

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

Silicon PNP epitaxial planer transistor

For digital circuits

Features

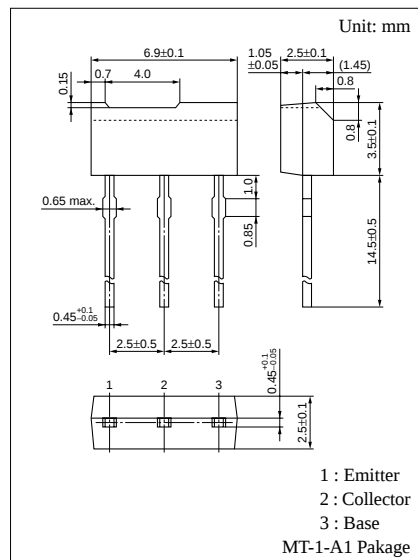
- Costs can be reduced through downsizing of the equipment and reduction of the number of parts.
- MT-1 type package, allowing supply with the radial taping.

Resistance by Part Number

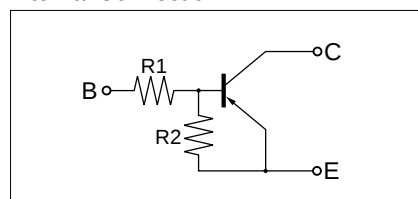
	(R ₁)	(R ₂)
• UNR6121	2.2kΩ	2.2kΩ
• UNR6122	4.7kΩ	4.7kΩ
• UNR6123	10kΩ	10kΩ
• UNR6124	2.2kΩ	10kΩ
• UNR612X	0.27kΩ	5kΩ
• UNR612Y	3.1kΩ	4.6kΩ

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V _{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

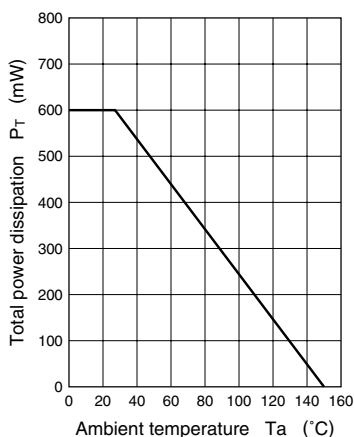


Note) The Part numbers in the Parenthesis show conventional part number.

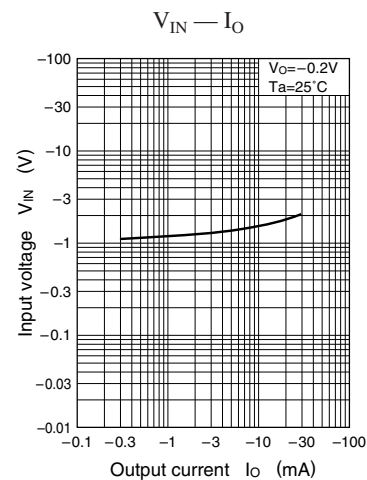
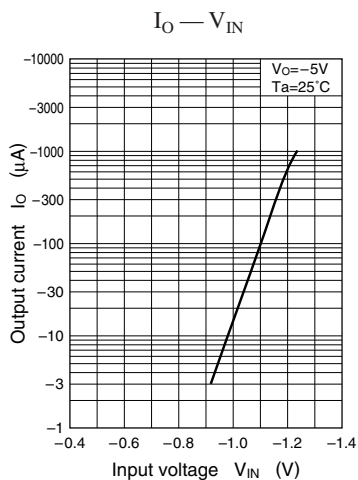
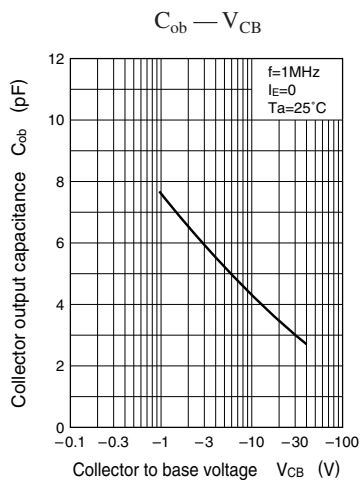
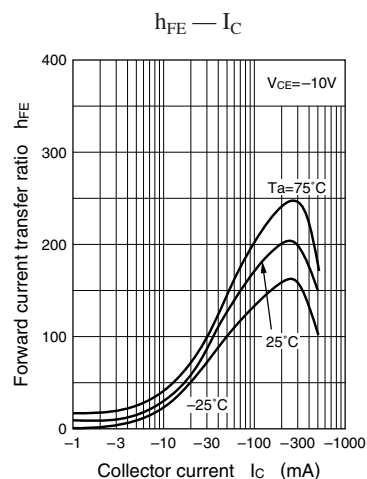
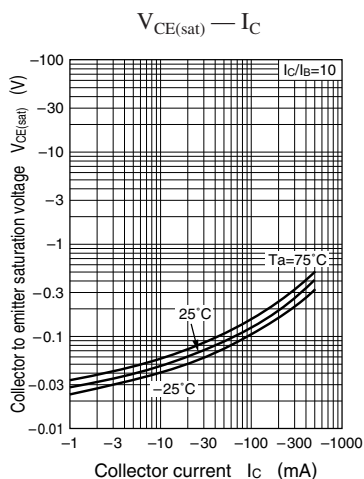
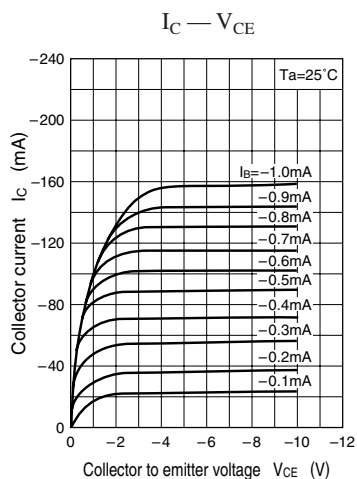
■ Electrical Characteristics (Ta=25°C)

Parameter		Symbol	Conditions	min	typ	max	Unit	
Collector cutoff current		I _{CBO}	V _{CB} = -50V, I _E = 0			-1	μA	
		UNR612X I _{CBO}	V _{CB} = -50V, I _E = 0			-0.1		
Collector cutoff current		I _{CEO}	V _{CE} = -50V, I _B = 0			-1	μA	
		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 = -10μA, 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 = 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	UNR6121	R _i		(-30%)	2.2	(+30%)	kΩ	
	UNR6122				4.7			
	UNR6123				10			
	UNR612X				0.27			
	UNR612Y				3.1			
Resistance ratio		R ₁ /R ₂			0.8	1.0	1.2	
					0.17	0.22		0.27
					0.043	0.054		0.065
						0.67		

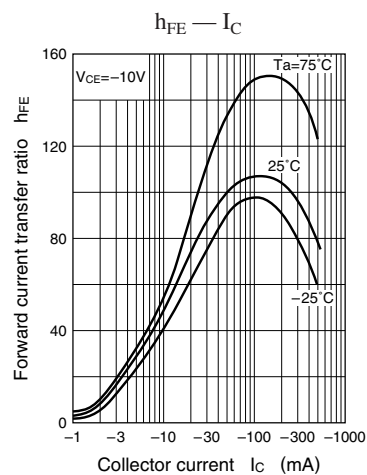
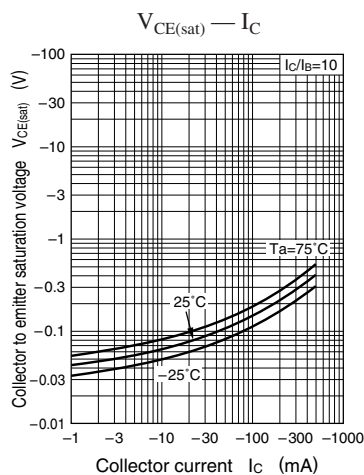
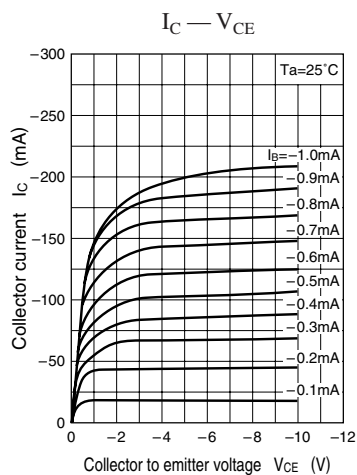
Common characteristics chart

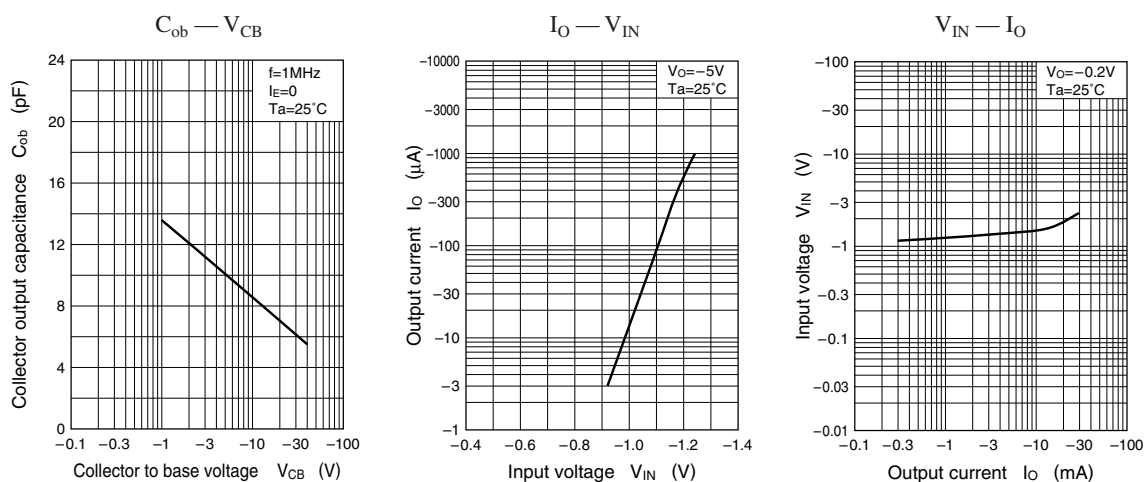
 $P_T - T_a$ 

Characteristics charts of UNR6121

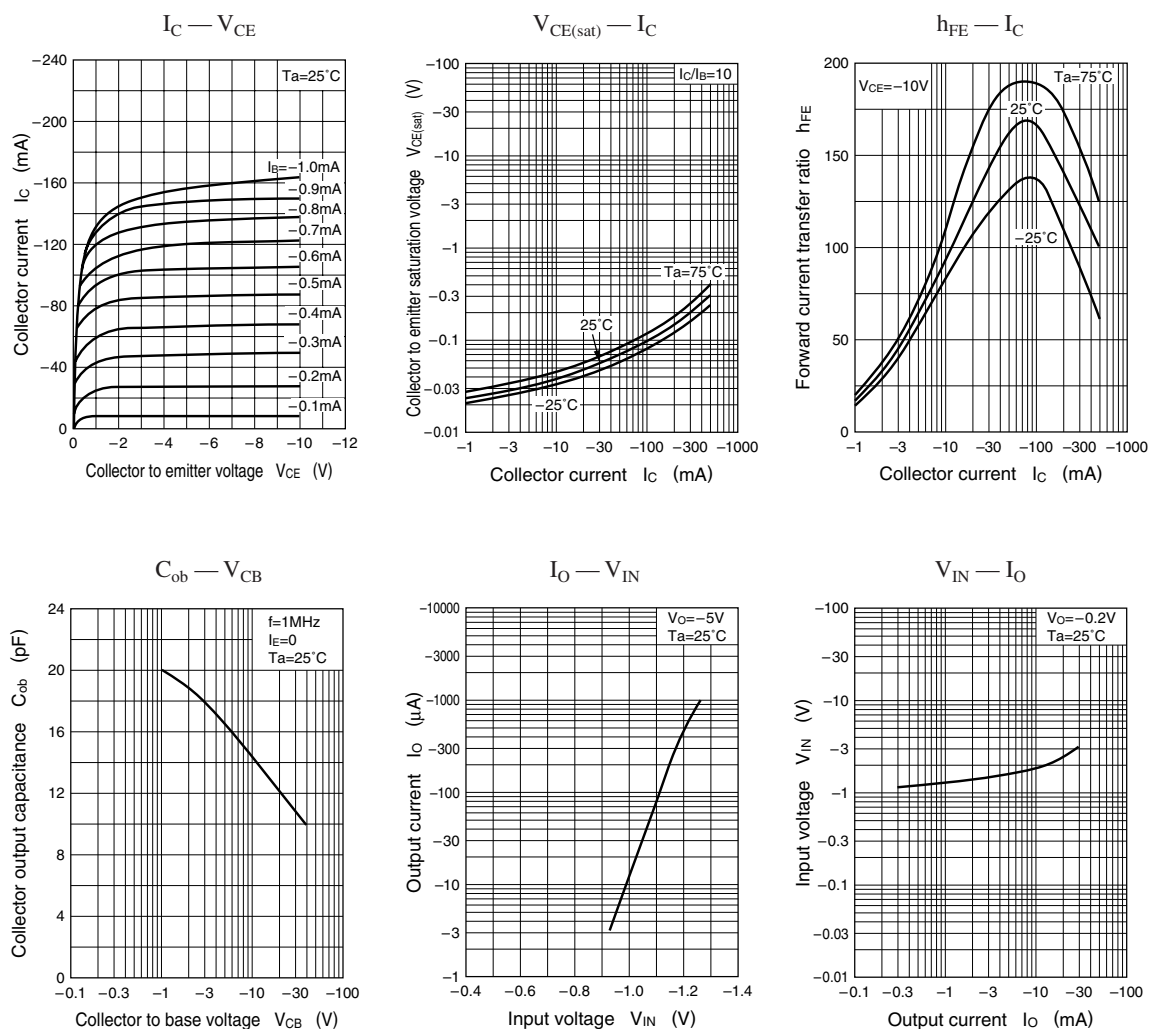


Characteristics charts of UNR6122

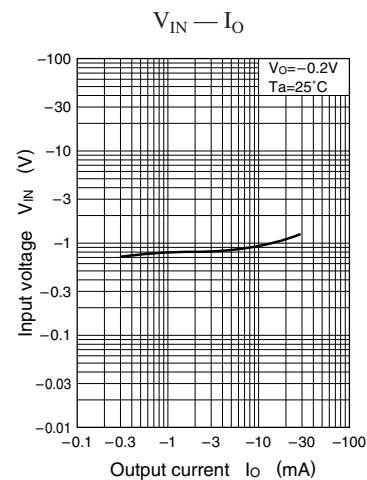
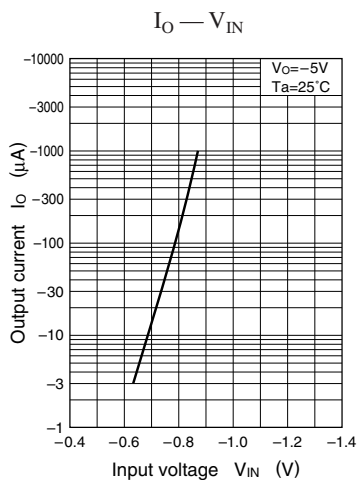
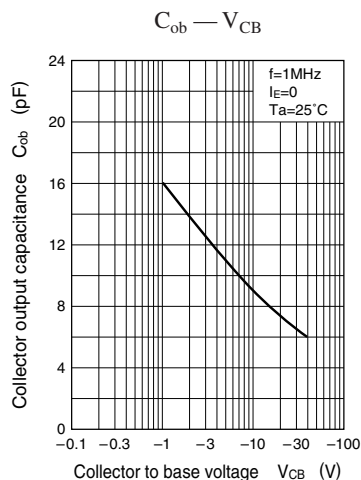
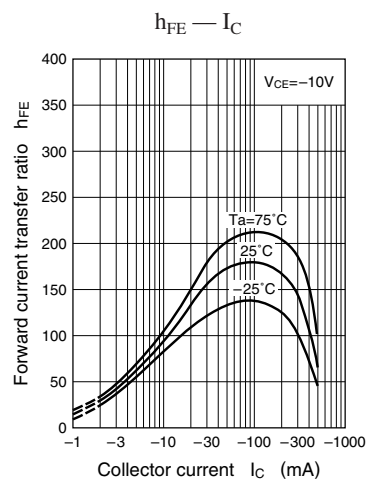
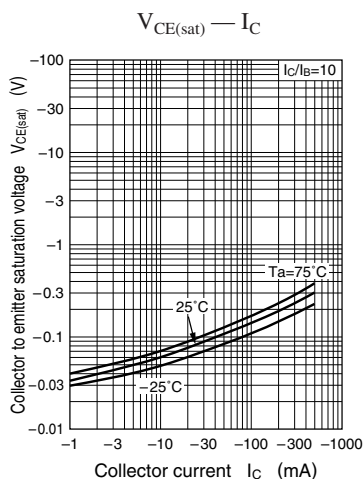
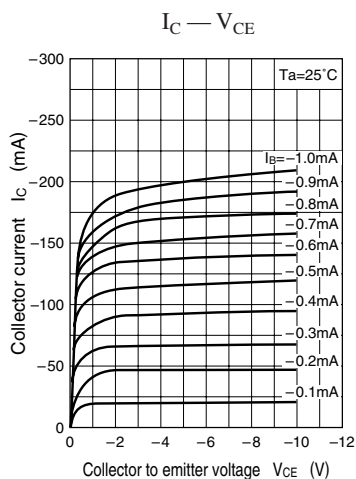




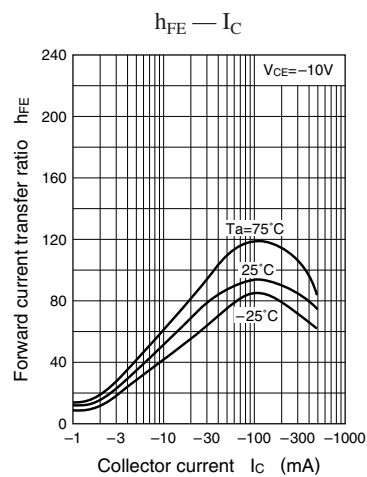
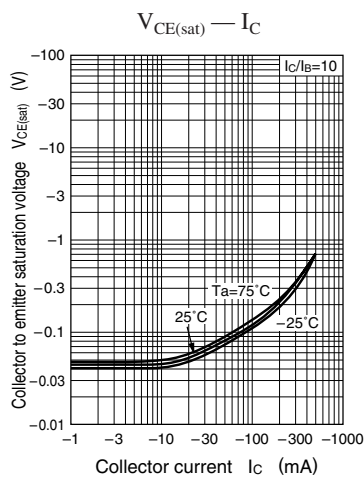
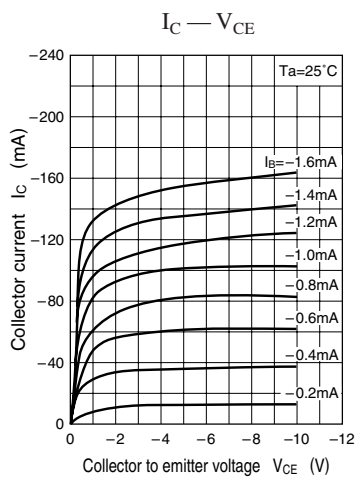
Characteristics charts of UNR6123

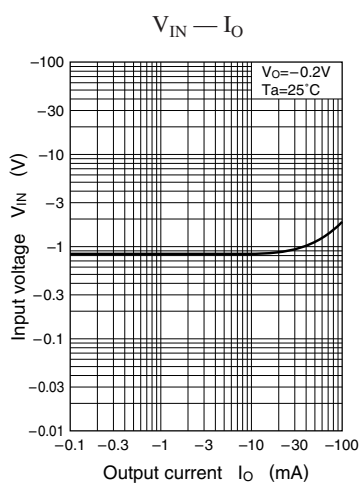
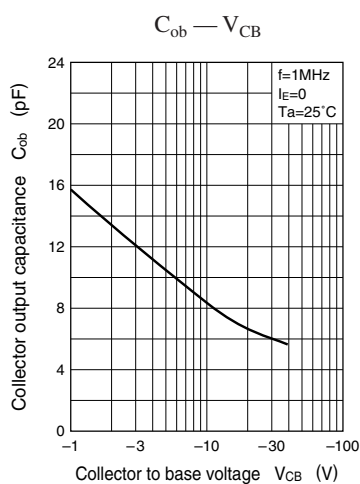


Characteristics charts of UNR6124

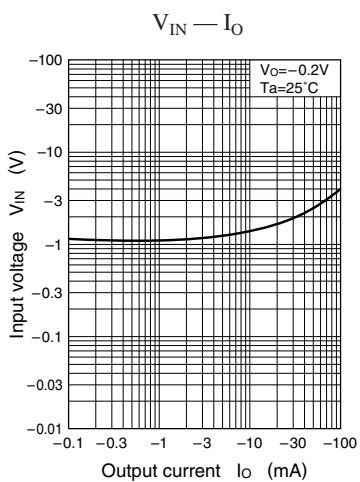
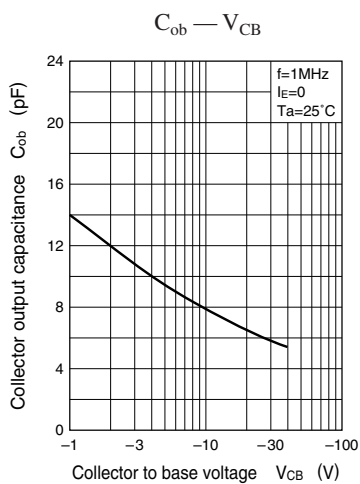
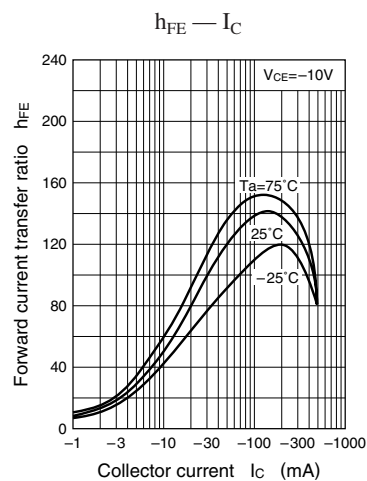
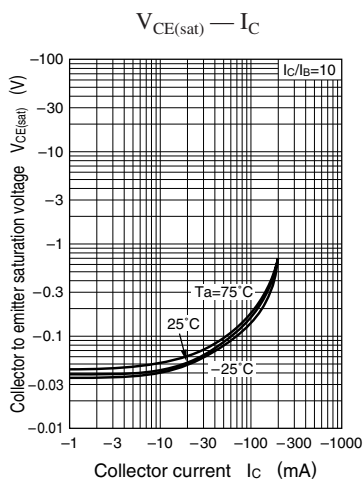
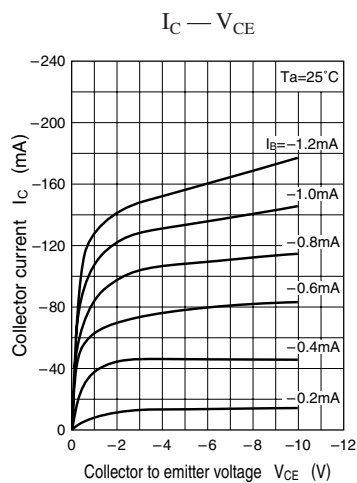


Characteristics charts of UNR612X





Characteristics charts of UNR612Y



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