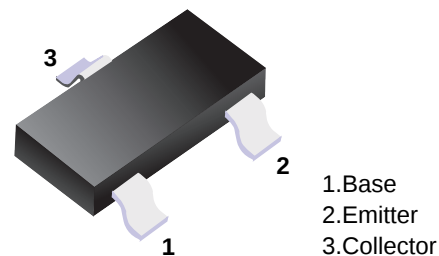


■ NPN Transistors



■ Features

- Collector current up to 150mA
- High h_{FE} linearity
- Complementary to 2SA733

■ Simplified outline(SOT-23)

■ 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	$^\circ\text{C}$

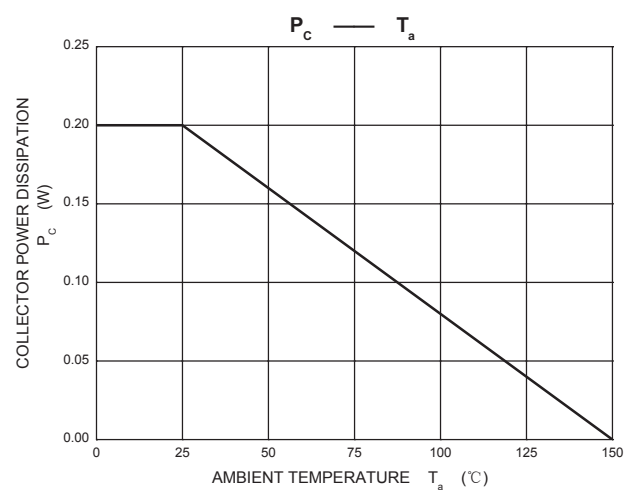
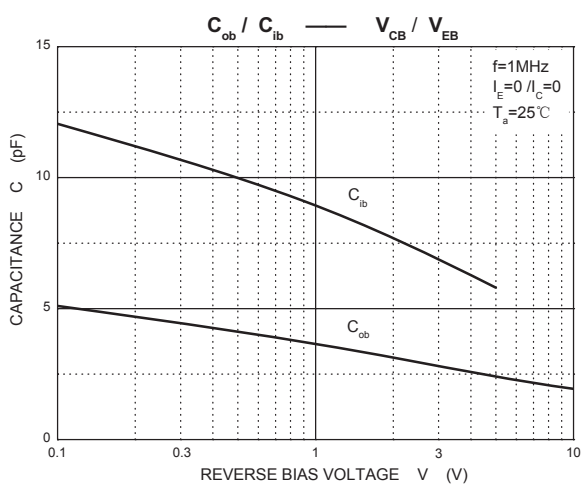
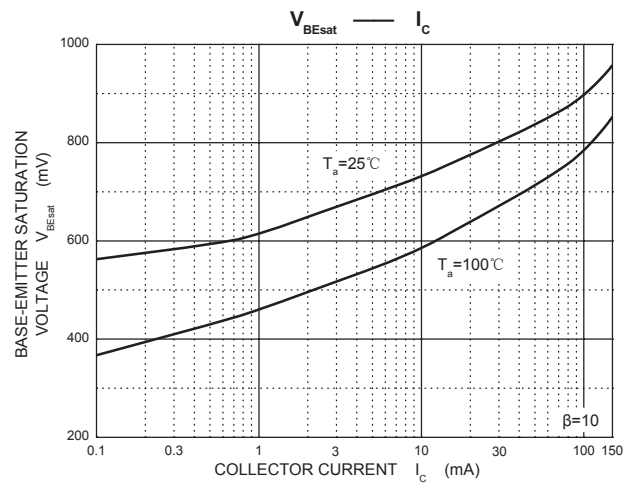
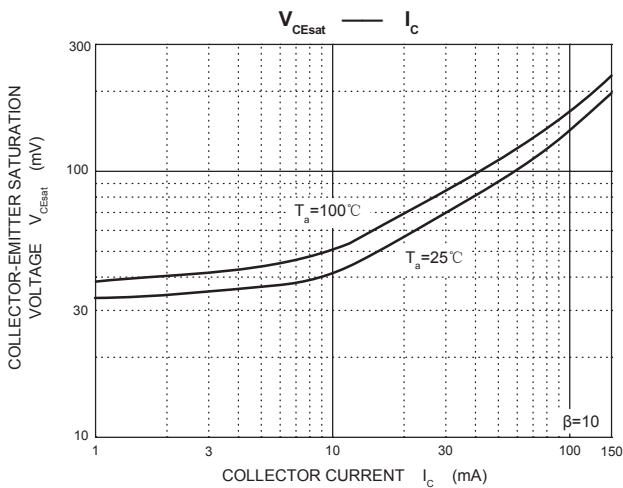
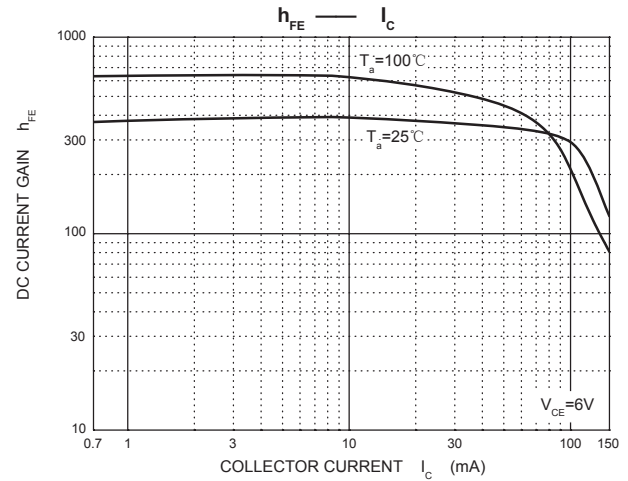
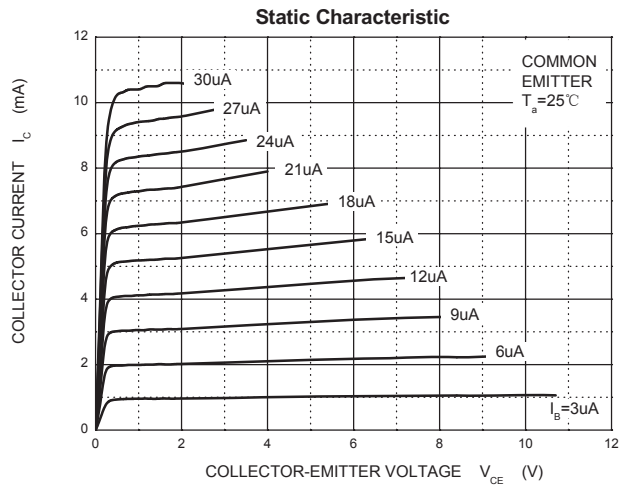
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\ \mu\text{A}$, $I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\ \mu\text{A}$, $I_C=0$	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

■ Classification of $h_{FE}(1)$

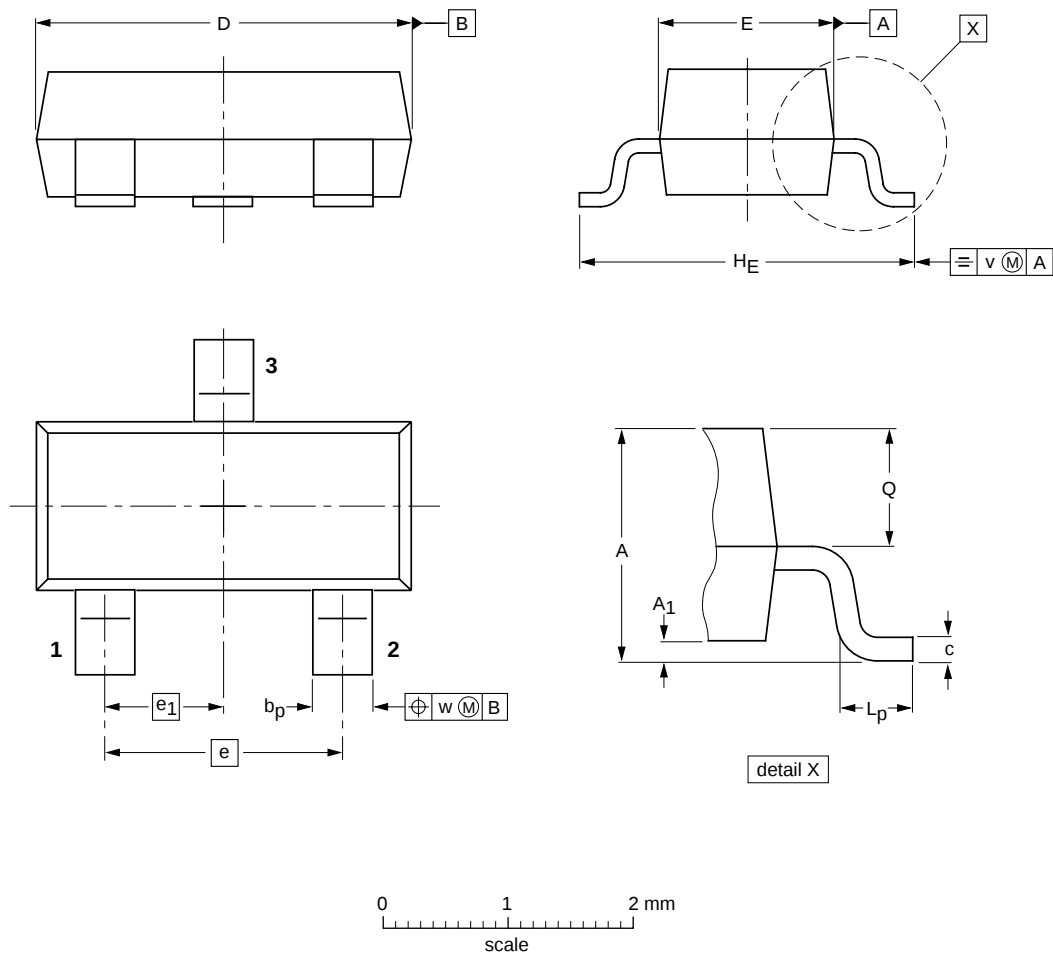
Type	2SC945-L	2SC945-H
Range	130-200	200-400
Marking	CRL	CR

■ Typical Characteristics



Package Outline

SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel, 7" reel	3000	EIA-481-1