

UNR1121/1122/1123/1124/112X/112Y (UN1121/1122/1123/1124/112X/112Y)

Silicon PNP epitaxial planer transistor

For digital circuits

Features

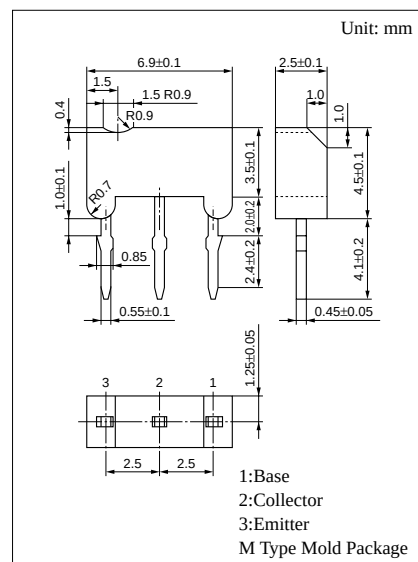
- Costs can be reduced through downsizing of the equipment and reduction of the number of parts.
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

Resistance by Part Number

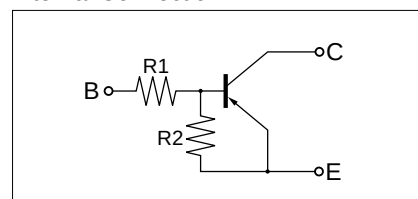
	(R ₁)	(R ₂)
• UNR1121	2.2kΩ	2.2kΩ
• UNR1122	4.7kΩ	4.7kΩ
• UNR1123	10kΩ	10kΩ
• UNR1124	2.2kΩ	10kΩ
• UNR112X	0.27kΩ	5kΩ
• UNR112Y	3.1kΩ	4.6kΩ

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

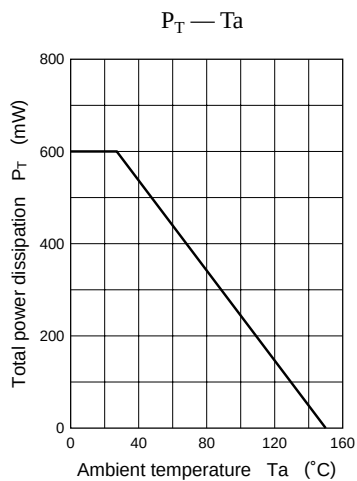


Note) The part numbers in the parenthesis show conventional part number.

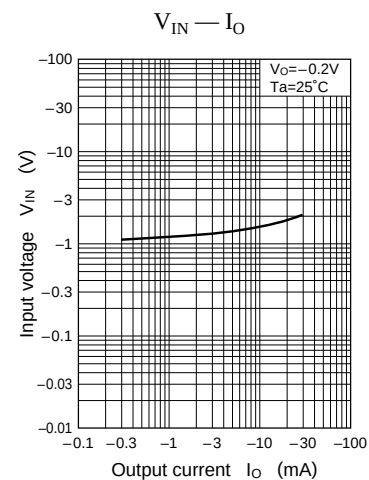
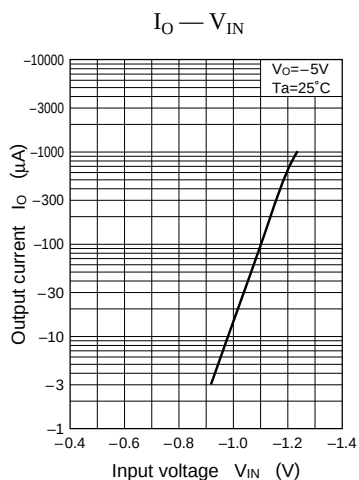
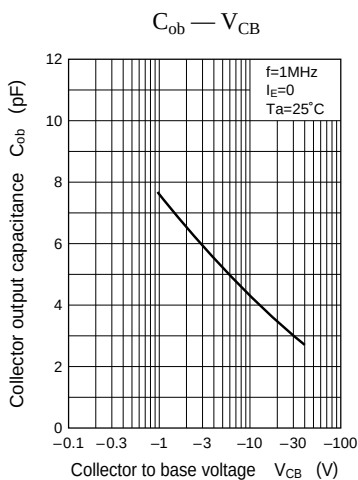
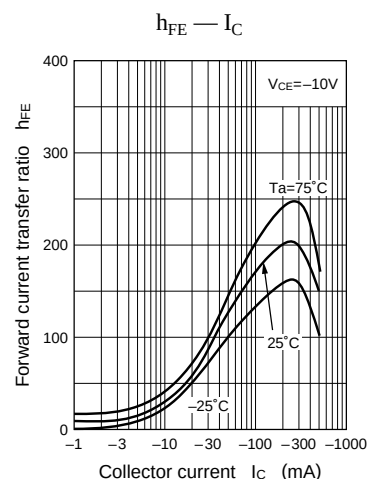
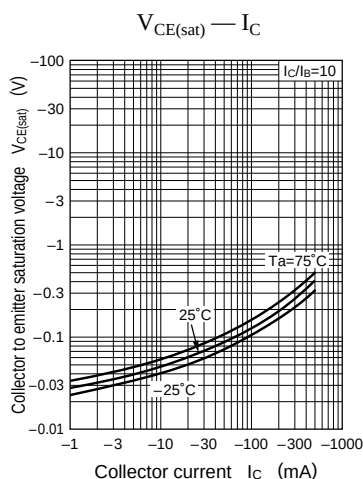
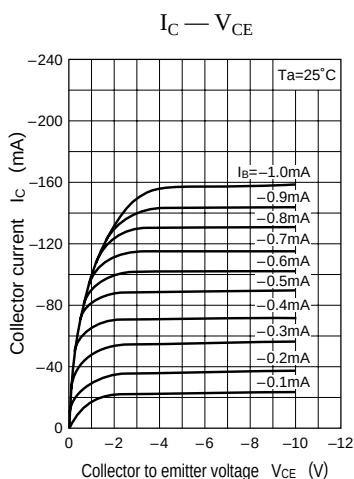
■ Electrical Characteristics (Ta=25°C)

Parameter		Symbol	Conditions	min	typ	max	Unit
Collector cutoff current		I _{CBO}	V _{CB} = −50V, I _E = 0			−1	μA
		UNR112X I _{CBO}	V _{CB} = −50V, I _E = 0			−0.1	
Collector cutoff current		I _{CEO}	V _{CE} = −50V, I _B = 0			−1	μA
		UNR112X I _{CEO}	V _{CE} = −50V, I _B = 0			−0.5	
Emitter cutoff current	UNR1121	I _{EBO}	V _{EB} = −6V, I _C = 0			−5	mA
	UNR1122/112X/112Y					−2	
	UNR1123/1124					−1	
Collector to base voltage		V _{CBO}	I _C = −10μA, I _E = 0	−50			V
Forward current transfer ratio	UNR1121	h _{FE}	V _{CE} = −10V, I _C = −100mA	40			
	UNR1122/112Y			50			
	UNR1123/1124			60			
	UNR112X			20			
Collector to emitter saturation voltage		V _{CE(sat)}	I _C = −100mA, I _B = −5mA			−0.25	V
		UNR112X V _{CE(sat)}	I _C = −10mA, I _B = −0.3mA			−0.25	
		UNR112Y 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		200		MHz
Input resistance	UNR1121	R ₁		(−30%)	2.2	(+30%)	kΩ
	UNR1122				4.7		
	UNR1123				10		
	UNR112X				0.27		
	UNR112Y				3.1		
Resistance ratio		R ₁ /R ₂		0.8	1.0	1.2	
					0.22		
					0.054		
					0.67		

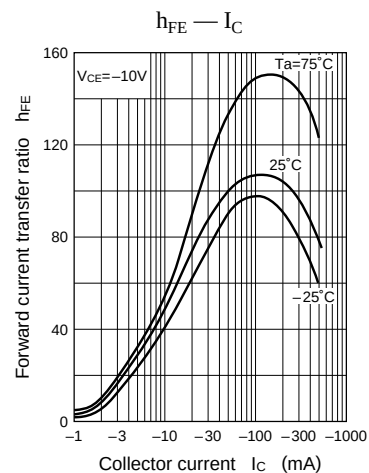
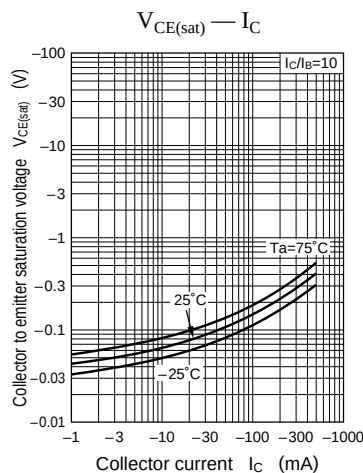
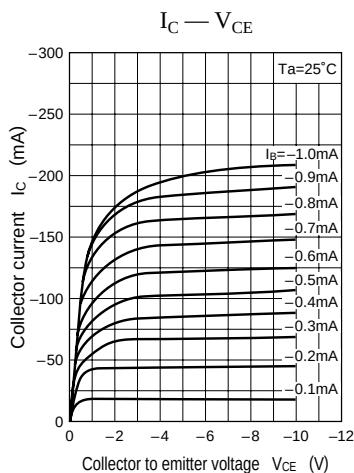
Common characteristics chart

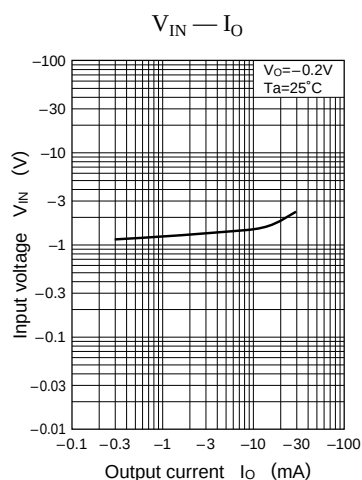
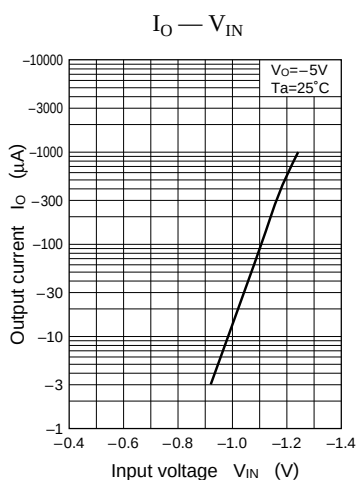
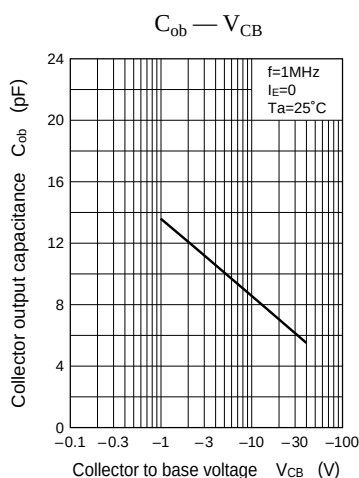


Characteristics charts of UNR1121

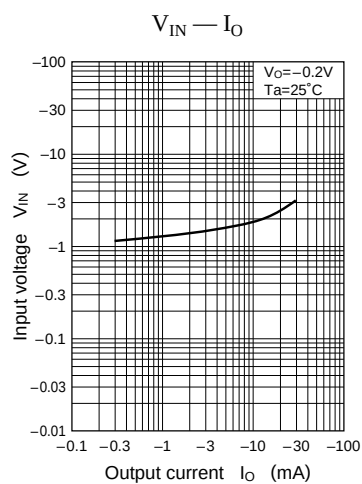
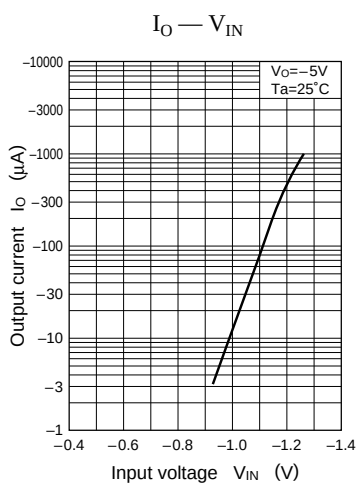
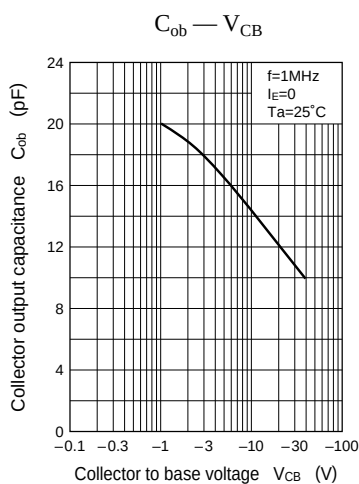
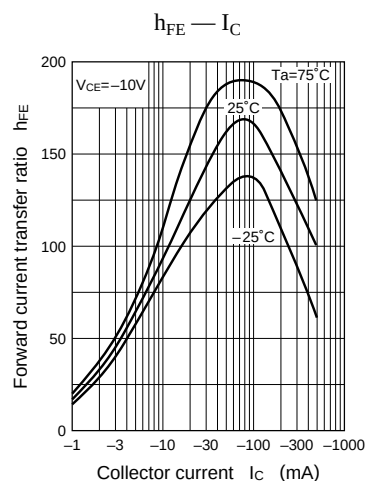
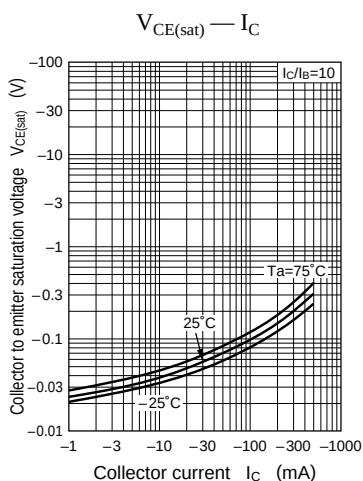
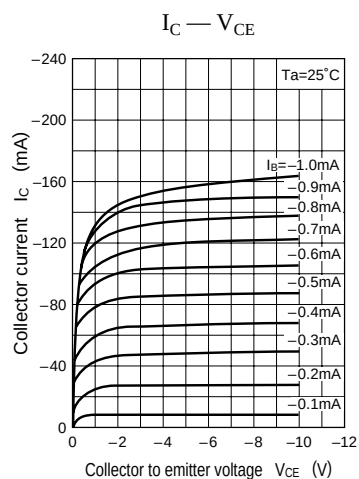


Characteristics charts of UNR1122

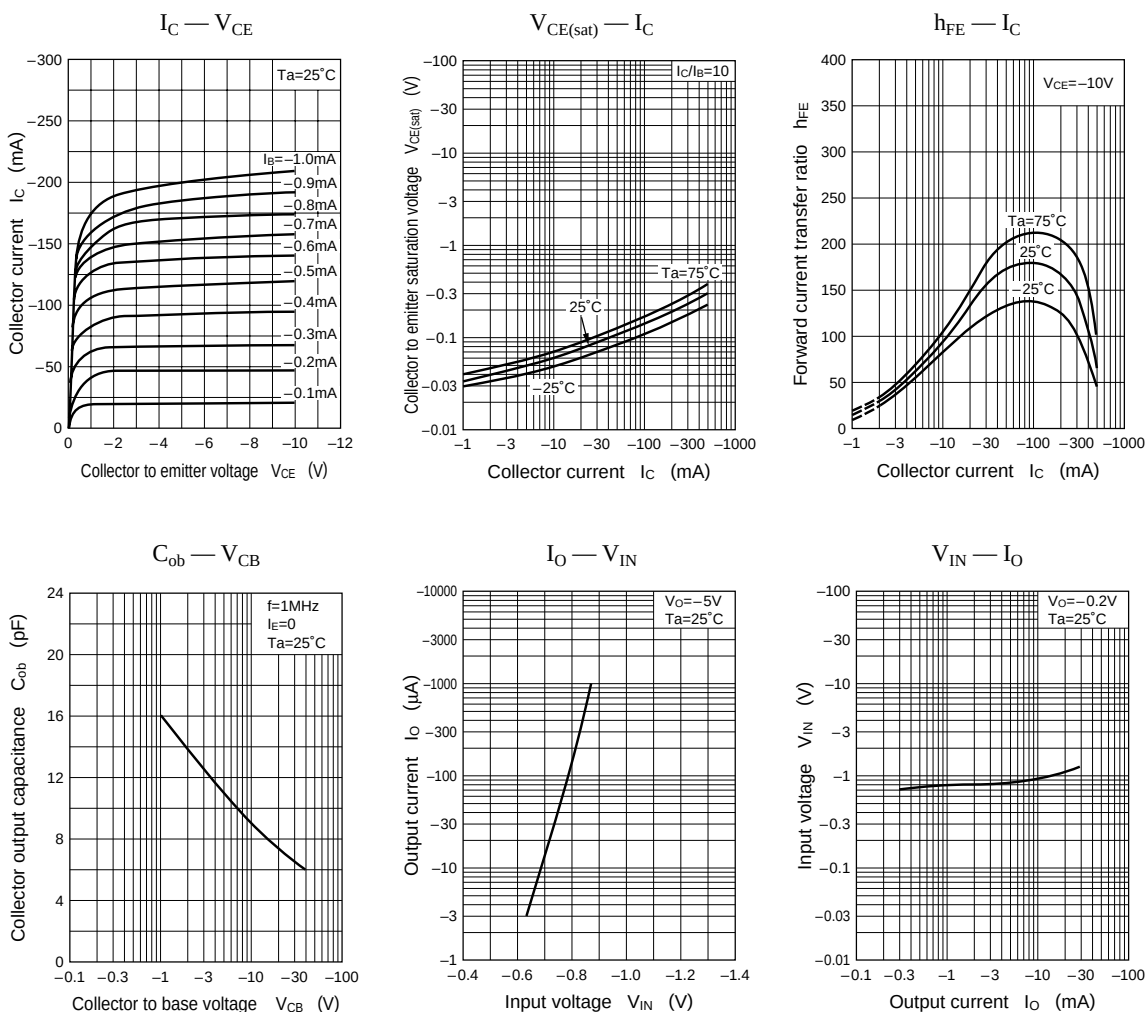




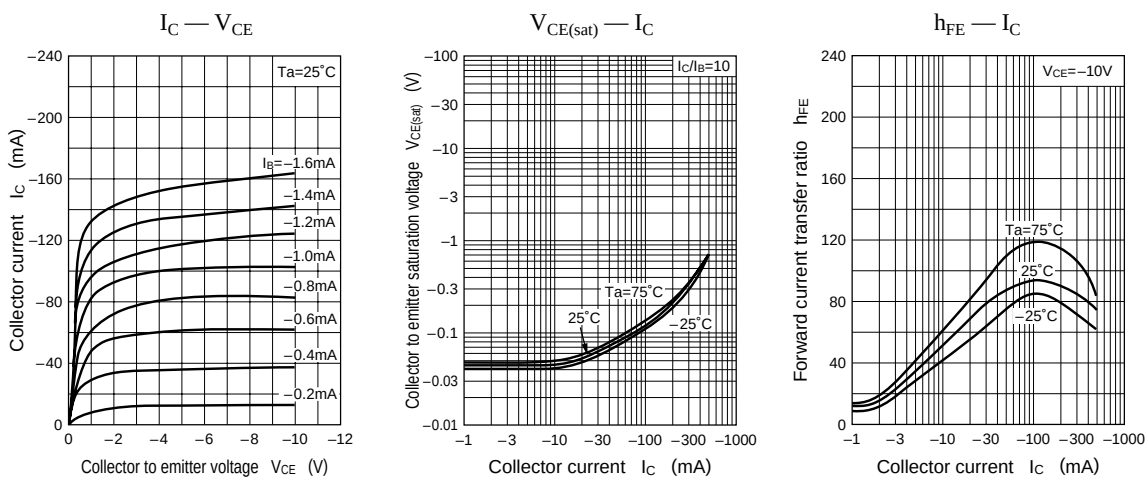
Characteristics charts of UNR1123

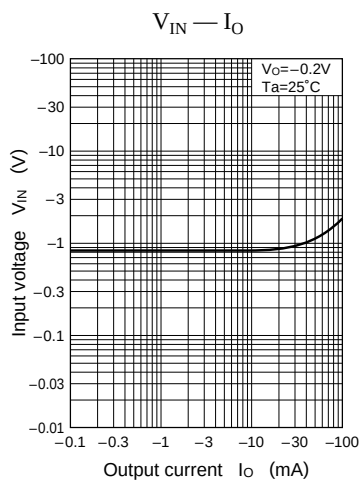
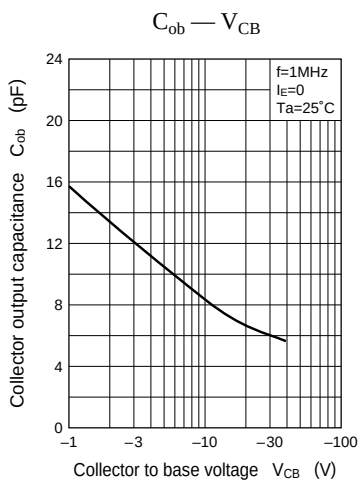


Characteristics charts of UNR1124

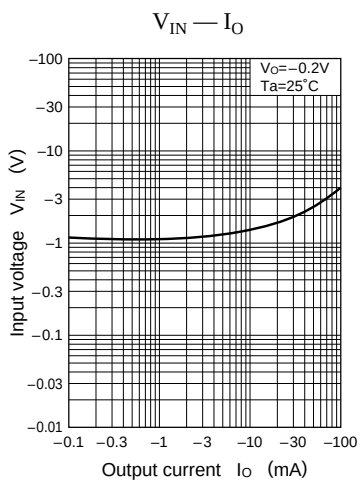
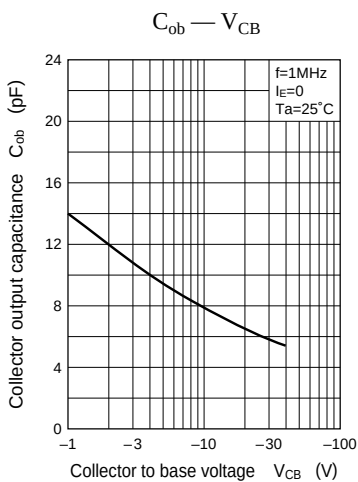
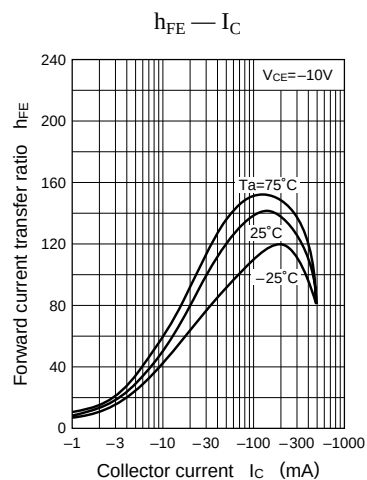
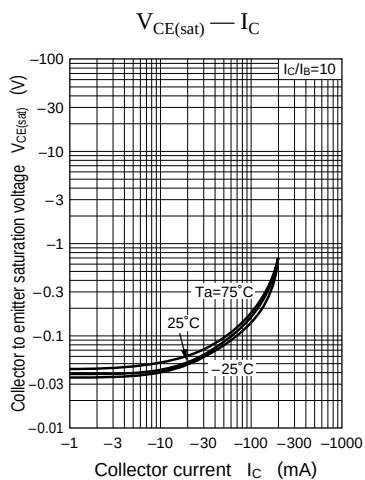
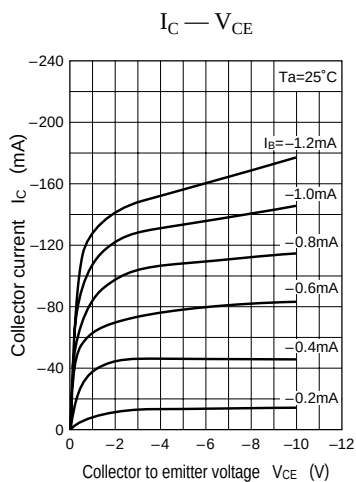


Characteristics charts of UNR112X





Characteristics charts of UNR112Y



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