

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

Silicon PNP epitaxial planer transistor

For digital circuits

## Features

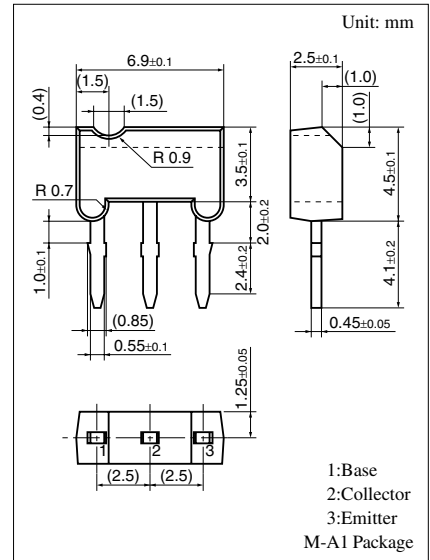
- Costs can be reduced through downsizing of the equipment and reduction of the number of parts.
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

## Resistance by Part Number

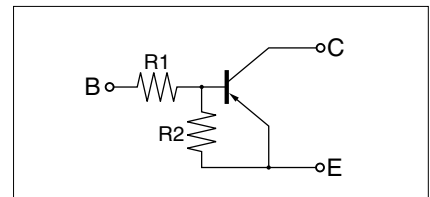
	(R <sub>1</sub> )	(R <sub>2</sub> )
• UNR1121	2.2kΩ	2.2kΩ
• UNR1122	4.7kΩ	4.7kΩ
• UNR1123	10kΩ	10kΩ
• UNR1124	2.2kΩ	10kΩ
• UNR112X	0.27kΩ	5kΩ
• UNR112Y	3.1kΩ	4.6kΩ

## Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V <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

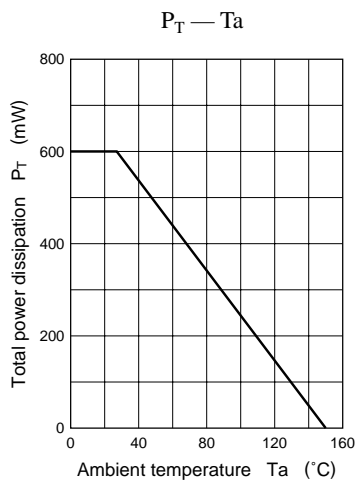


Note) The part numbers in the parenthesis show conventional part number.

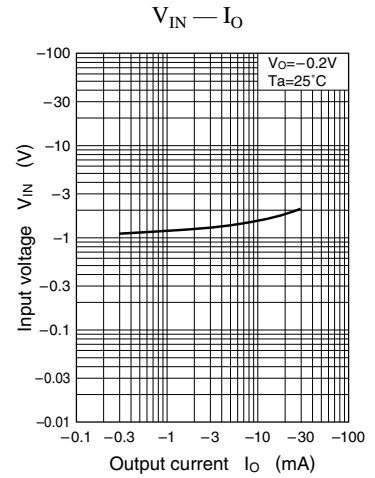
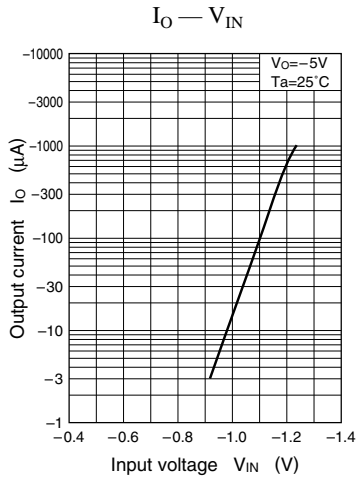
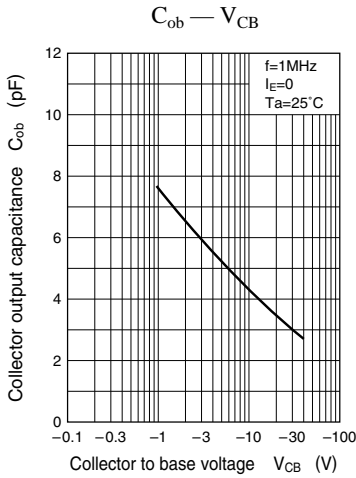
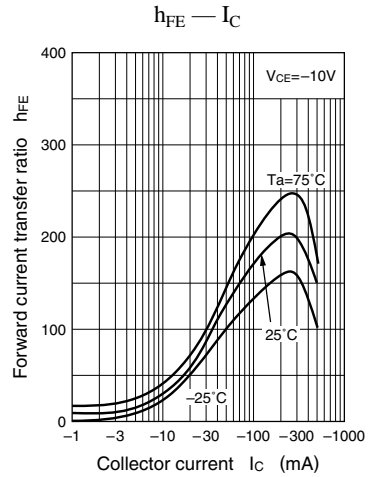
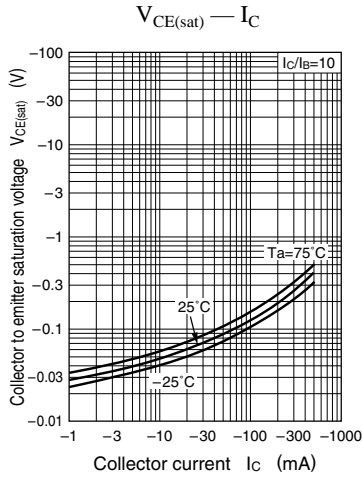
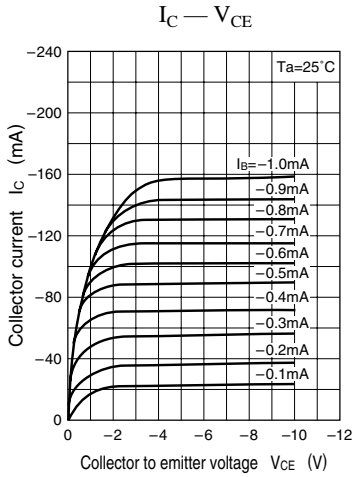
■ Electrical Characteristics (Ta=25°C)

Parameter		Symbol	Conditions	min	typ	max	Unit	
Collector cutoff current		$I_{CBO}$	$V_{CB} = -50V, I_E = 0$			-1	$\mu A$	
	UNR112X	$I_{CBO}$	$V_{CB} = -50V, I_E = 0$			-0.1		
Collector cutoff current		$I_{CEO}$	$V_{CE} = -50V, I_B = 0$			-1	$\mu A$	
	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		$V_{CBO}$	$I_C = -10\mu A, I_E = 0$	-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		$V_{OH}$	$V_{CC} = -5V, V_B = -0.5V, R_L = 500\Omega$	-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	UNR1121	$R_1$		(-30%)	2.2	(+30%)	k $\Omega$	
	UNR1122				4.7			
	UNR1123				10			
	UNR112X				0.27			
	UNR112Y				3.1			
Resistance ratio		$R_1/R_2$			0.8	1.0	1.2	
					UNR1124		0.22	
					UNR112X		0.054	
					UNR112Y		0.67	

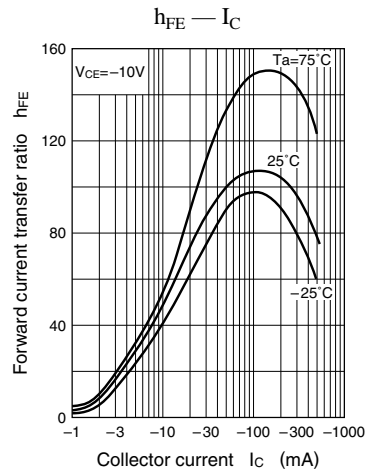
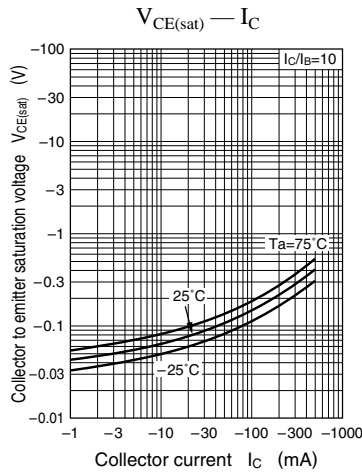
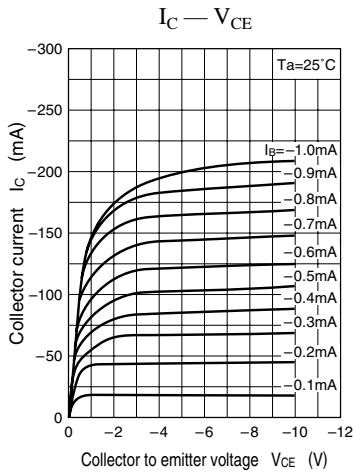
Common characteristics chart

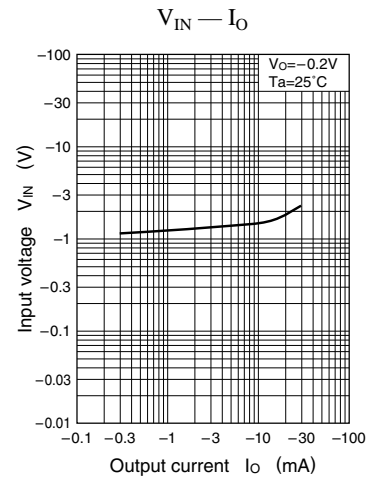
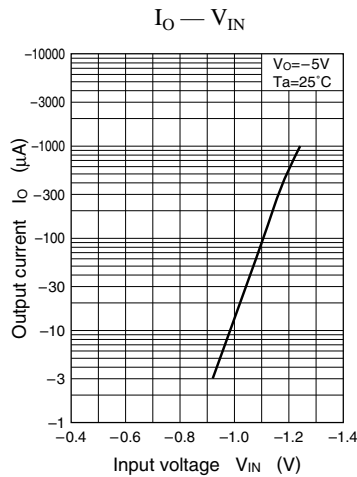
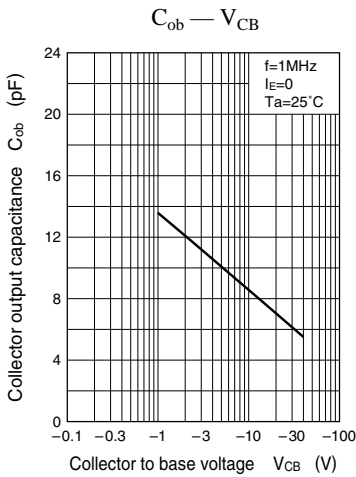


Characteristics charts of UNR1121

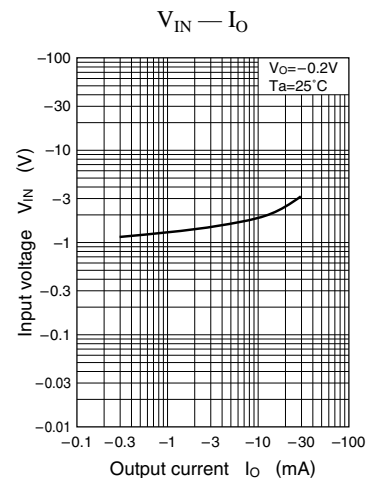
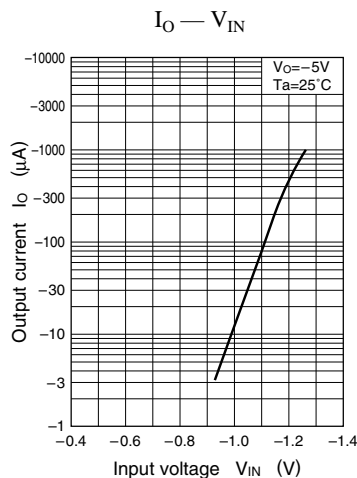
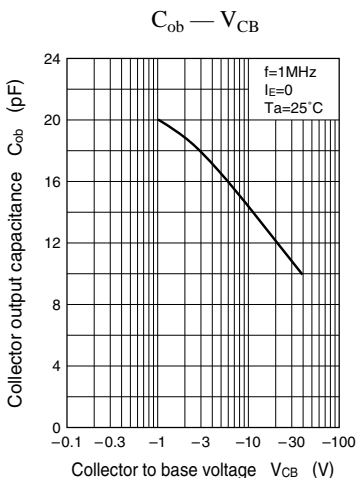
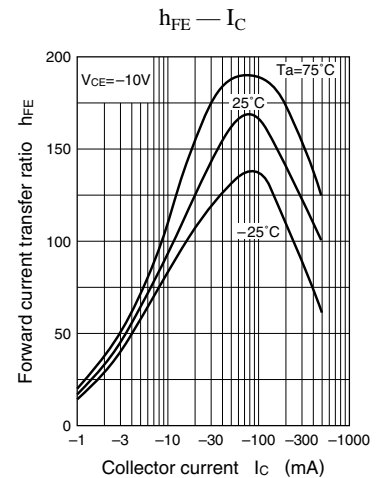
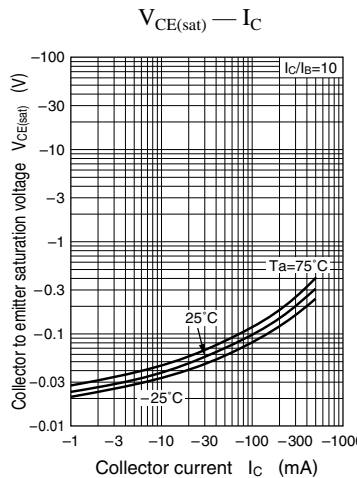
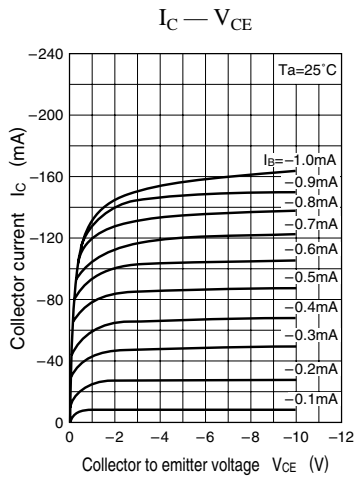


Characteristics charts of UNR1122

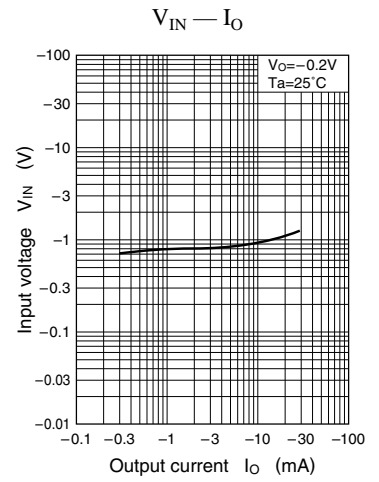
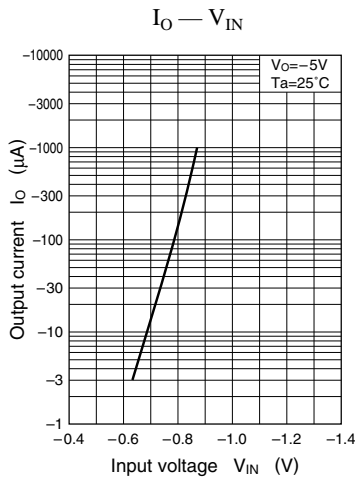
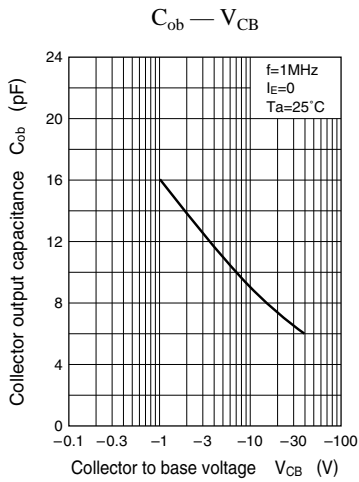
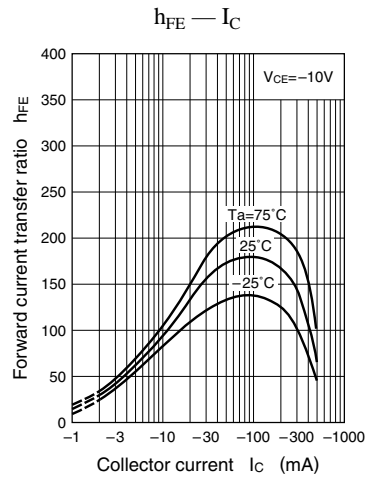
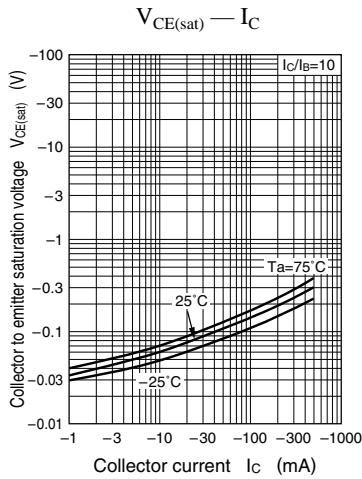
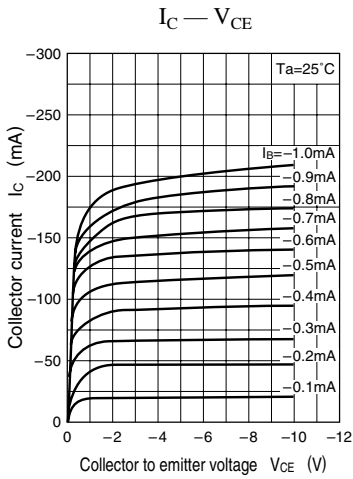




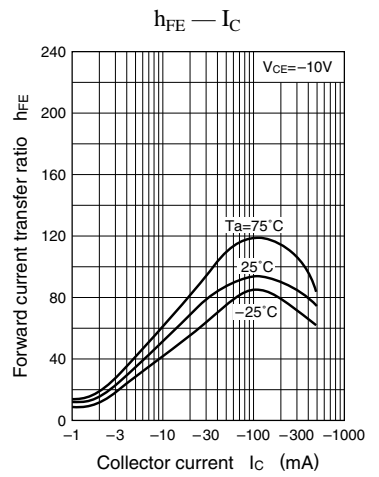
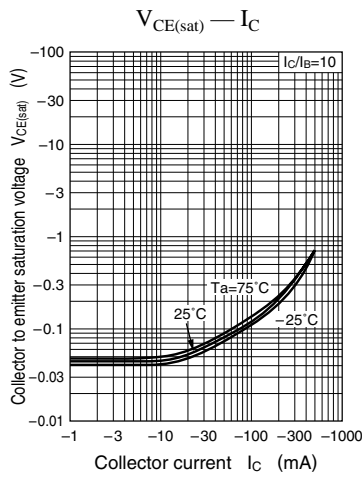
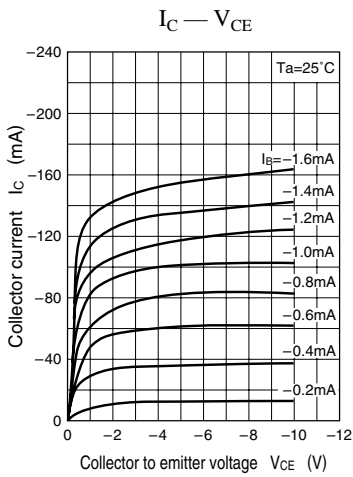
Characteristics charts of UNR1123

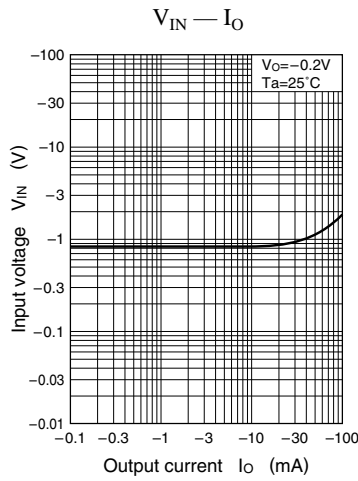
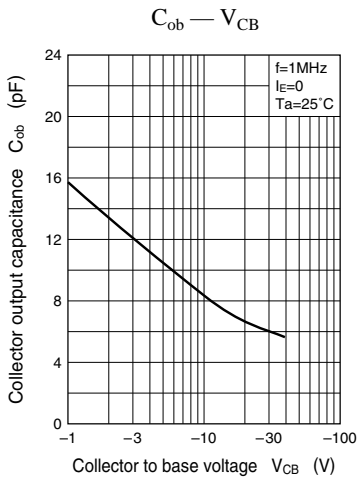


Characteristics charts of UNR1124

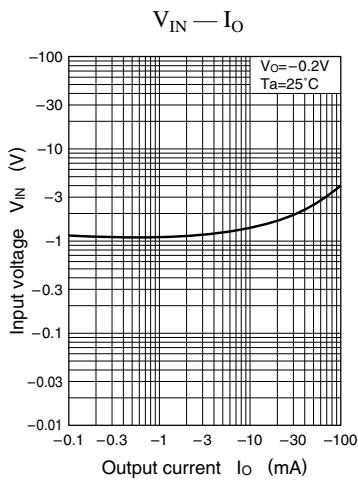
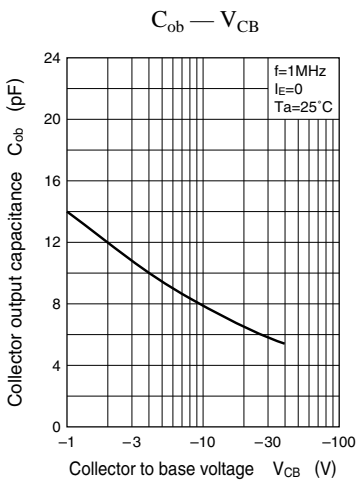
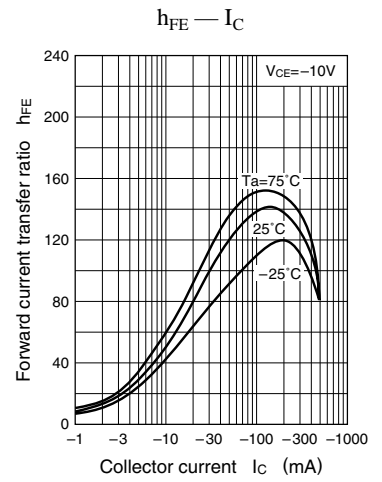
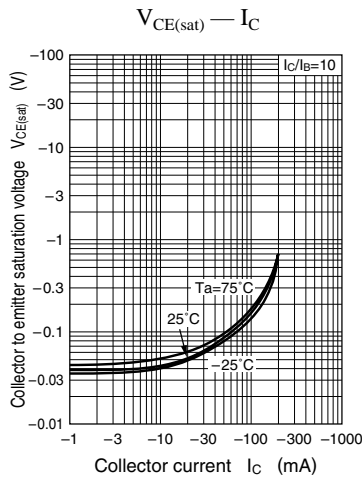
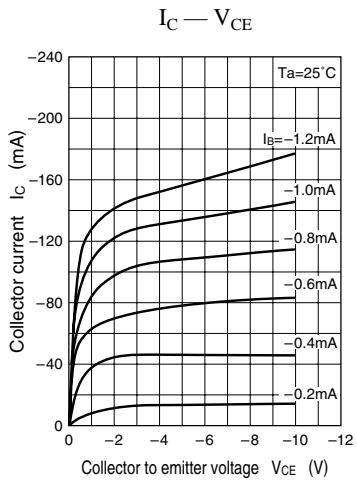


Characteristics charts of UNR112X





Characteristics charts of UNR112Y



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