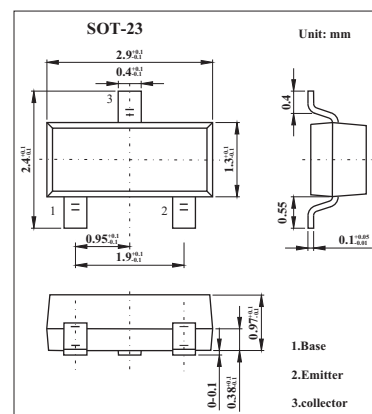


NPN Silicon Transistor

2SC945

■ Features

- Collector current up to 150mA
- High h_{FE} linearity



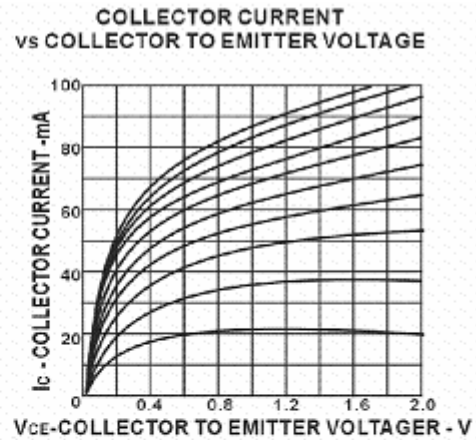
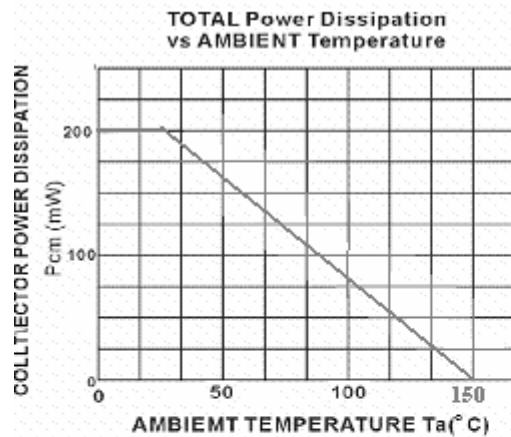
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	60	V
Collector to emitter voltage	V_{CEO}	50	V
Emitter to base voltage	V_{EBO}	5	V
Collector current (DC)	I_C	150	mA
power dissipation	P_C	200	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to +150	$^\circ\text{C}$

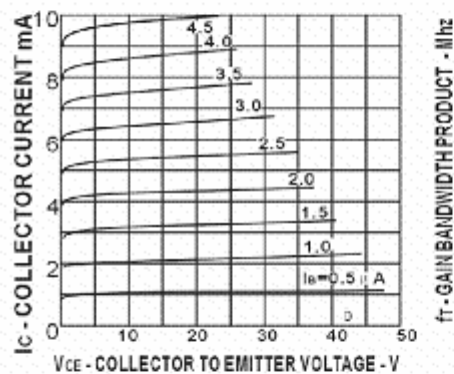
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\text{ }\mu\text{A}$, $I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\text{ }\mu\text{A}$, $I_C=0$	5			V
Collector cutoff current	I_{CBO}	$V_{CB}=60\text{V}$, $I_E=0$			0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB}=5.0\text{V}$, $I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=6.0\text{V}$, $I_C=1.0\text{mA}$	130		400	
		$V_{CE}=6.0\text{V}$, $I_C=0.1\text{mA}$	40			
Collector saturation voltage	$V_{CE(sat)}$	$I_C=100\text{mA}$, $I_B=10\text{mA}$			0.3	V
Base saturation voltage	$V_{BE(sat)}$	$I_C=100\text{mA}$, $I_B=10\text{mA}$			1.0	V
Collector to base capacitance	C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$			3.0	pF
Noise figure	NF	$V_{CE}=6\text{V}$, $I_C=0.1\text{mA}$, $R_g=10\text{k}\Omega$, $f=1\text{kHz}$		4	10	dB
Transition frequency	f_T	$V_{CE}=6\text{V}$, $I_C=10\text{mA}$, $f=30\text{MHz}$	150			MHz

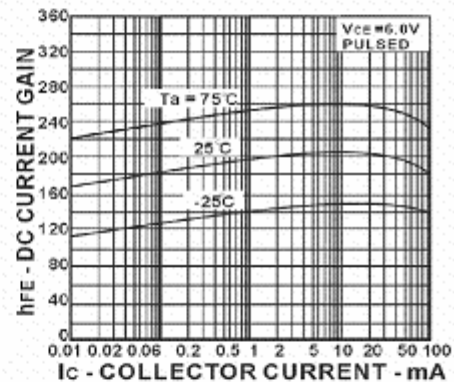
2SC945



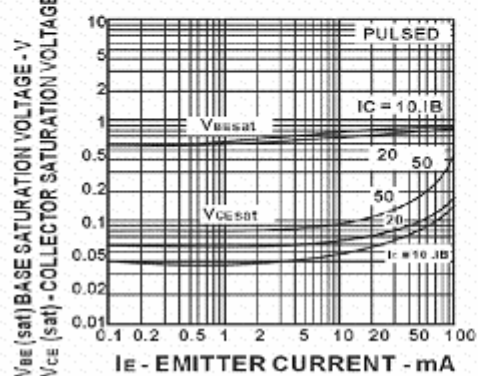
**COLLECTOR CURRENT
vs. COLLECTOR TO EMITTER VOLTAGE**



**DC CURRENT GAIN
vs. COLLECTOR CURRENT**



**COLLECTOR AND BASE SATURATION
VOLTAGE vs. COLLECTOR CURRENT**



**DC CURRENT GAIN
vs. COLLECTOR CURRENT**

