
■ Electrical Characteristics (Ta=25°C)

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			

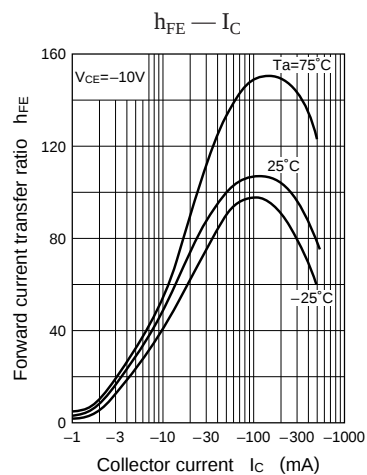
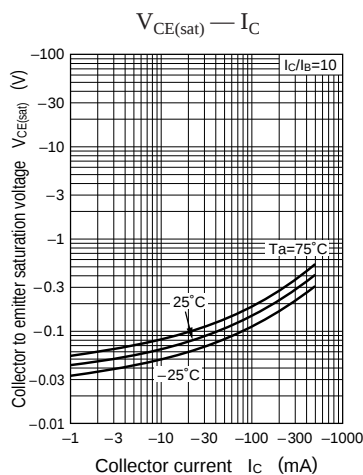
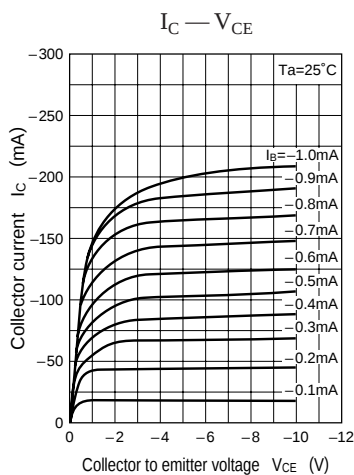
Common characteristics chart

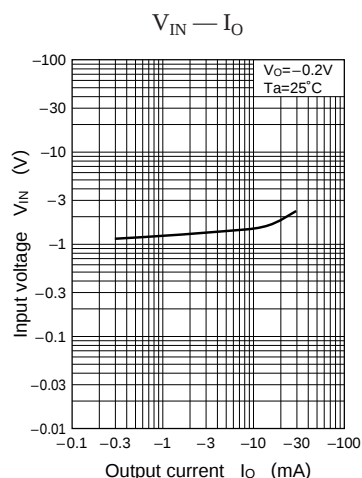
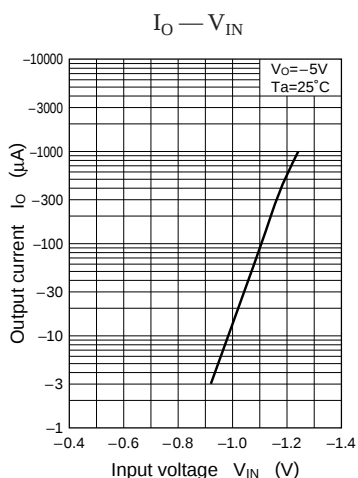
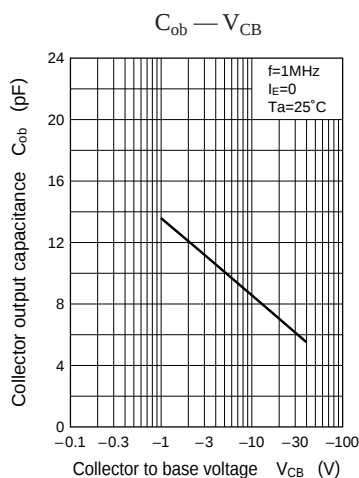


Characteristics charts of UN1121

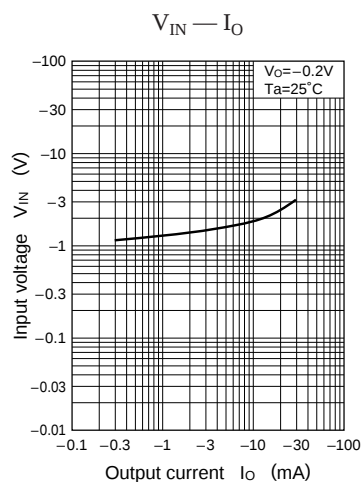
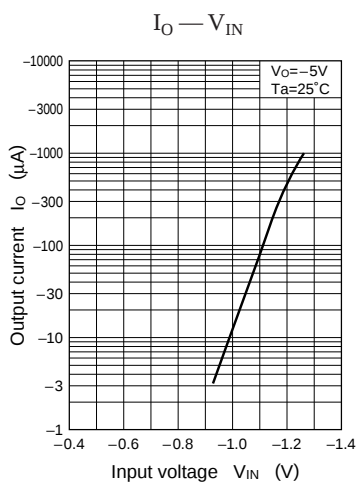
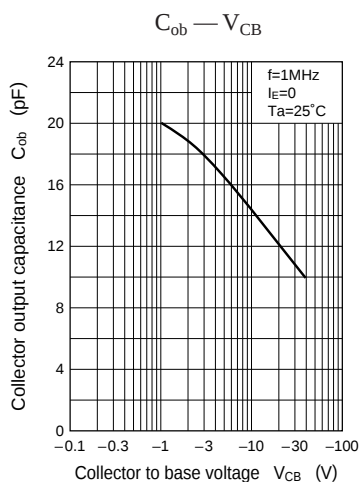
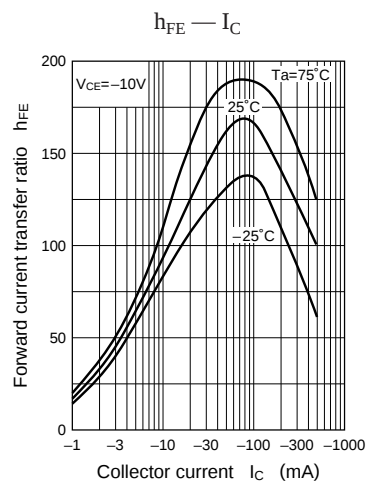
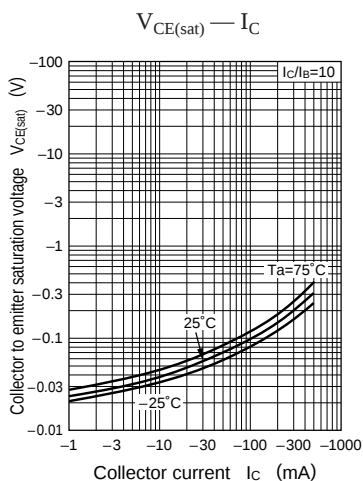
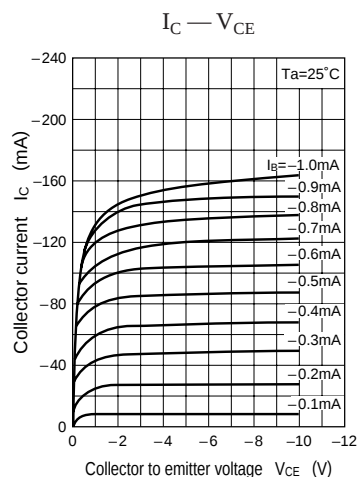


Characteristics charts of UN1122

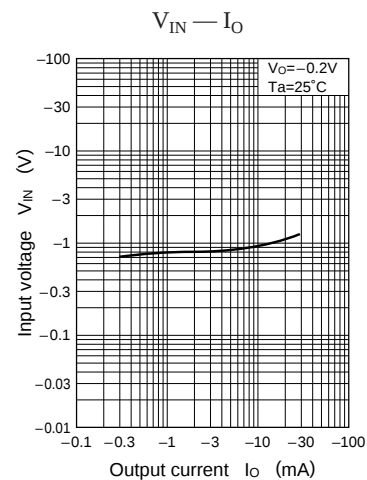
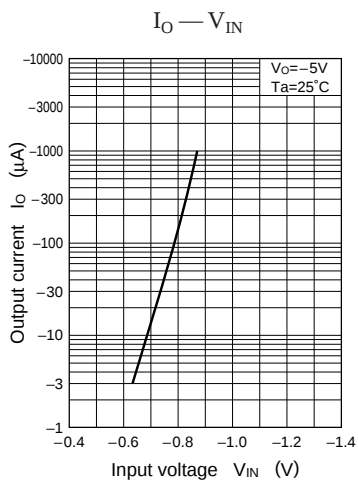
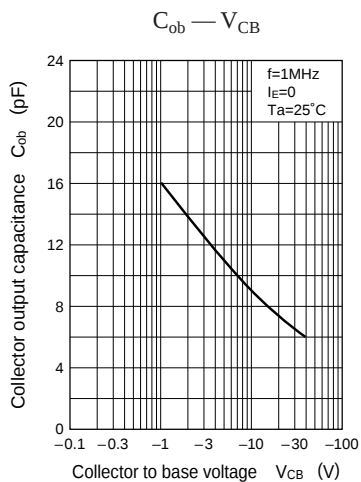
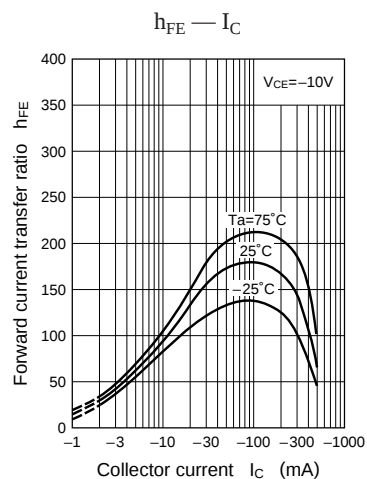
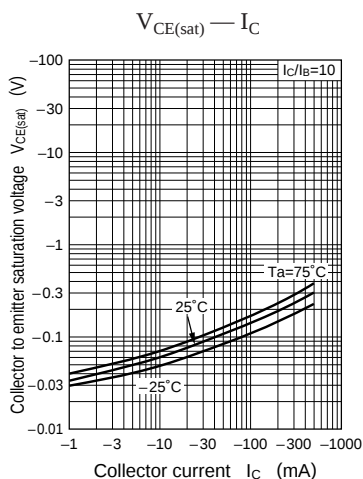
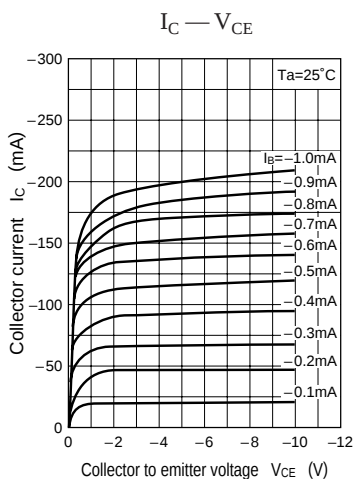




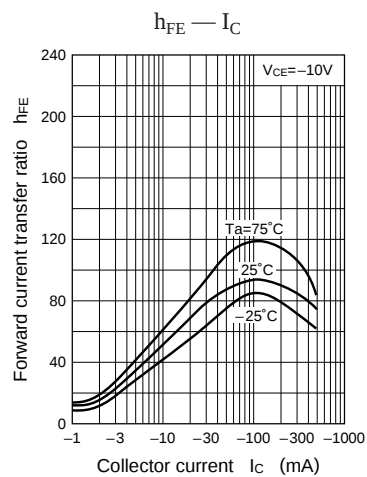
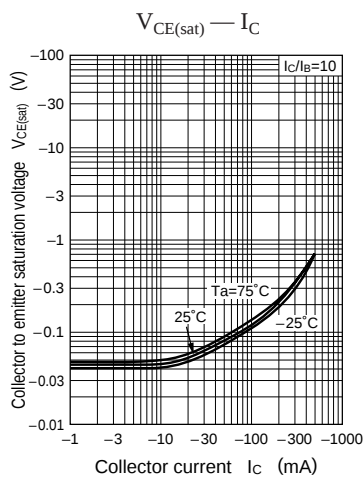
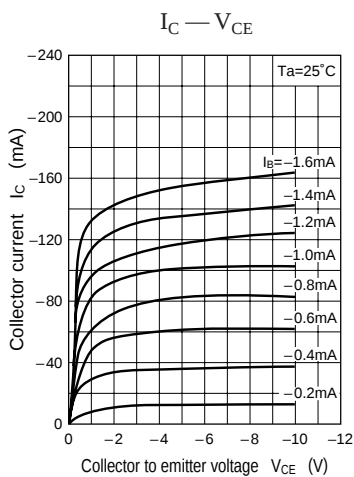
Characteristics charts of UN1123

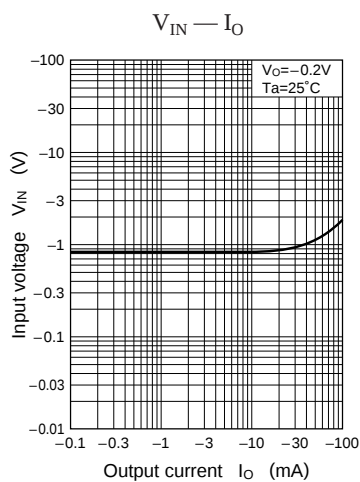
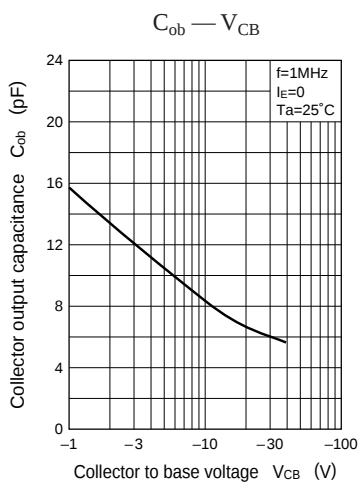


Characteristics charts of UN1124



Characteristics charts of UN112X





Characteristics charts of UN112Y

