

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

Silicon PNP epitaxial planer transistor

For digital circuits

Features

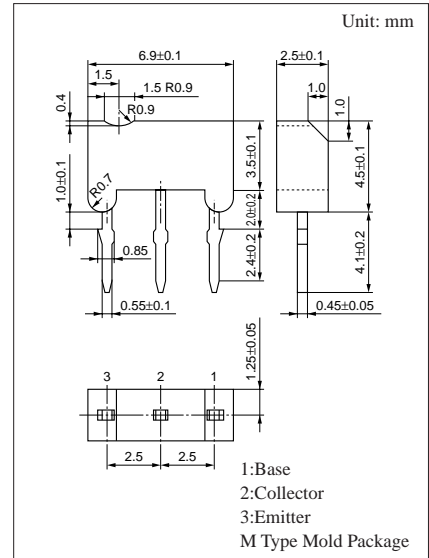
- Costs can be reduced through downsizing of the equipment and reduction of the number of parts.
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

Resistance by Part Number

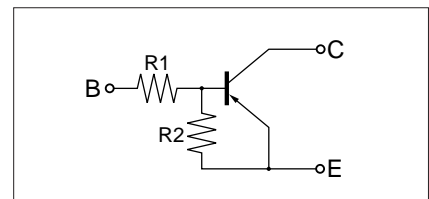
	(R ₁)	(R ₂)
• UN1121	2.2kΩ	2.2kΩ
• UN1122	4.7kΩ	4.7kΩ
• UN1123	10kΩ	10kΩ
• UN1124	2.2kΩ	10kΩ
• UN112X	0.27kΩ	5kΩ
• UN112Y	3.1kΩ	4.6kΩ

Absolute Maximum Ratings (T_a=25°C)

Parameter	Symbol	Rated	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



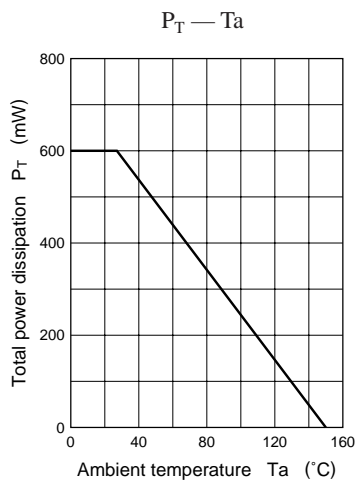
Internal Connection



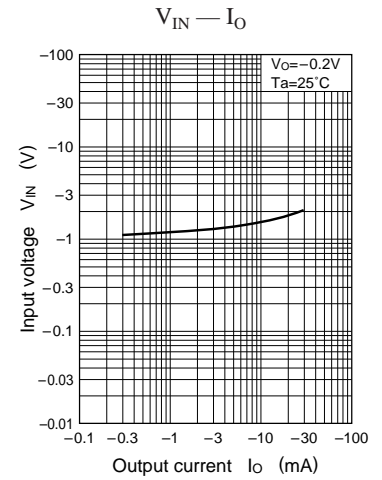
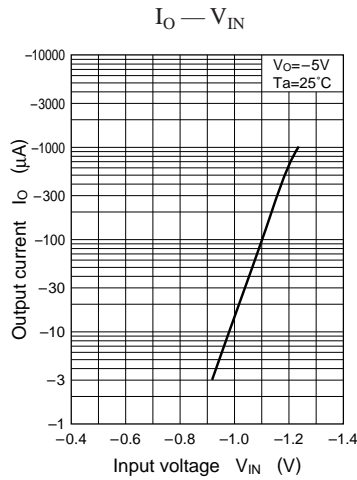
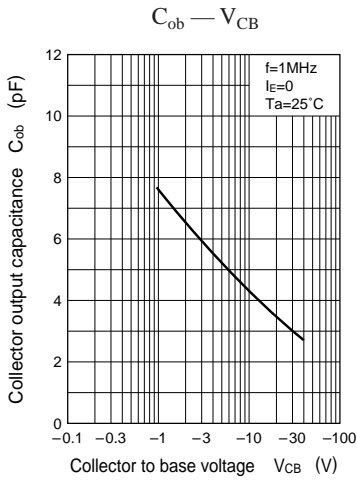
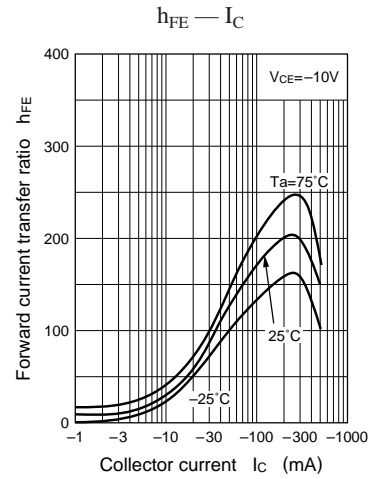
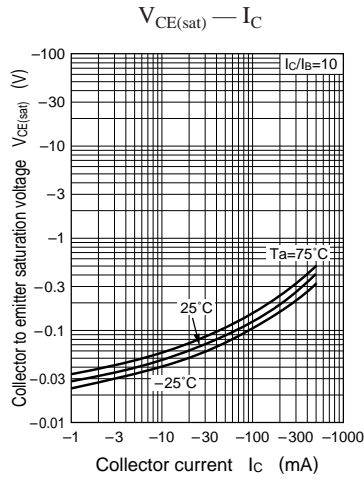
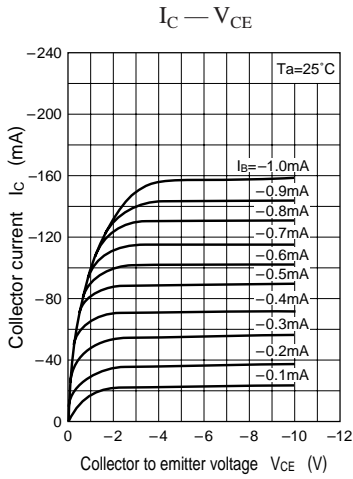
■ Electrical Characteristics (Ta=25°C)

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}	$I_C = -10\mu A, I_E = 0$	-50			V	
Forward 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}	$V_{CC} = -5V, V_B = -0.5V, R_L = 500\Omega$	-4.9			V	
Output voltage low level		V_{OL}	$V_{CC} = -5V, V_B = -3.5V, R_L = 500\Omega$			-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%)	k Ω	
	UN1122				4.7			
	UN1123				10			
	UN112X				0.27			
	UN112Y				3.1			
Resistance ratio		R_1/R_2			0.8	1.0	1.2	
					UN1124		0.22	
					UN112X		0.054	
					UN112Y		0.67	

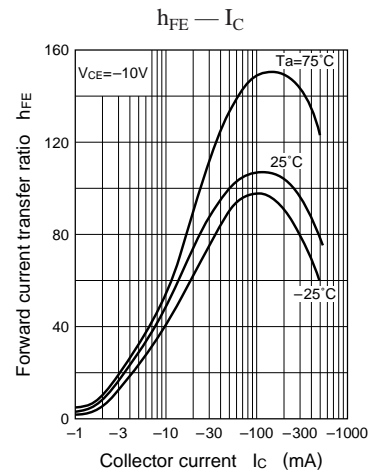
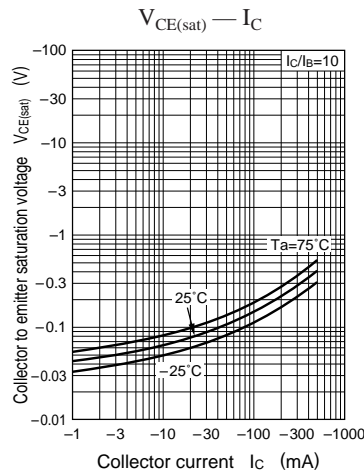
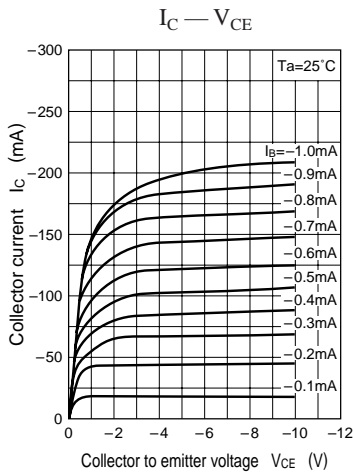
Common characteristics chart

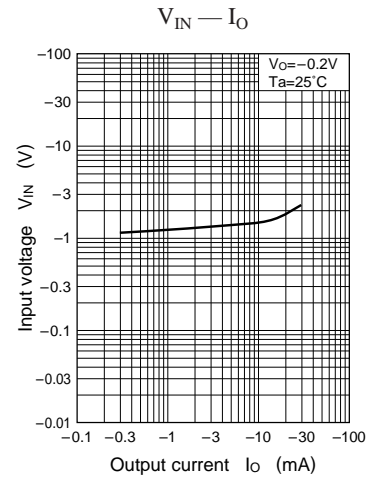
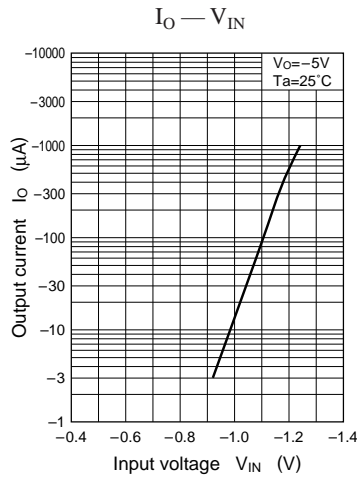
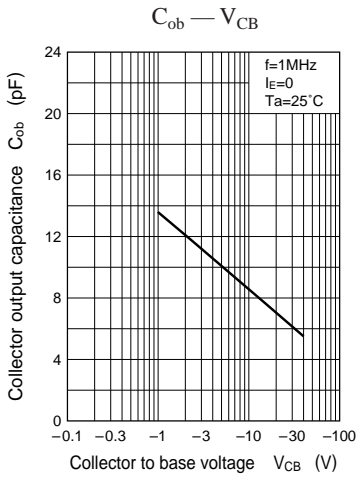


Characteristics charts of UN1121

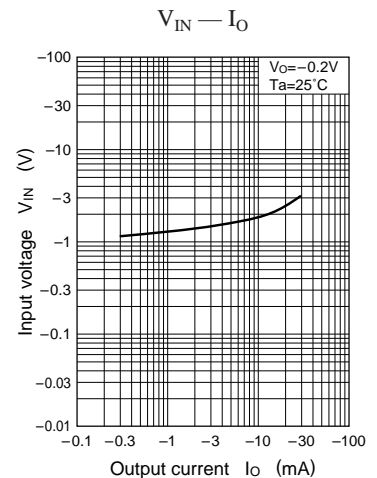
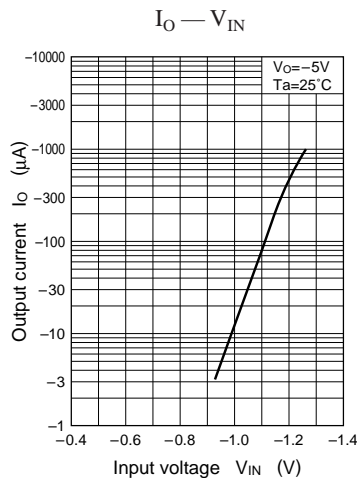
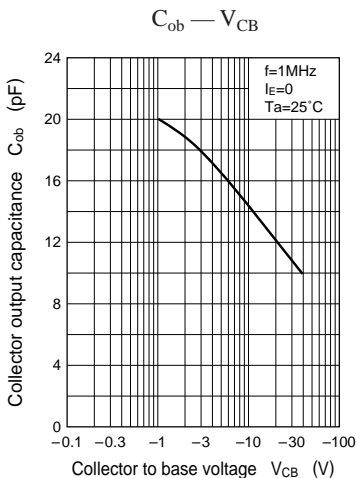
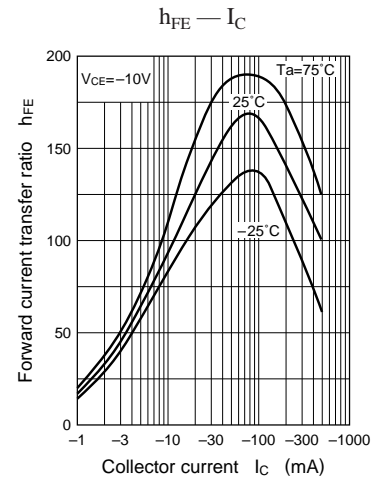
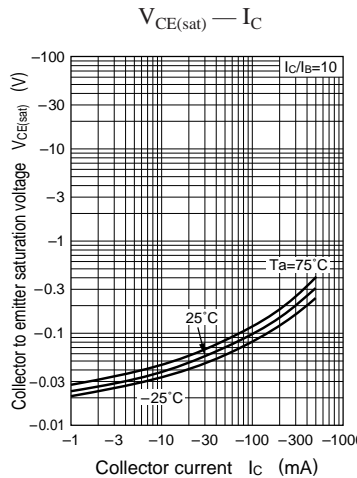
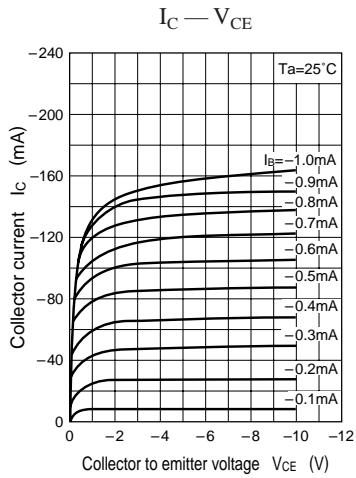


Characteristics charts of UN1122

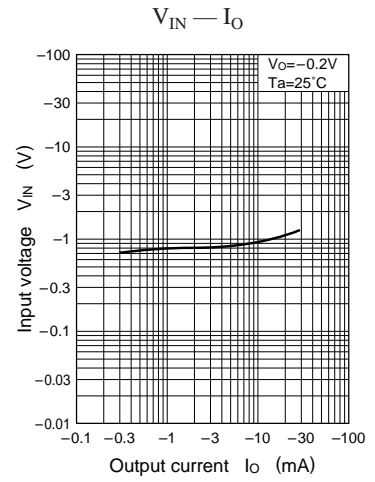
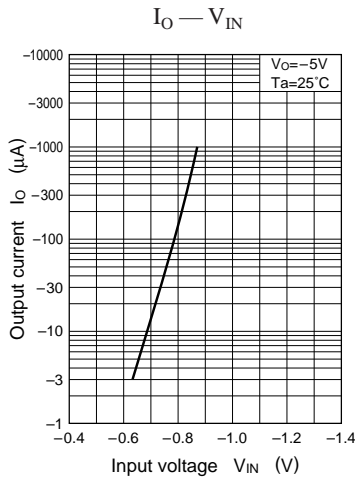
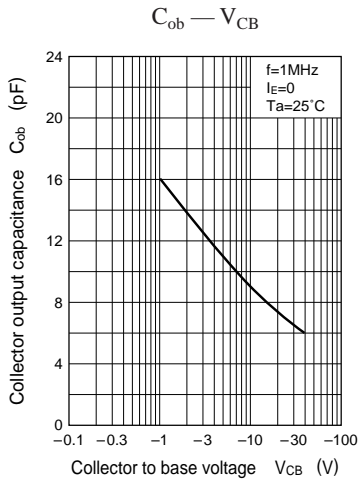
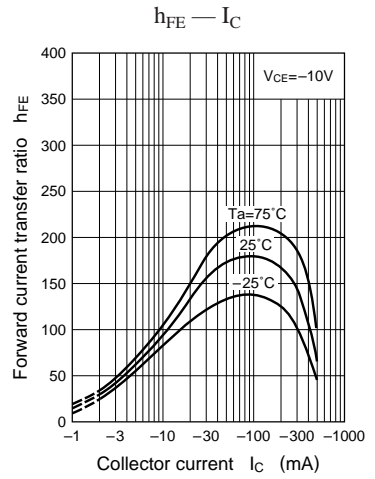
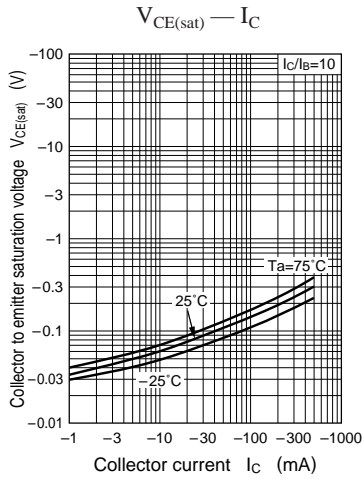
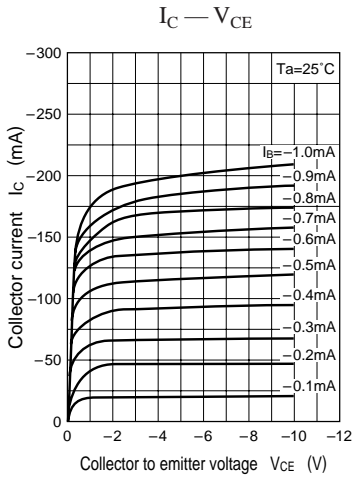




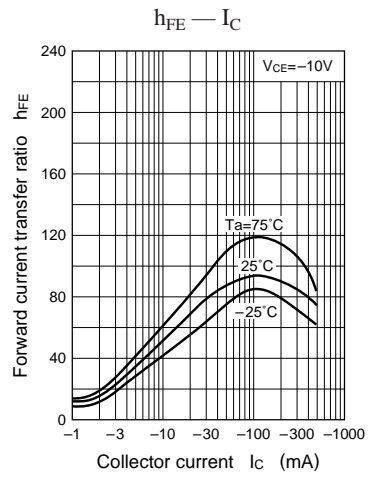
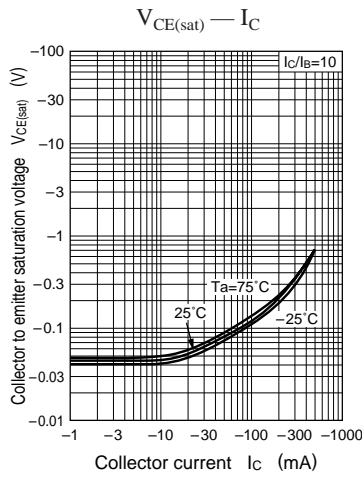
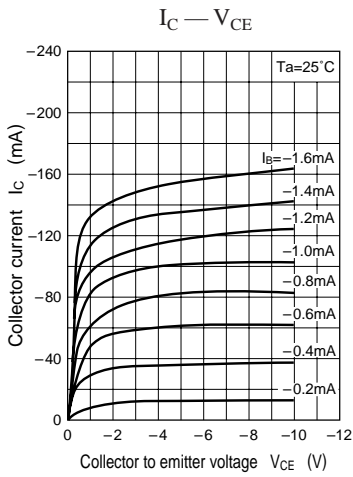
Characteristics charts of UN1123

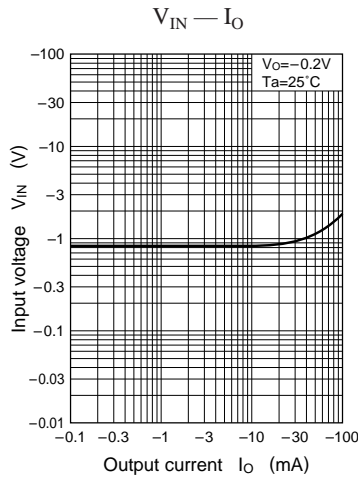
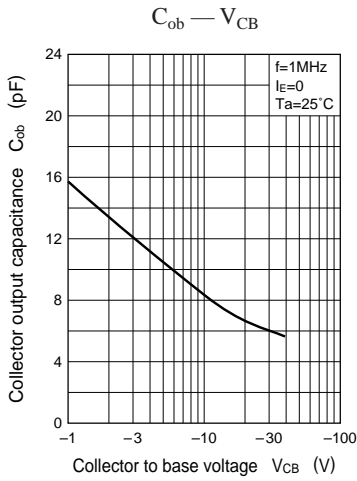


Characteristics charts of UN1124



Characteristics charts of UN112X





Characteristics charts of UN112Y

