

# UNR6121/6122/6123/6124/612X/612Y (UN6121/6122/6123/6124/612X/612Y)

Silicon PNP epitaxial planer transistor

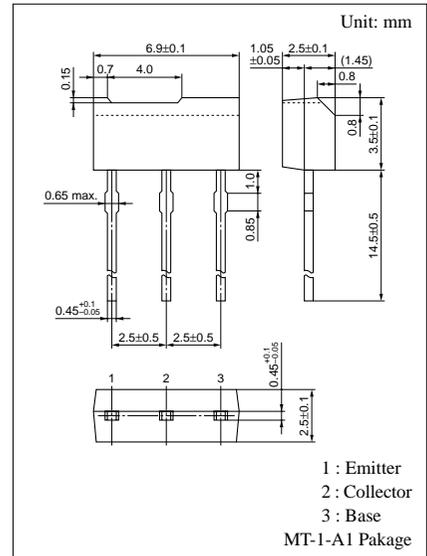
For digital circuits

## ■ 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

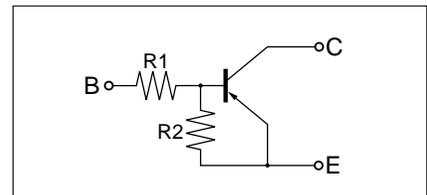
	(R <sub>1</sub> )	(R <sub>2</sub> )
• UNR6121	2.2kΩ	2.2kΩ
• UNR6122	4.7kΩ	4.7kΩ
• UNR6123	10kΩ	10kΩ
• UNR6124	2.2kΩ	10kΩ
• UNR612X	0.27kΩ	5kΩ
• UNR612Y	3.1kΩ	4.6kΩ



## ■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V <sub>CBO</sub>	-50	V
Collector to emitter voltage	V <sub>CEO</sub>	-50	V
Collector current	I <sub>C</sub>	-500	mA
Total power dissipation	P <sub>T</sub>	600	mW
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

## Internal Connection

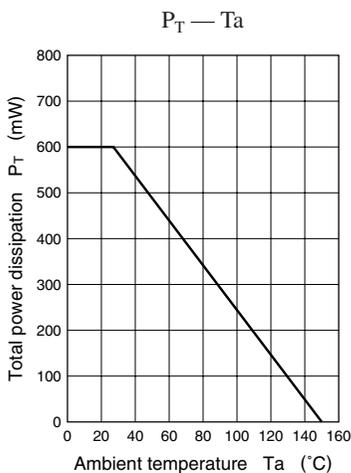


Note) The Part numbers in the Parenthesis show conventional part number.

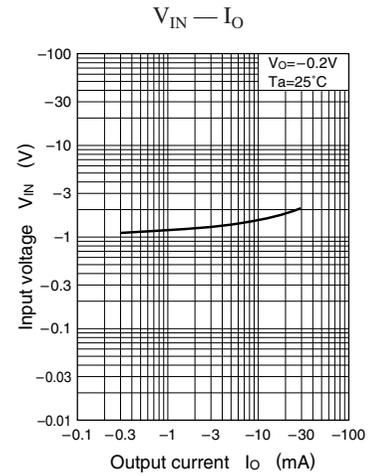
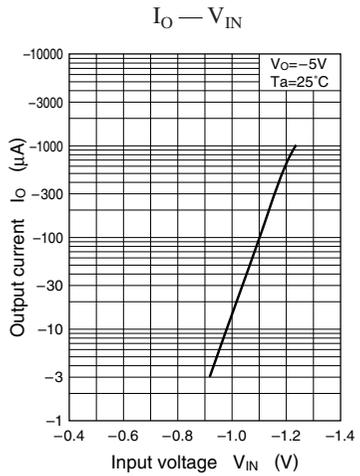
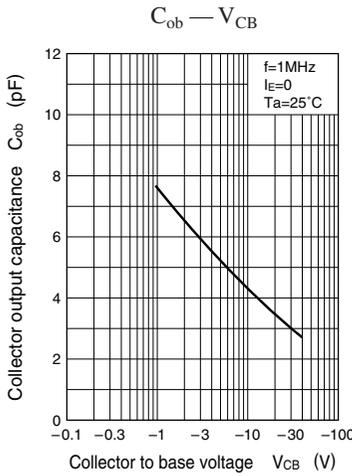
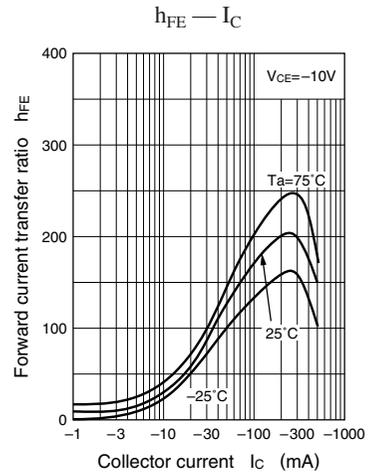
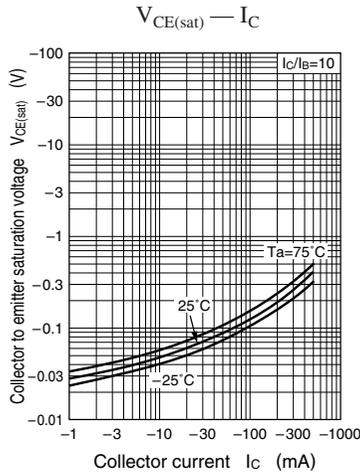
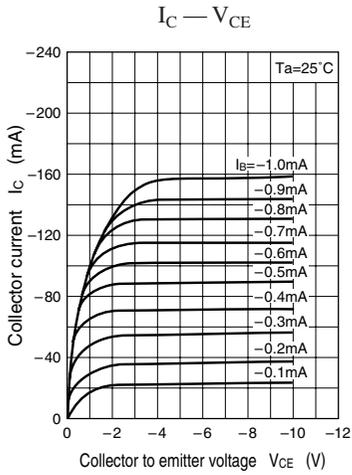
■ Electrical Characteristics (Ta=25°C)

Parameter		Symbol	Conditions	min	typ	max	Unit		
Collector cutoff current		$I_{CBO}$	$V_{CB} = -50V, I_E = 0$			-1	$\mu A$		
	UNR612X	$I_{CBO}$	$V_{CB} = -50V, I_E = 0$			-0.1			
Collector cutoff current		$I_{CEO}$	$V_{CE} = -50V, I_B = 0$			-1	$\mu A$		
	UNR612X	$I_{CEO}$	$V_{CE} = -50V, I_B = 0$			-0.5			
Emitter cutoff current	UNR6121	$I_{EBO}$	$V_{EE} = -6V, I_C = 0$			-5	mA		
	UNR6122/612X/612Y					-2			
	UNR6123/6124					-1			
Collector to base voltage		$V_{CBO}$	$I_C = -10\mu A, I_E = 0$	-50			V		
Collector to emitter voltage		$V_{CEO}$	$I_C = -2mA, I_B = 0$	-50			V		
Forward current transfer ratio	UNR6121	$h_{FE}$	$V_{CE} = -10V, I_C = -100mA$	40					
	UNR6122/612Y			50					
	UNR6123/6124			60					
	UNR612X			20					
Collector to emitter saturation voltage		$V_{CE(sat)}$	$I_C = -100mA, I_B = -5mA$			-0.25	V		
		UNR612X	$V_{CE(sat)}$	$I_C = -10mA, I_B = -0.3mA$				-0.25	
		UNR612Y	$V_{CE(sat)}$	$I_C = -50mA, I_B = -5mA$				-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		$f_T$	$V_{CB} = -10V, I_E = 50mA, f = 200MHz$		80		MHz		
Input resistance	UNR6121	$R_1$		(-30%)	2.2	(+30%)	k $\Omega$		
	UNR6122				4.7				
	UNR6123				10				
	UNR612X				0.27				
	UNR612Y				3.1				
Resistance ratio		$R_1/R_2$			0.8	1.0	1.2		
					UNR6124	0.17		0.22	0.27
					UNR612X	0.043		0.054	0.065
					UNR612Y			0.67	

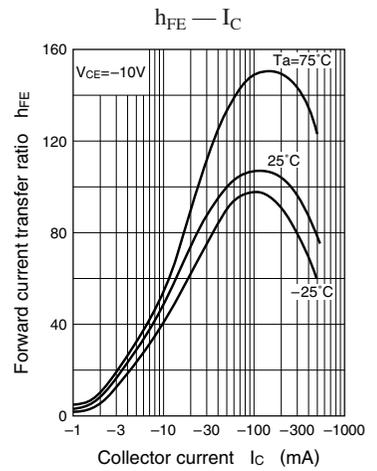
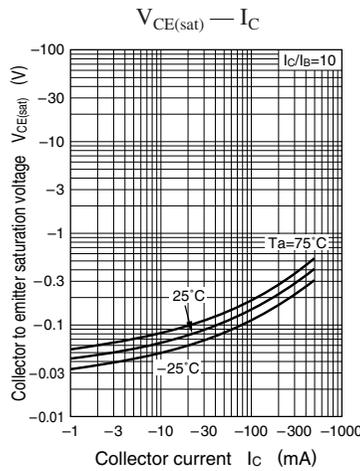
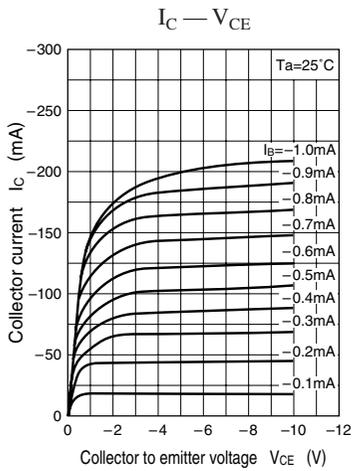
Common characteristics chart

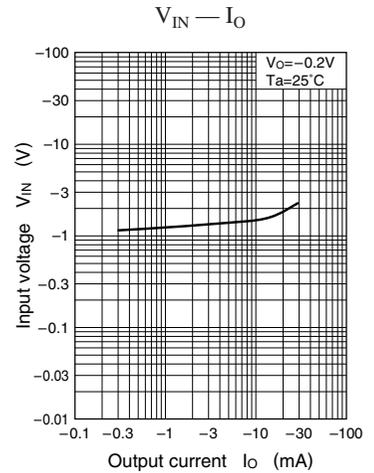
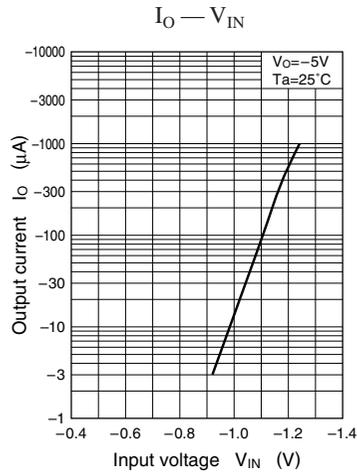
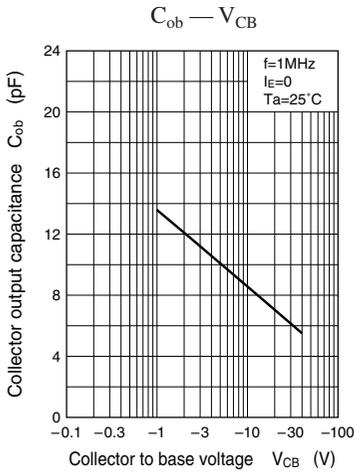


Characteristics charts of UNR6121

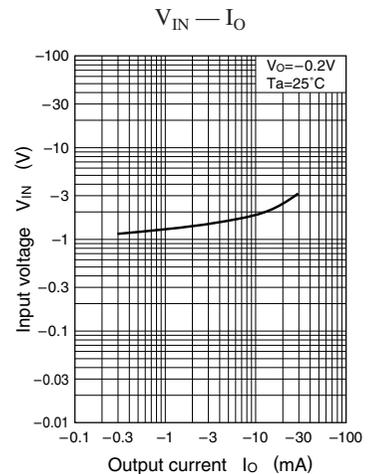
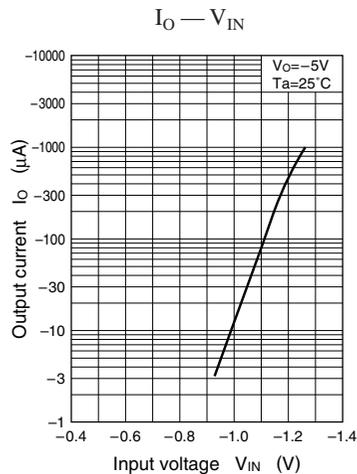
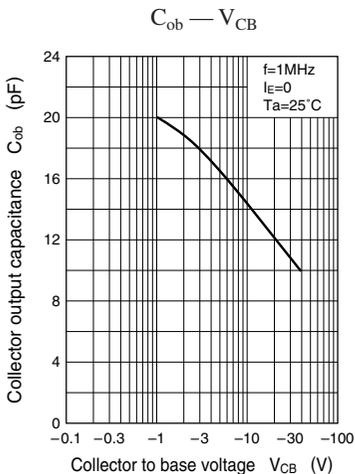
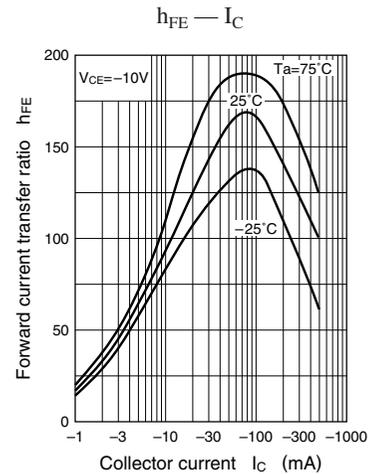
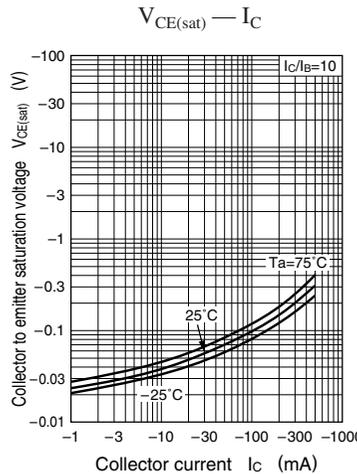
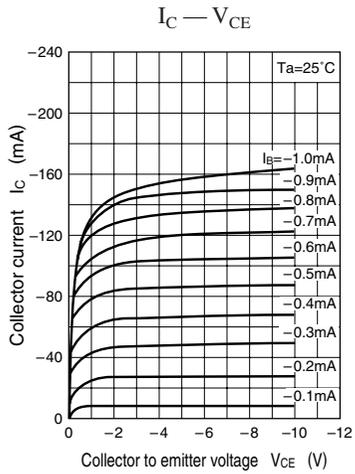


Characteristics charts of UNR6122

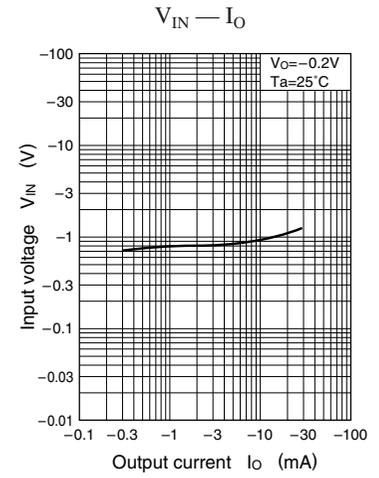
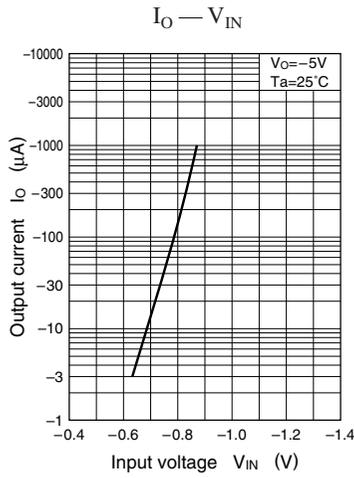
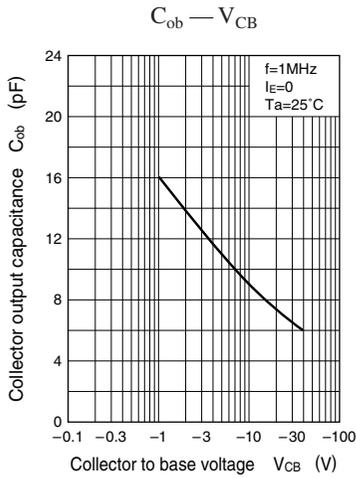
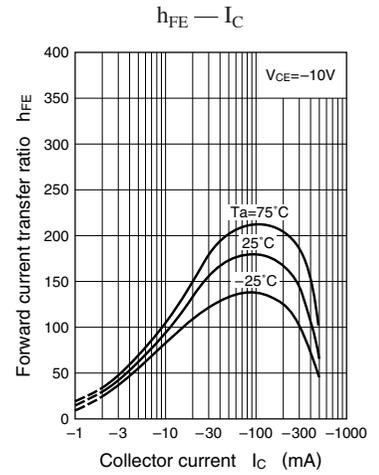
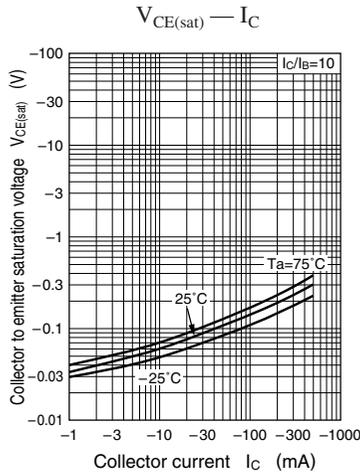
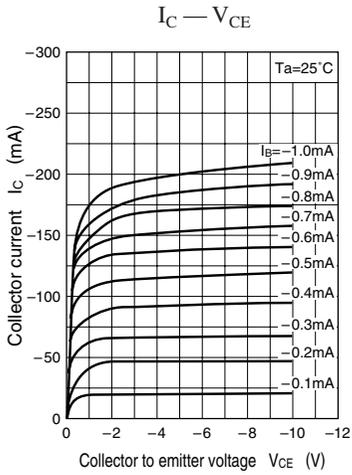




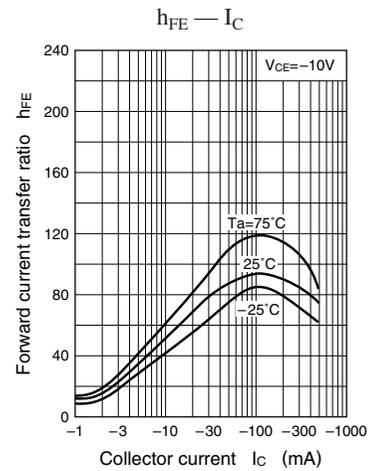
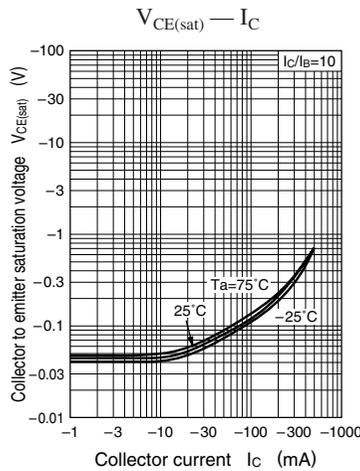
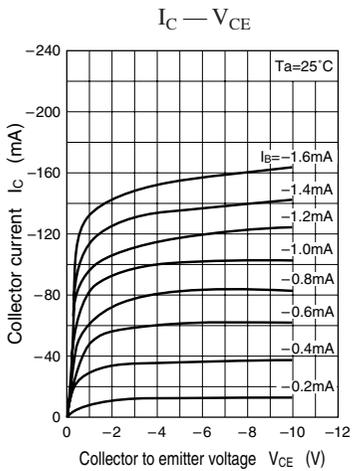
Characteristics charts of UNR6123

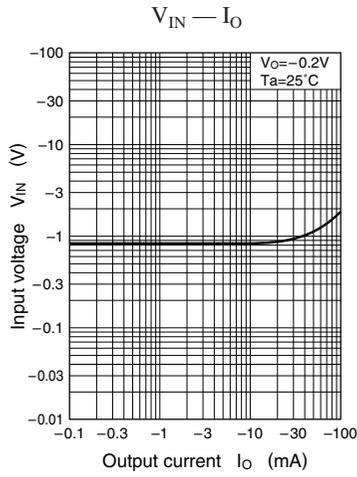
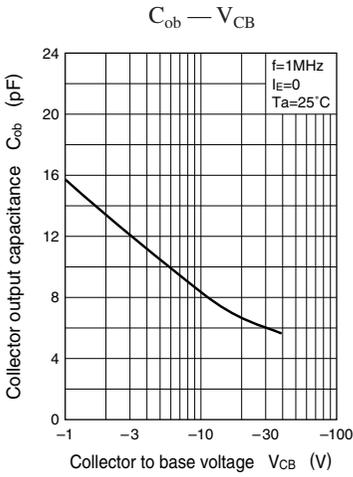


Characteristics charts of UNR6124

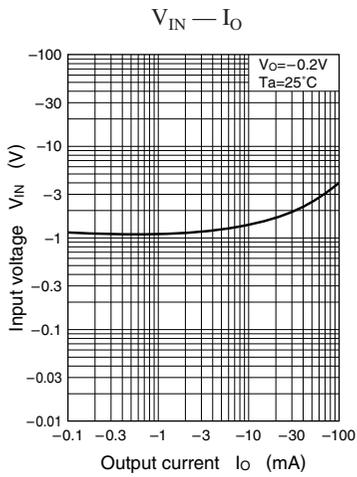
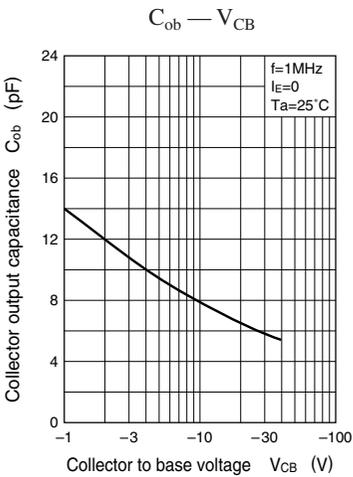
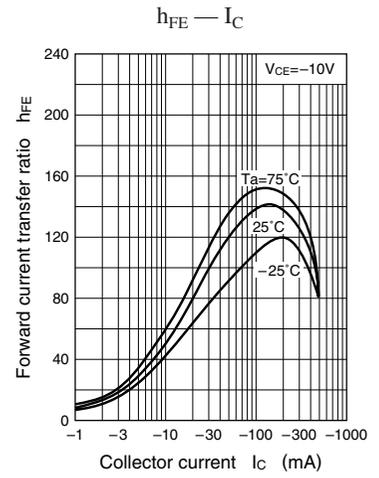
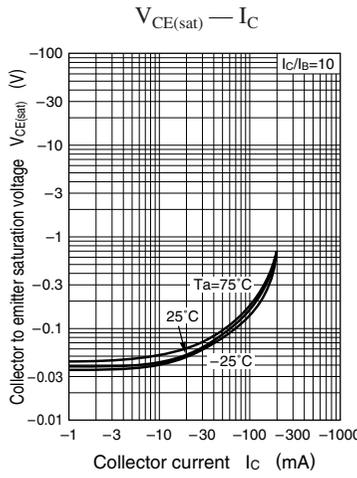
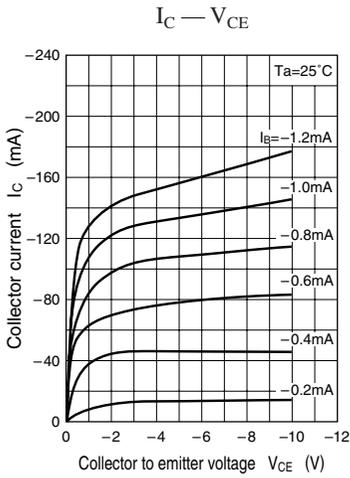


Characteristics charts of UNR612X





Characteristics charts of UNR612Y



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