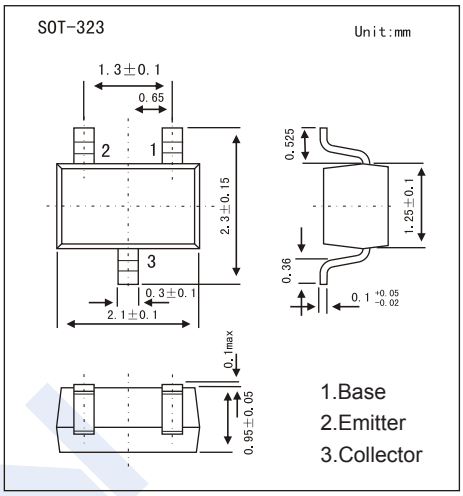
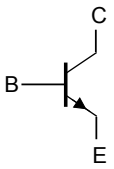
NPN Transistors
BC849W ~ BC850W
(KC849W ~ KC850W)



■ Features

- Low current (max. 100 mA)
- Low voltage (max. 45 V).
- Complements to BC859W/BC860W



■ Absolute Maximum Ratings Ta = 25℃

Parameter		Symbol	Rating	Unit
Collector - Base Voltage	BC849W	V_{CBO}	30	V
	BC850W		50	
Collector - Emitter Voltage	BC849W	V_{CEO}	30	
	BC850W		45	
Emitter - Base Voltage		V_{EBO}	5	
Collector Current - Continuous		I_C	100	mA
Collector Current - Pulsed		I_{CP}	200	
Base Current - Pulsed		I_{BP}	200	
Collector Power Dissipation		P_C	200	mW
Thermal Resistance From Junction to Ambient		$R_{\theta JA}$	625	℃/W
Junction Temperature		T_J	150	℃
Storage Temperature Range		T_{stg}	-65 to 150	

NPN Transistors
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■ 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	BC849W	30			V
			BC850W	50			
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA, I_B= 0	BC849W	30			
			BC850W	45			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A, I_C= 0		5			
Collector-base cut-off current BC849W	I_{CBO}	V_{CB}= 30 V , I_E= 0				0.1	uA
		V_{CB}= 30 V , I_E= 0 ,T_J = 150℃				0.5	
Collector-base cut-off current BC850W		V_{CB}= 50 V , I_E= 0				0.1	
		V_{CB}= 50 V , I_E= 0 ,T_J = 150℃				0.5	
Emitter cut-off current	I_{EBO}	V_{EB}= 5V , I_C=0				0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10 mA, I_B=0.5mA				250	mV
		IC=100 mA, IB=5mA (Note.1)				600	
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=100 mA, I_B=5mA (Note.1)				1.2	V
Base - emitter voltage	V_{BE}	V_{CE}= 5V, I_C= 2 mA		580		700	mV
		V_{CE}= 5V, I_C= 10 mA				770	
DC current gain BC849BW,BC850BW	h_{FE}	V_{CE}= 5V, I_C= 2mA		200		450	
BC849CW,BC850CW				420		800	
Collector output capacitance	C_{ob}	V_{CB}= 10V, I_E=ie=0,f=1MHz				3	pF
Emitter output capacitance	C_{oe}	V_{EB}= 0.5V, I_C=ic=0,f=1MHz			11		
Noise Figure	NF	I_C = 200 μA; V_{CE} = 5 V; R_S = 2 kΩ; f = 10 Hz to 15.7 kHz				4	dB
		I_C = 200 μA; V_{CE} = 5 V; R_S = 2 kΩ; f = 1 kHz; B = 200 Hz				4	
Transition frequency	f_T	V_{CE}= 5V, I_C= 10mA,f=1MHz		100			MHz

Note.1: Pulse test: tp ⩽ 300 μs; δ ⩽ 0.02.

■ Marking

NO	BC849BW	BC849CW	BC850BW	BC850CW
Range	200-450	420-800	200-450	420-800
Marking	2B*	2C*	2F*	2G*

NPN Transistors
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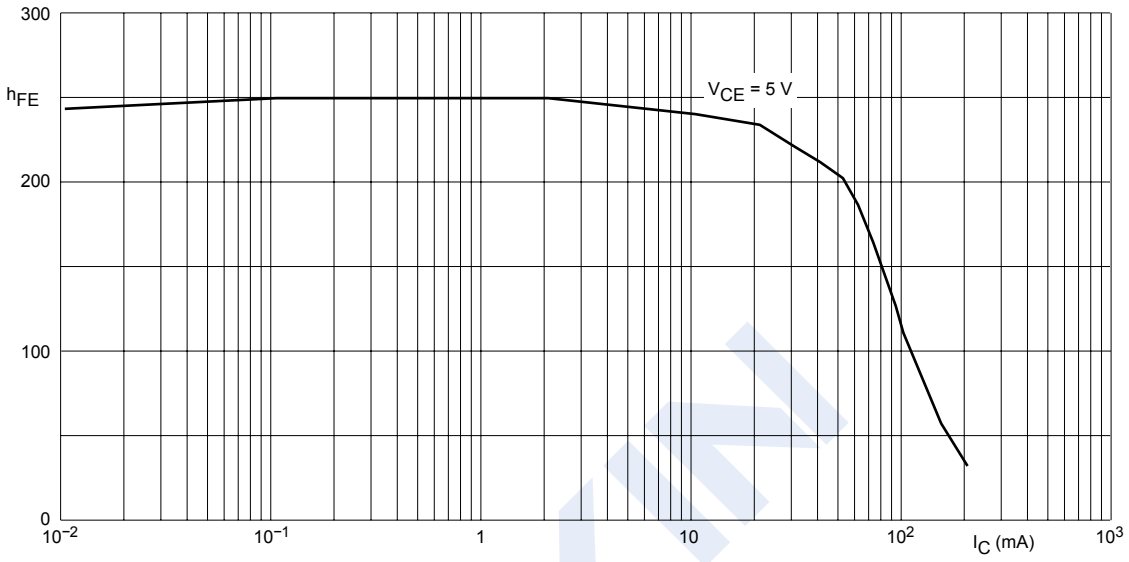
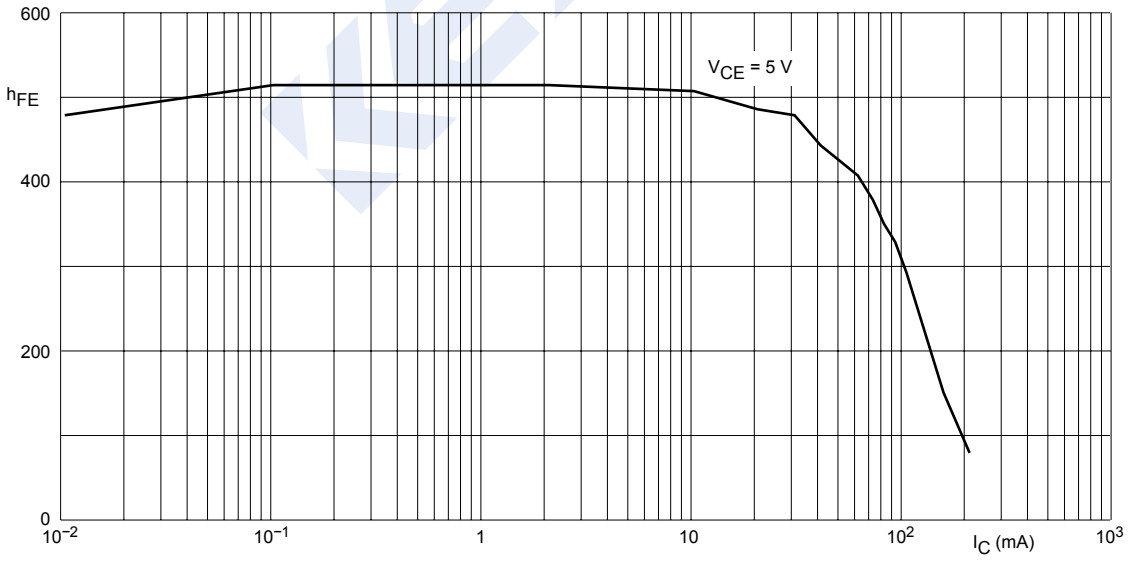
■ Typical Characterisitics



BC849BW; BC850BW.

Fig.1 DC current gain; typical values.



BC849CW; BC850CW.

Fig.2 DC current gain; typical values.