

UN2121/2122/2123/2124/212X/212Y

Silicon PNP epitaxial planer transistor

For digital circuits

■ Features

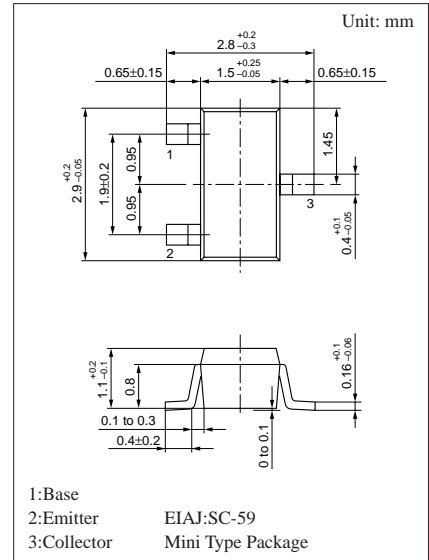
- Costs can be reduced through downsizing of the equipment and reduction of the number of parts.
- Mini type package, allowing downsizing of the equipment and automatic insertion through tape packing and magazine packing.

■ Resistance by Part Number

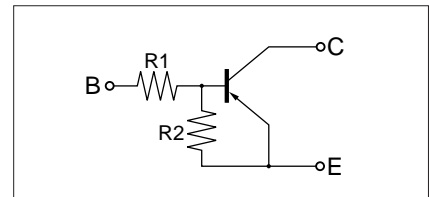
	Marking Symbol	(R ₁)	(R ₂)
• UN2121	7A	2.2kΩ	2.2kΩ
• UN2122	7B	4.7kΩ	4.7kΩ
• UN2123	7C	10kΩ	10kΩ
• UN2124	7D	2.2kΩ	10kΩ
• UN212X	7I	0.27kΩ	5kΩ
• UN212Y	7Y	3.1kΩ	4.6kΩ

■ 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	200	mW
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C



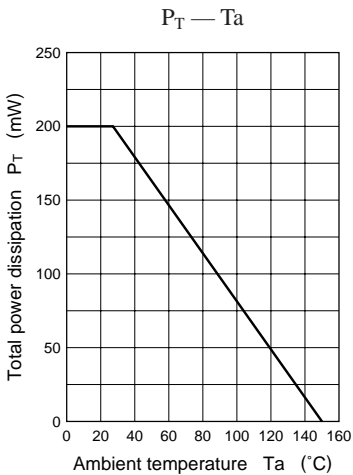
Internal Connection



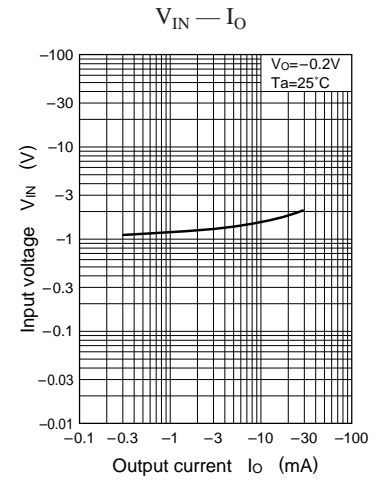
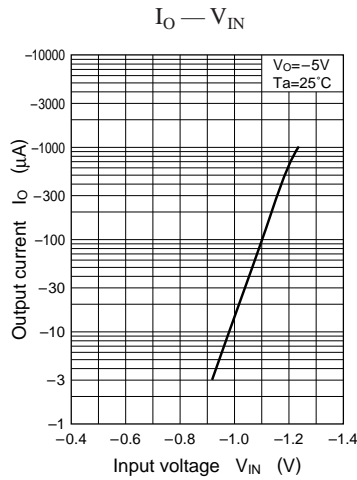
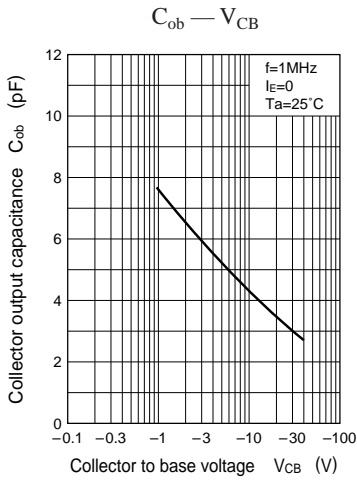
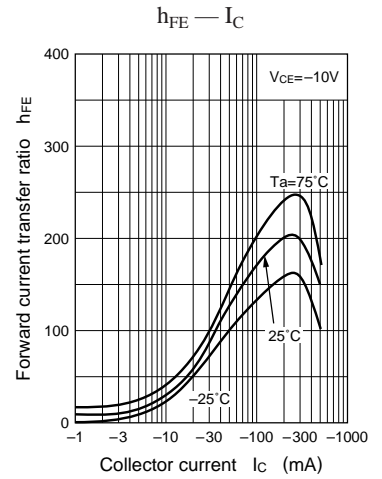
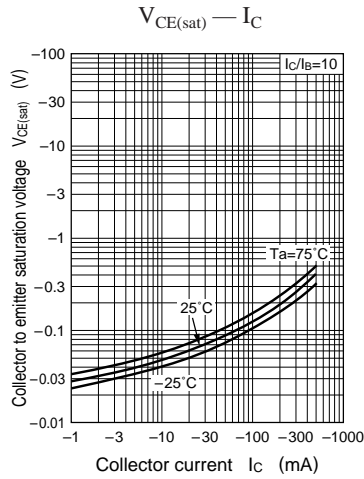
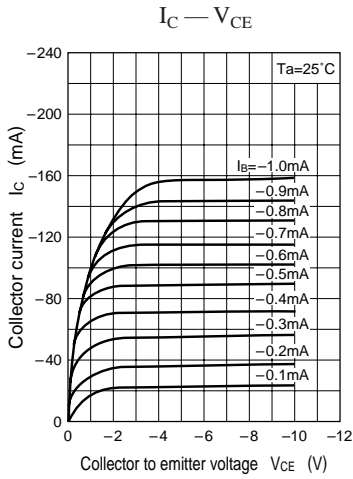
■ Electrical Characteristics (Ta=25°C)

Parameter		Symbol	Conditions	min	typ	max	Unit	
Collector cutoff current		I_{CBO}	$V_{CB} = -50V, I_E = 0$			-1	μA	
	UN212X	I_{CBO}	$V_{CB} = -50V, I_E = 0$			-0.1		
Collector cutoff current		I_{CEO}	$V_{CE} = -50V, I_B = 0$			-1	μA	
	UN212X	I_{CEO}	$V_{CE} = -50V, I_B = 0$			-0.5		
Emitter cutoff current	UN2121	I_{EBO}	$V_{EB} = -6V, I_C = 0$			-5	mA	
	UN2122/212X/212Y					-2		
	UN2123/2124					-1		
Collector to base voltage		V_{CBO}	$I_C = -10\mu A, I_E = 0$	-50			V	
Forward transfer ratio	UN2121	h_{FE}	$V_{CE} = -10V, I_C = -100mA$	40				
	UN2122/212Y			50				
	UN2123/2124			60				
	UN212X			20				
Collector to emitter saturation voltage		$V_{CE(sat)}$	$I_C = -100mA, I_B = -5mA$			-0.25	V	
		UN212X	$V_{CE(sat)}$	$I_C = -10mA, I_B = -0.3mA$				-0.25
		UN212Y	$V_{CE(sat)}$	$I_C = -50mA, I_B = -5mA$				-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	UN2121	R_1		(-30%)	2.2	(+30%)	k Ω	
	UN2122				4.7			
	UN2123				10			
	UN212X				0.27			
	UN212Y				3.1			
Resistance ratio		R_1/R_2			0.8	1.0	1.2	
						0.22		
						0.054		
						0.67		

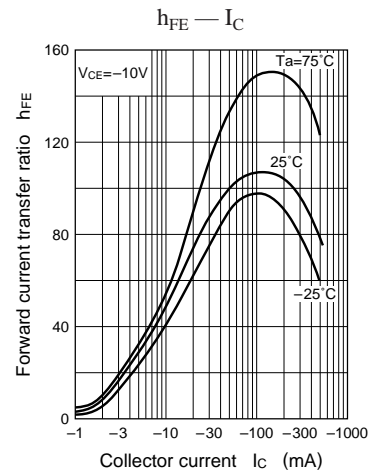
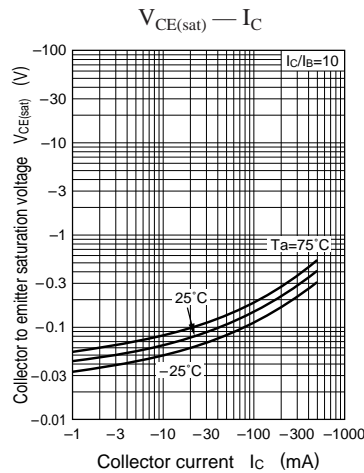
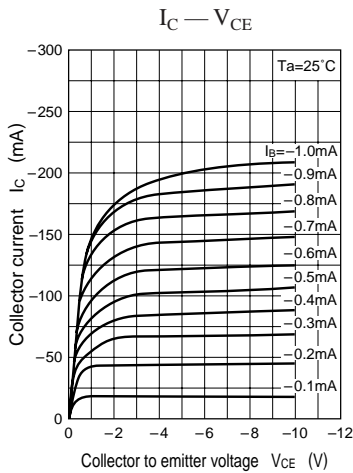
Common characteristics chart

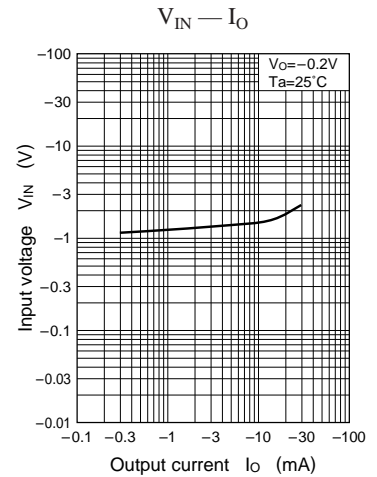
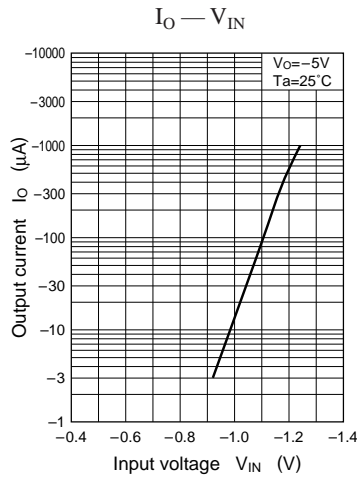
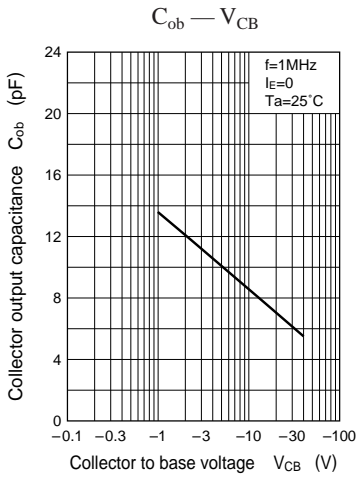


Characteristics charts of UN2121

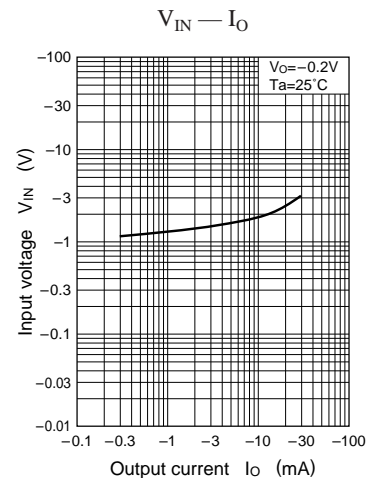
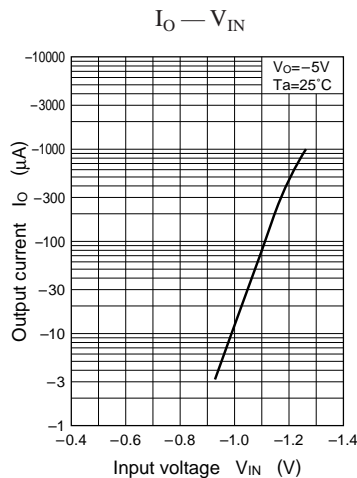
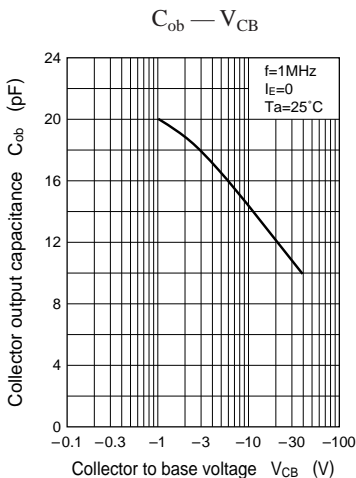
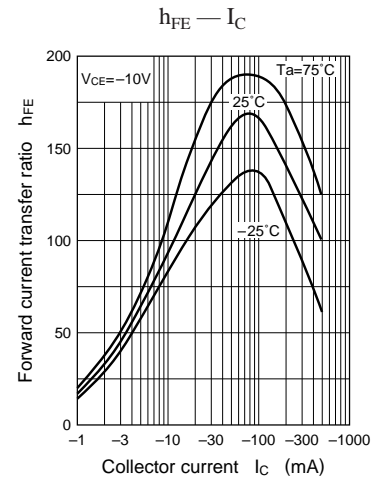
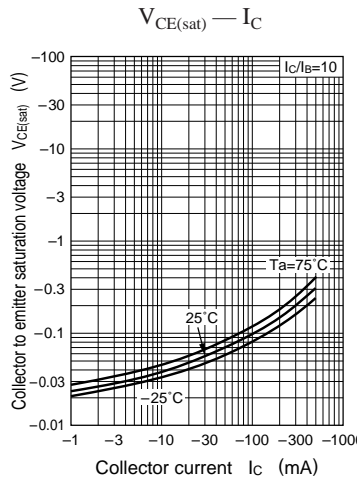
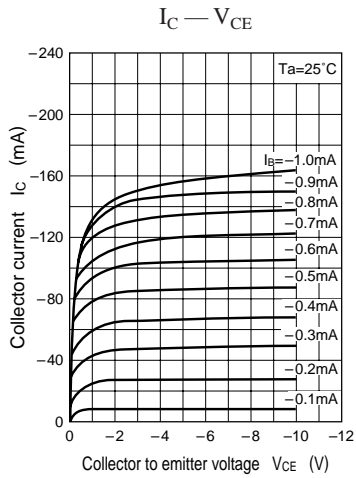


Characteristics charts of UN2122

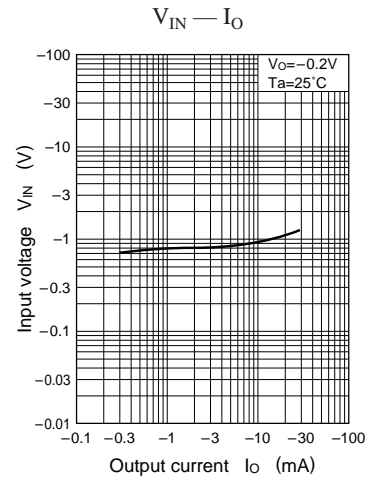
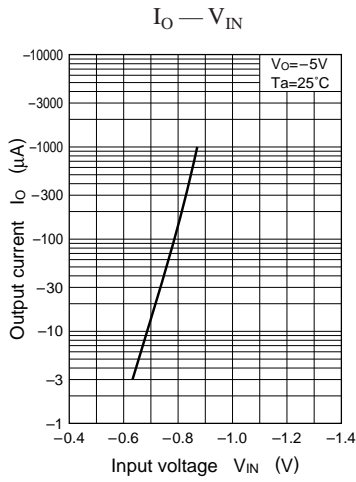
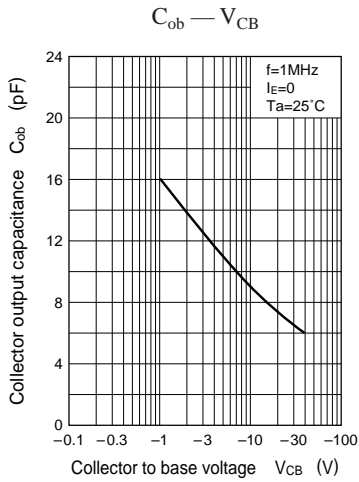
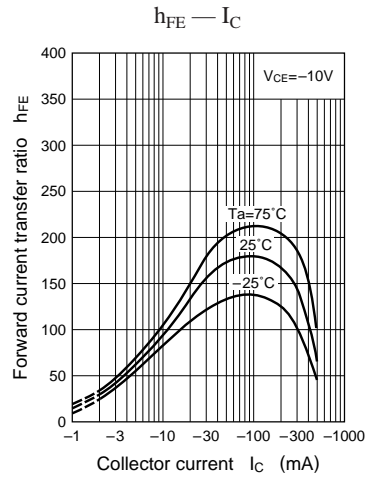
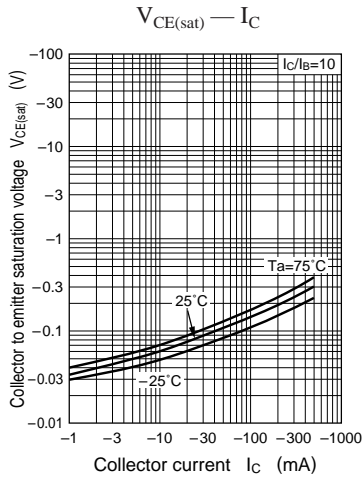
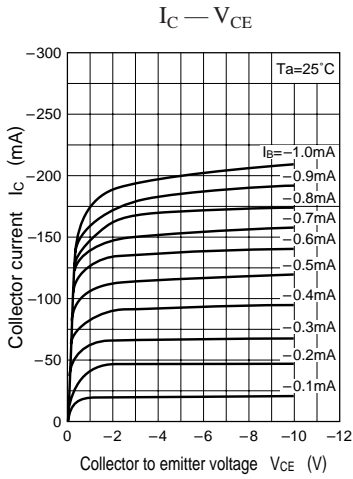




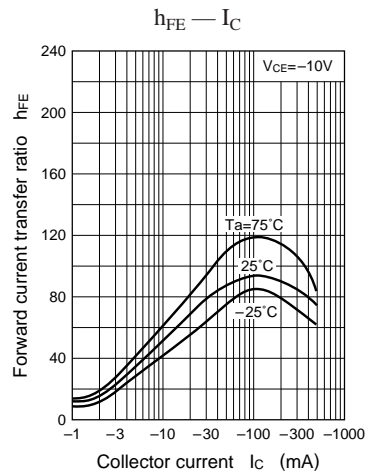
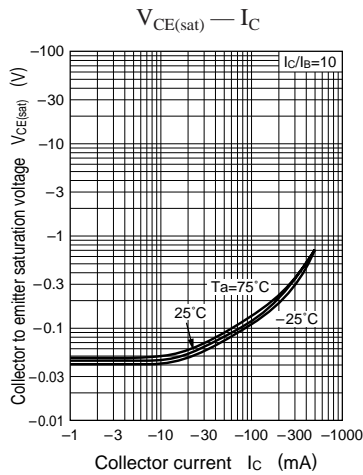
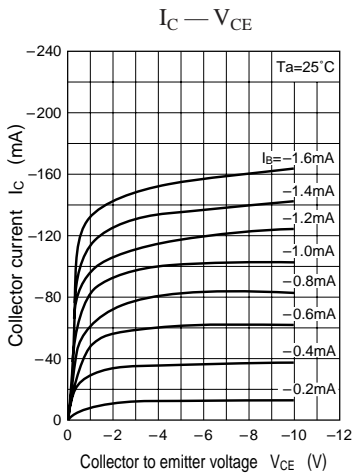
Characteristics charts of UN2123

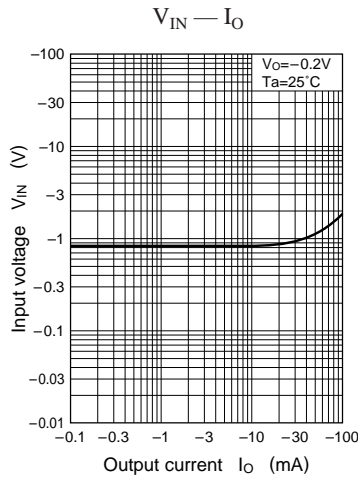
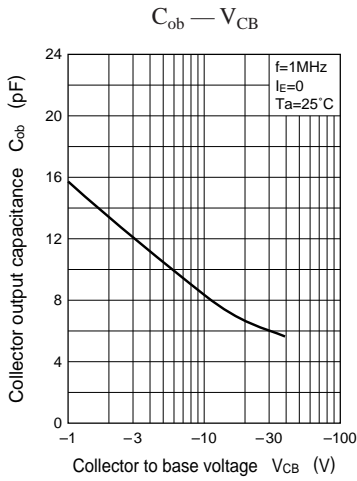


Characteristics charts of UN2124



Characteristics charts of UN212X





Characteristics charts of UN212Y

