

UN6121/6122/6123/6124/612X/612Y

Silicon PNP epitaxial planer transistor

For digital circuits

■ Features

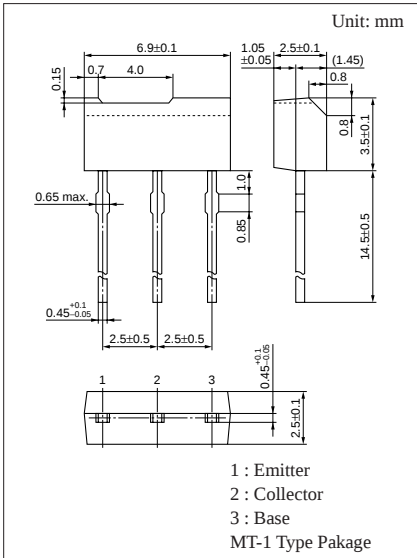
- Costs can be reduced through downsizing of the equipment and reduction of the number of parts.
- MT-1 type package, allowing supply with the radial taping.

■ Resistance by Part Number

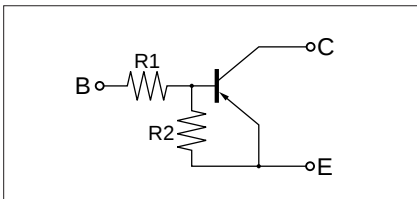
	(R ₁)	(R ₂)
• UN6121	2.2kΩ	2.2kΩ
• UN6122	4.7KΩ	4.7kΩ
• UN6123	10kΩ	10kΩ
• UN6124	2.2kΩ	10kΩ
• UN612X	0.27kΩ	5kΩ
• UN612Y	3.1kΩ	4.6kΩ

■ 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



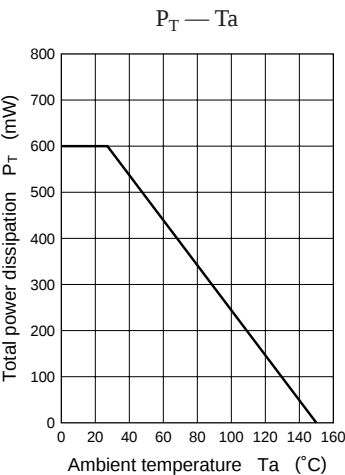
Internal Connection



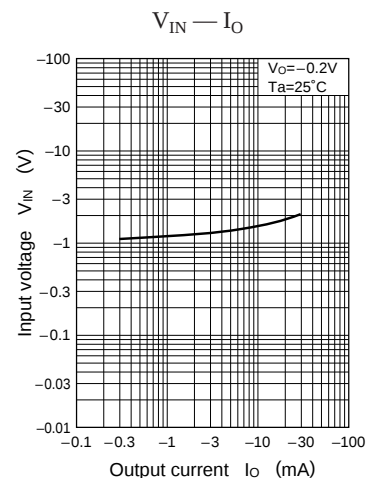
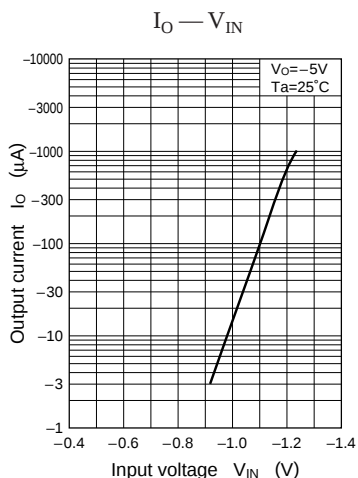
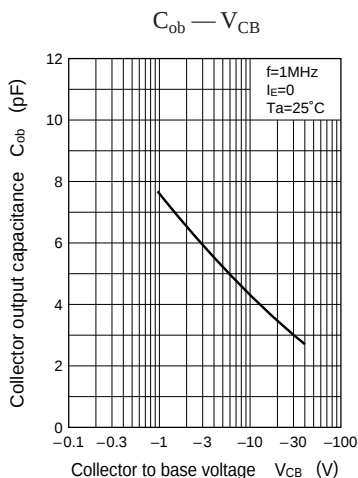
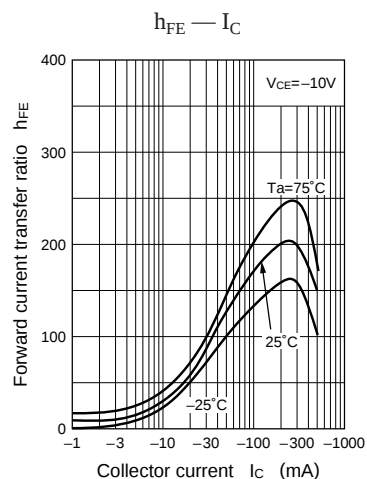
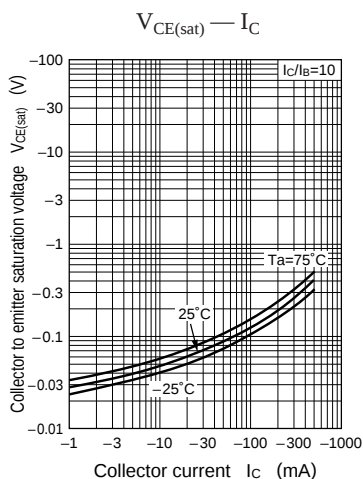
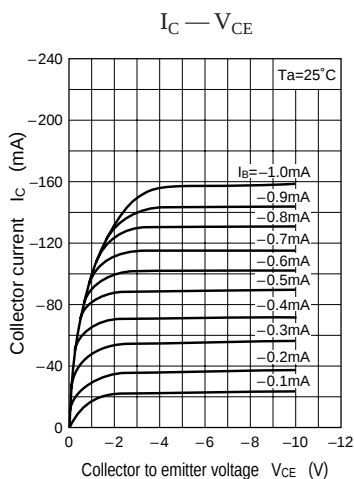
■ Electrical Characteristics (Ta=25°C)

Parameter		Symbol	Conditions	min	typ	max	Unit	
Collector cutoff current		I _{CBO}	V _{CB} = −50V, I _E = 0			−1	μA	
		UN612X	I _{CBO}	V _{CB} = −50V, I _E = 0				− 0.1
Collector cutoff current		I _{CEO}	V _{CE} = −50V, I _B = 0			−1	μA	
		UN612X	I _{CEO}	V _{CE} = −50V, I _B = 0				− 0.5
Emitter cutoff current	UN6121	I _{EBO}	V _{EE} = −6V, I _C = 0			−5	mA	
	UN6122/612X/612Y					−2		
	UN6123/6124					−1		
Collector to base voltage		V _{CBO}	I _C = −10μA, I _E = 0	−50			V	
Collector to emitter voltage		V _{CEO}	I _C = −2mA, I _B = 0	−50			V	
Forward current transfer ratio	UN6121	h _{FE}	V _{CE} = −10V, I _C = −100mA	40				
	UN6122/612Y			50				
	UN6123/6124			60				
	UN612X			20				
Collector to emitter saturation voltage		V _{CE(sat)}	I _C = −100mA, I _B = −5mA			− 0.25	V	
		UN612X	V _{CE(sat)}	I _C = −10mA, I _B = − 0.3mA				− 0.25
		UN612Y	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		80		MHz	
Input resistance	UN6121	R ₁		(−30%)	2.2	(+30%)	kΩ	
	UN6122				4.7			
	UN6123				10			
	UN612X				0.27			
	UN612Y				3.1			
Resistance ratio		R ₁ /R ₂			0.8	1.0	1.2	
				UN6124	0.17	0.22		0.27
				UN612X	0.043	0.054		0.065
				UN612Y		0.67		

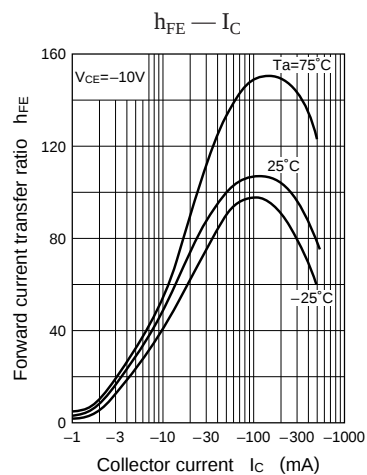
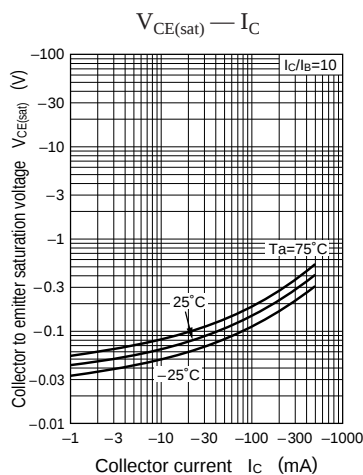
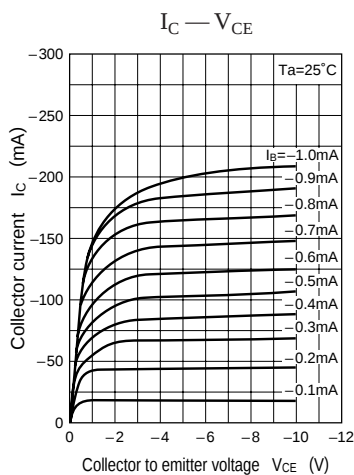
Common characteristics chart

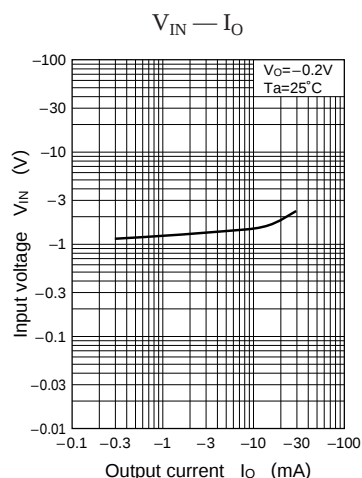
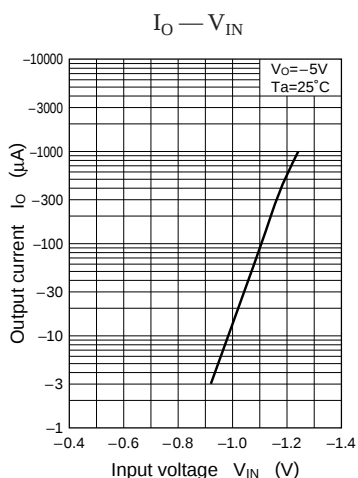
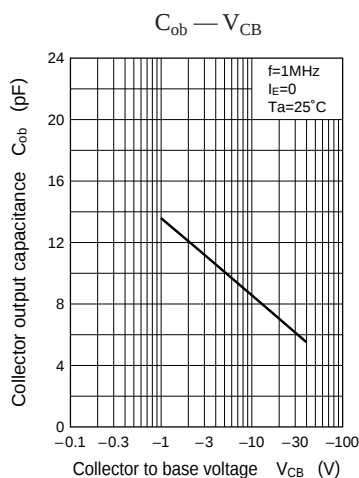


Characteristics charts of UN6121

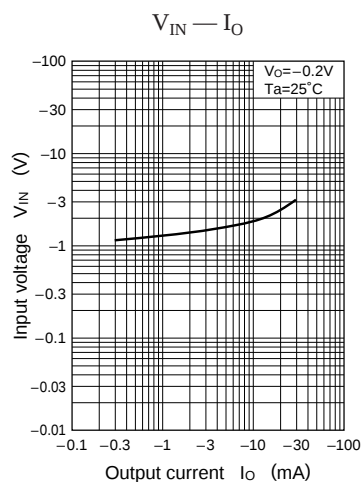
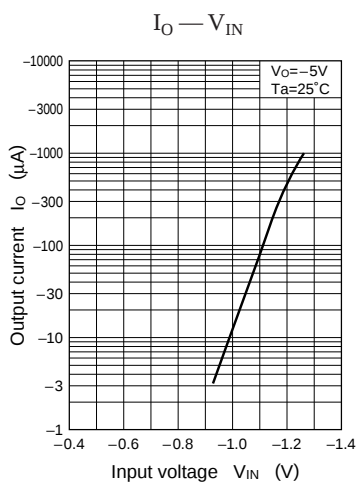
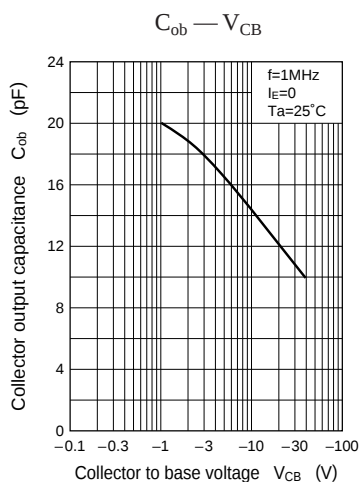
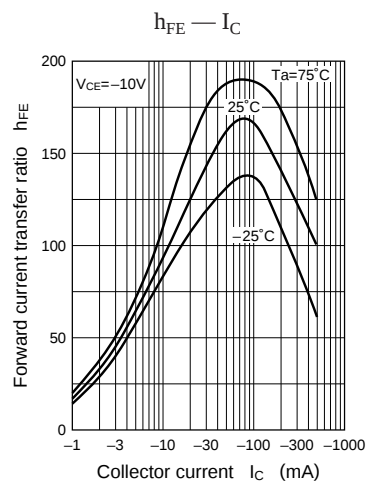
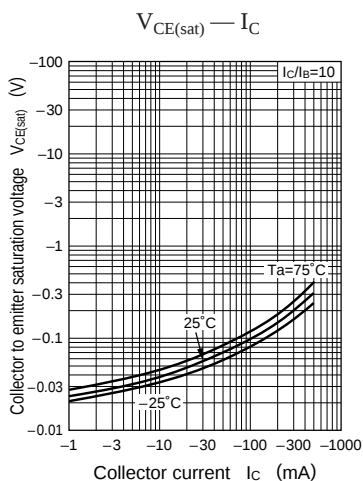
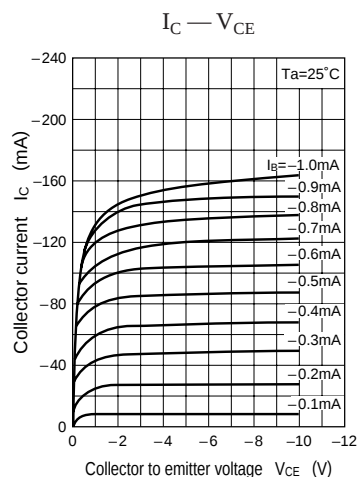


Characteristics charts of UN6122

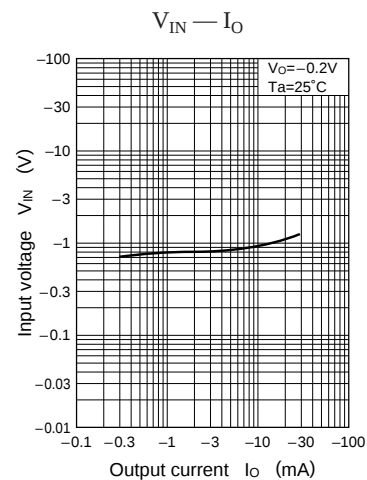
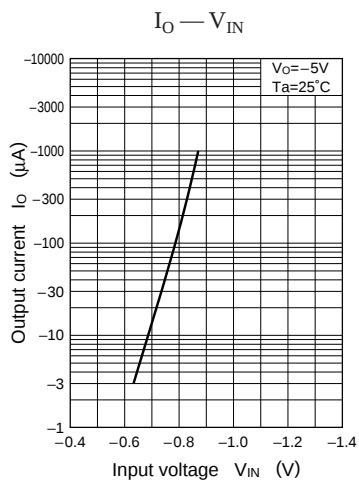
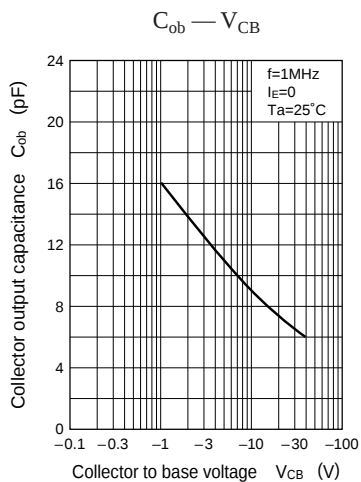
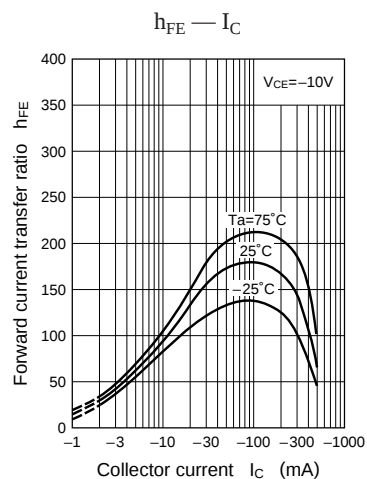
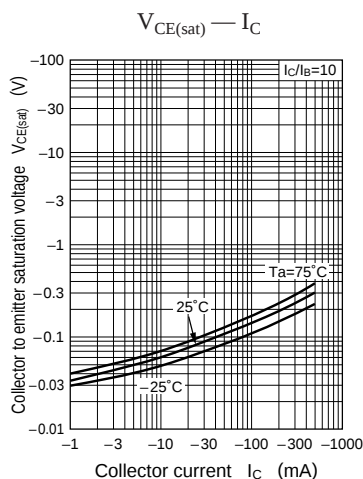
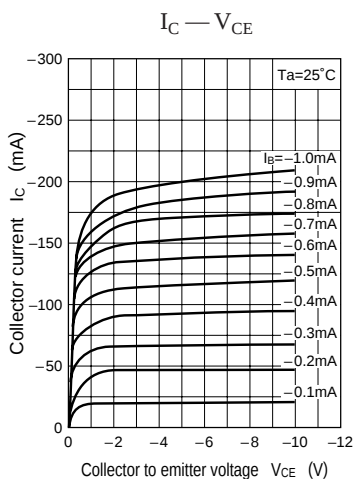




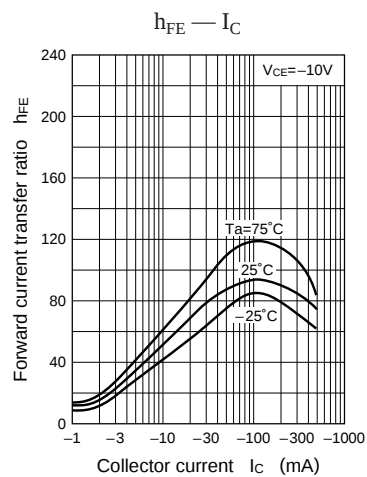
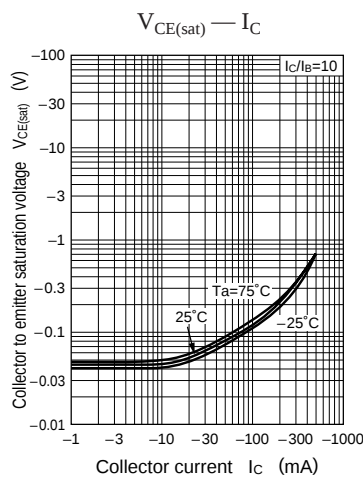
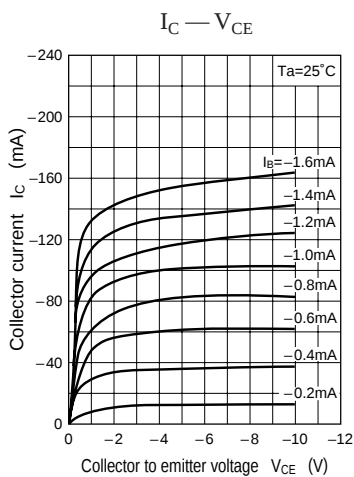
Characteristics charts of UN6123

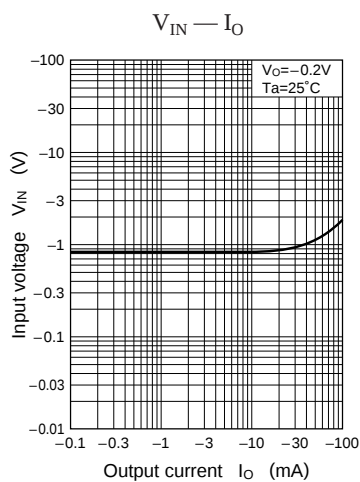
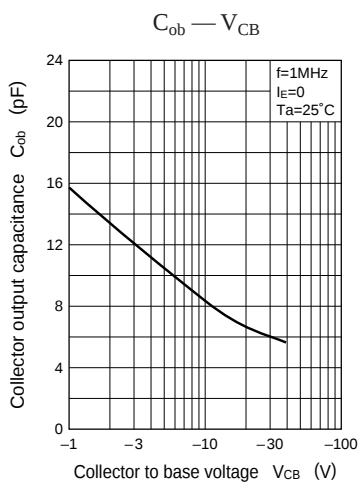


Characteristics charts of UN6124



Characteristics charts of UN612X





Characteristics charts of UN612Y

