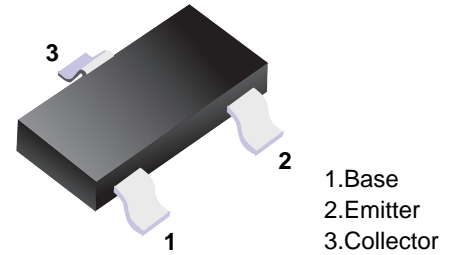


■ NPN Transistors

■ Features

- Power dissipation



■ Simplified outline(SOT-23)

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V <sub>CB0</sub>	60	V
Collector to Emitter Voltage	V <sub>CEO</sub>	50	V
Emitter to Base Voltage	V <sub>EB0</sub>	5	V
Collector Current to Continuous	I <sub>c</sub>	150	mA
Collector Power Dissipation	P <sub>c</sub>	200	mW
Junction Temperature	T <sub>j</sub>	125	°C
Storage Temperature	T <sub>stg</sub>	-55 to 125	°C

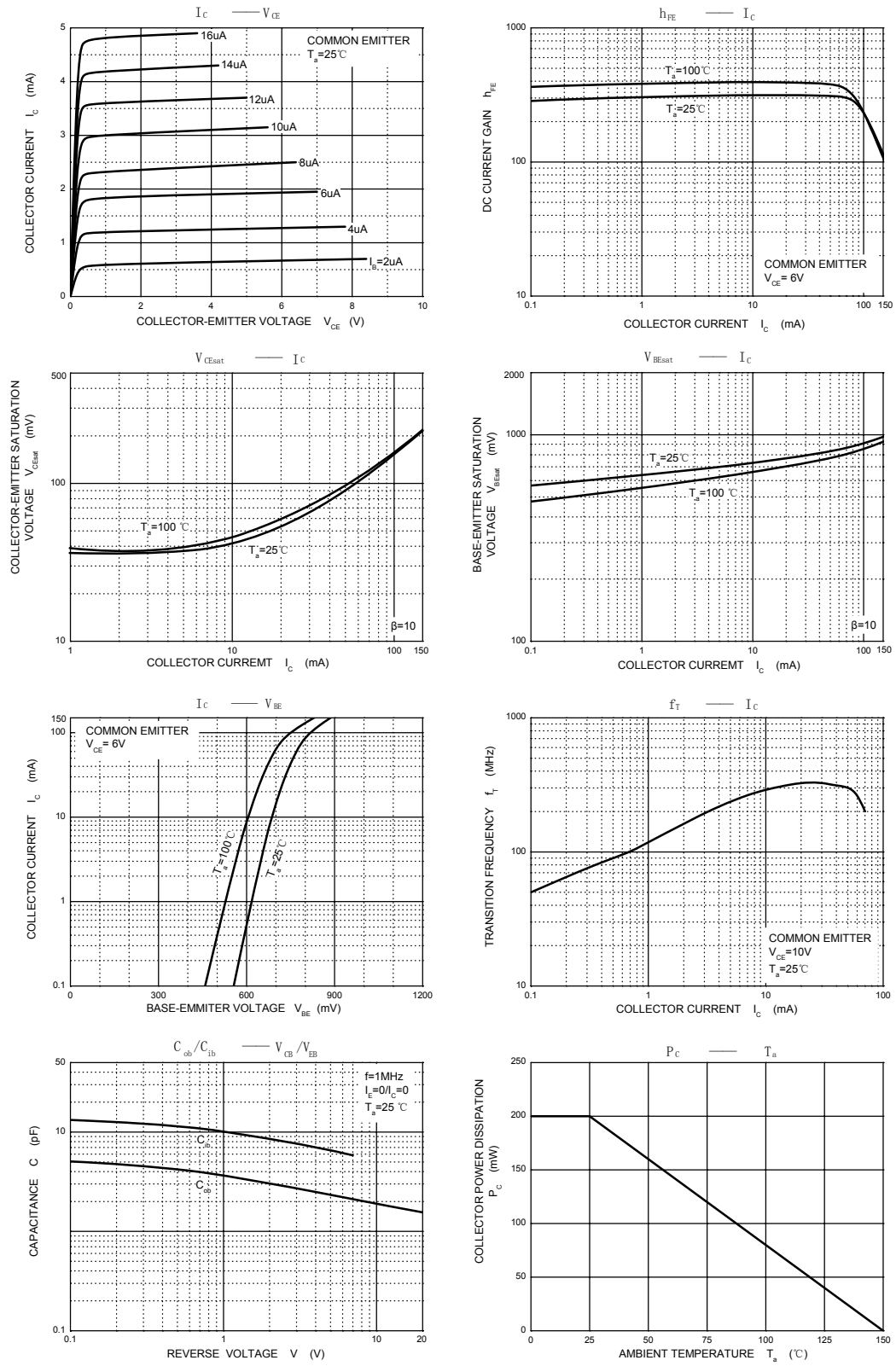
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector to base breakdown voltage	V <sub>CB0</sub>	I <sub>c</sub> = 100 μ A, I <sub>E</sub> =0	60			V
Collector to emitter breakdown voltage	V <sub>CEO</sub>	I <sub>c</sub> = 0.1mA, I <sub>B</sub> =0	50			V
Collector cut to off current	I <sub>CB0</sub>	V <sub>CB</sub> =60V, I <sub>E</sub> =0			0.1	μ A
Collector cut to off current	I <sub>CEO</sub>	V <sub>CE</sub> =40V, I <sub>B</sub> =0			1	μ A
Emitter cut to off current	I <sub>EB0</sub>	V <sub>EB</sub> = 5V, I <sub>c</sub> =0			0.1	μ A
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 6V, I <sub>c</sub> = 2mA	130		400	
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =100 mA, I <sub>B</sub> = 10mA			0.25	V
Base to emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>c</sub> =100 mA, I <sub>B</sub> = 10mA			1	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>c</sub> = 1mA, f=30MHz	80			MHz

■ hFE Classification

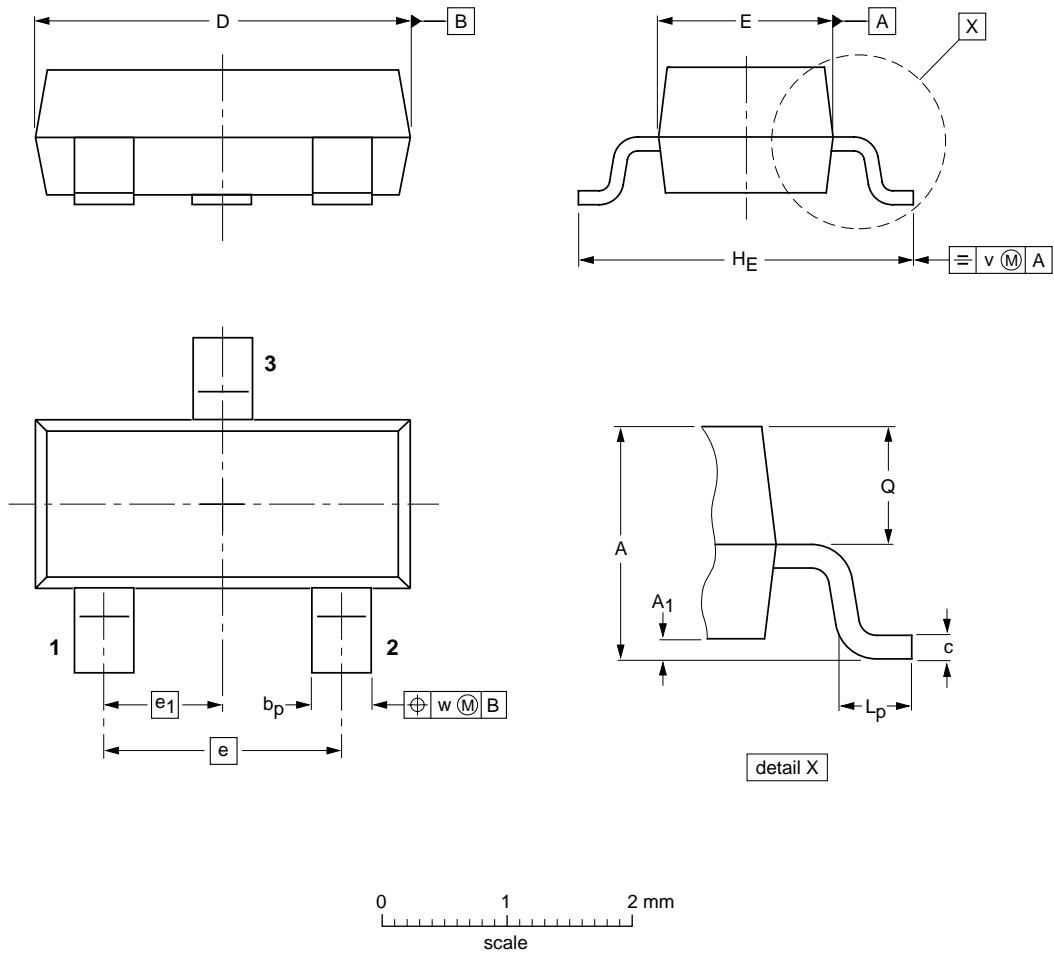
Type	2SC1815-L	2SC1815-H
Range	130-200	200-400
Marking	HFL	HF

■ Typical Characteristics



Package Outline

SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub> max.	b <sub>p</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	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