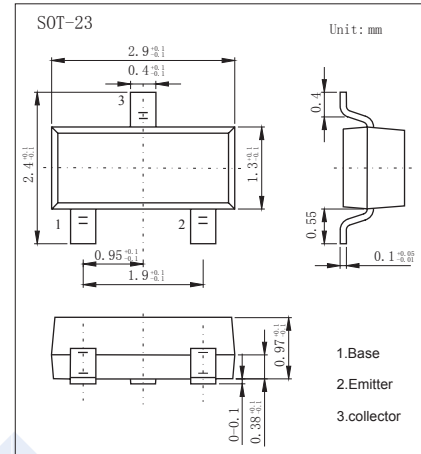


NPN Transistors

2SC5310

■ Features

- Collector Current Capability $I_C=1A$
- Collector Emitter Voltage $V_{CE0}=25V$
- Complement to 2SA1973



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	30	V
Collector - Emitter Voltage	V_{CE0}	25	
Emitter - Base Voltage	V_{EB0}	6	
Collector Current - Continuous	I_C	1	A
Collector Current - Pulse	I_{CP}	3	
Base Current	I_B	0.2	
Collector Power Dissipation	P_C	250	mW
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CB0}	$I_C = 100 \mu A, I_E = 0$	30			V
Collector-emitter breakdown voltage	V_{CE0}	$I_C = 1 mA, I_B = 0$	25			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu A, I_C = 0$	6			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 20 V, I_E = 0$			0.1	μA
Emitter-base cut-off current	I_{EB0}	$V_{EB} = 3 V, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500 mA, I_B = 25 mA$			0.2	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500 mA, I_B = 25 mA$			1.2	
DC current gain	h_{FE}	$V_{CE} = 5V, I_C = 100 mA$	135		400	
Turn-on time	t_{on}	See specified test circuit		60		ns
Storage time	t_{stg}			500		
Turn-off time	t_{off}			25		
Collector output capacitance	C_{ob}		$V_{CB} = 10V, f = 1MHz$		19	
Transition frequency	f_T	$V_{CE} = 10V, I_C = 50 mA$		150		MHz

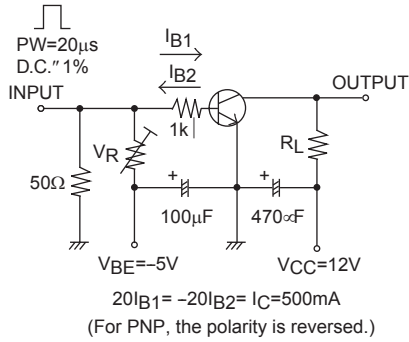
■ Classification of h_{FE}

Type	2SC5310-NN5	2SC5310-NN6
Range	135-270	200-400
Marking	NN5	NN6

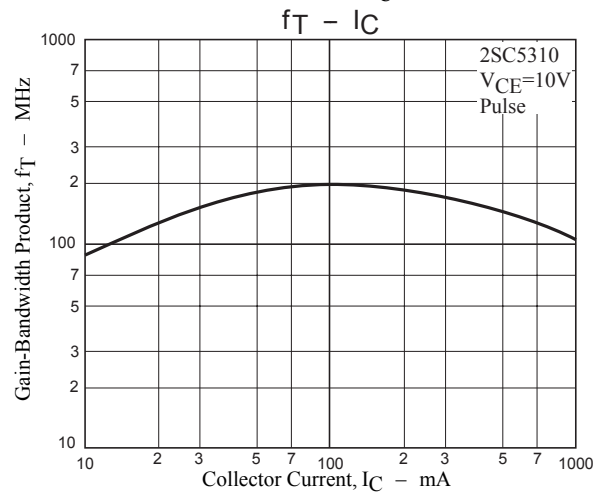
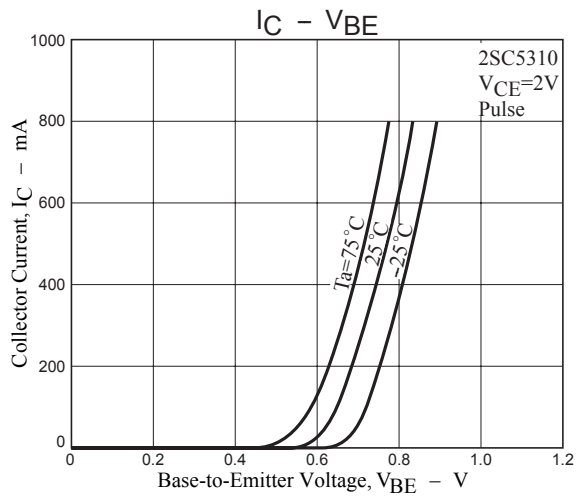
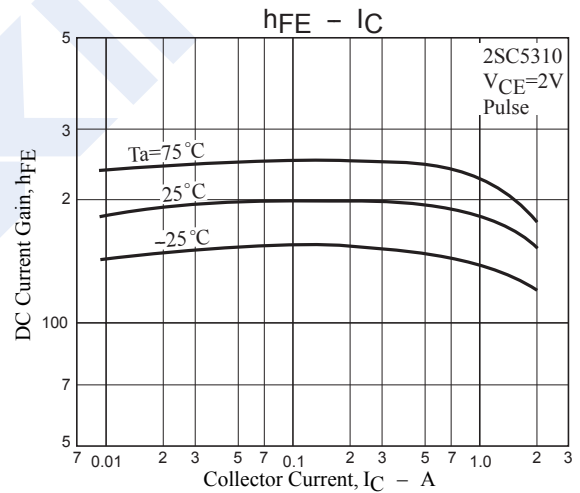
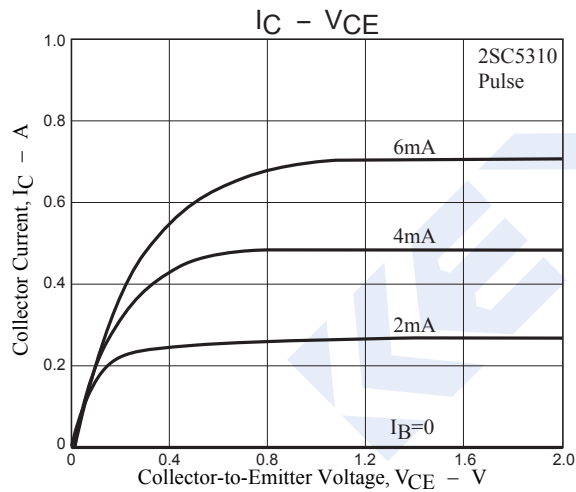
NPN Transistors

2SC5310

Switching Time Test Circuit



Typical Characteristics



NPN Transistors

2SC5310

■ Typical Characteristics

