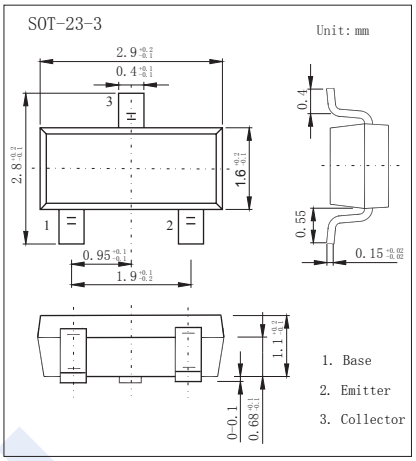
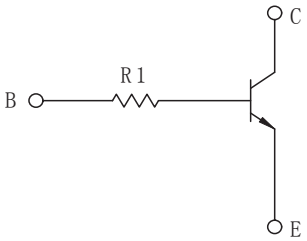
NPN Transistors

KRC231S ~ KRC235S



■ Features

- With Built-in Bias Resistors.
- Simplify Circuit Design.



■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	30	V
Collector - Emitter Voltage	V_{CEO}	15	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	600	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter		Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage		V_{CBO}	I_C= 100 μA, I_E= 0	30			V
Collector- emitter breakdown voltage		V_{CEO}	I_C= 1 mA, I_B= 0	15			
Emitter - base breakdown voltage		V_{EBO}	I_E= 100 μ A, I_C= 0	5			
Collector-base cut-off current		I_{CBO}	V_{CB}= 30 V , I_E= 0			0.5	uA
Emitter cut-off current		I_{EBO}	V_{EB}= 5V , I_C=0			0.1	
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C=50 mA, I_B=2.5mA			0.08	V
Base - emitter saturation voltage		$V_{BE(sat)}$	I_C=50 mA, I_B=2.5mA			1.2	
DC current gain		h_{FE}	V_{CE}= 5V, I_C= 50mA	200		800	
Input Resistor	KRC231S	R_I			2.2		KΩ
	KRC232S				5.6		
	KRC233S				10		
	KRC234S				4.7		
	KRC235S				6.8		
On Resistance		R_{on}	I_B= 1mA, V_{IN}= 300mV,f=1KHz		0.6		Ω
Transition frequency		f_T	V_{CE}= 10V, I_E= -50mA,f=100MHz		200		MHz

■ Marking

Type	KRC231S	KRC232S	KRC233S	KRC234S	KRC235S
Marking	NW	NY	NZ	NNA	NNB

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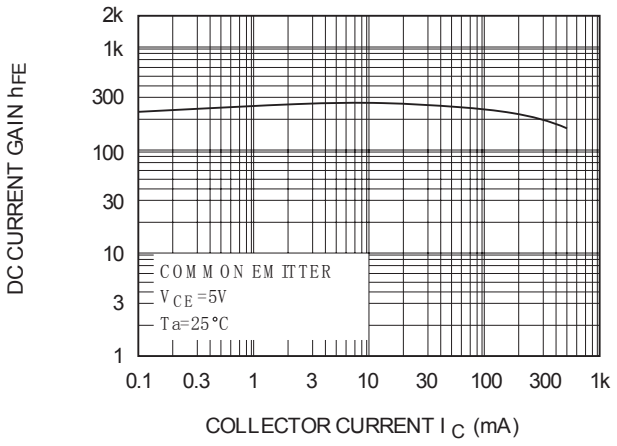
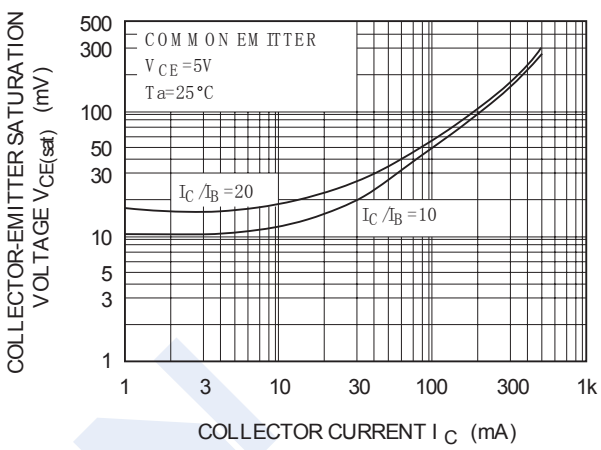
■ Typical Characterisitics

h_{FE} - I_C



$V_{CE(sat)}$ - I_C



R_{on} - I_B