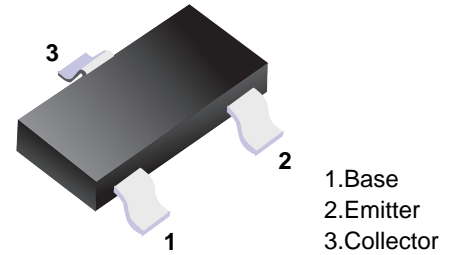


■ NPN Transistors

■ Features

- Low Cob.Cob=2.0pF (Typ.)



■ Simplified outline(SOT-23)

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CB0</sub>	60	V
Collector-emitter voltage	V <sub>CEO</sub>	50	V
Emitter-base voltage	V <sub>EB0</sub>	7	V
Collector current	I <sub>c</sub>	0.15	A
Collector power dissipation	P <sub>c</sub>	0.2	W
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

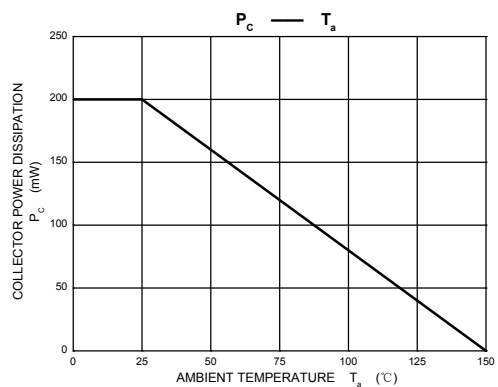
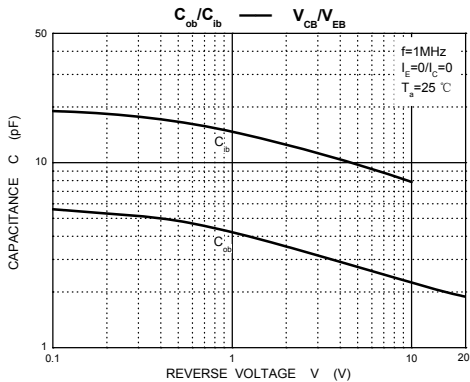
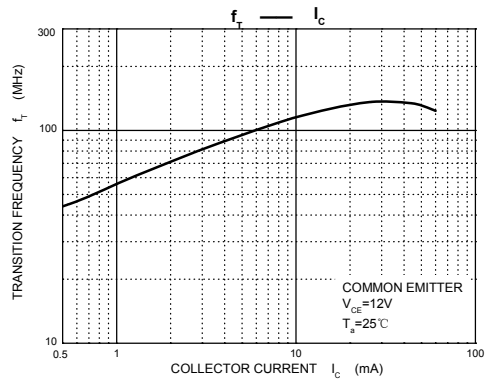
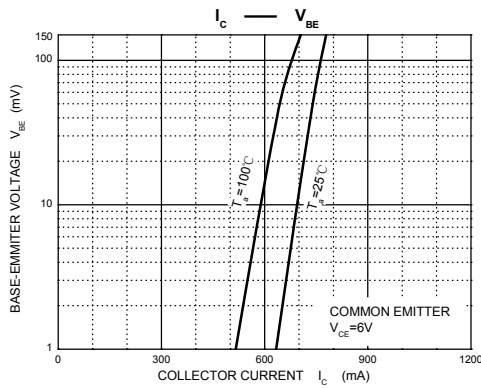
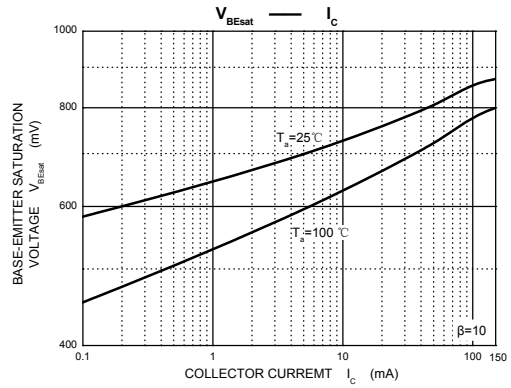
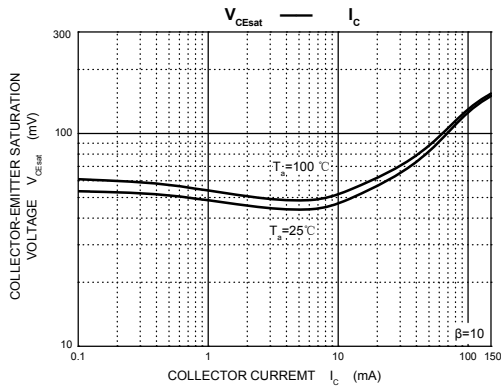
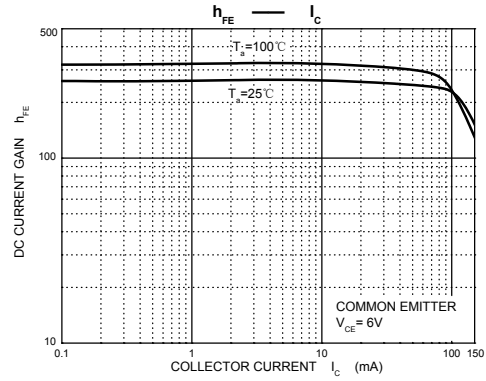
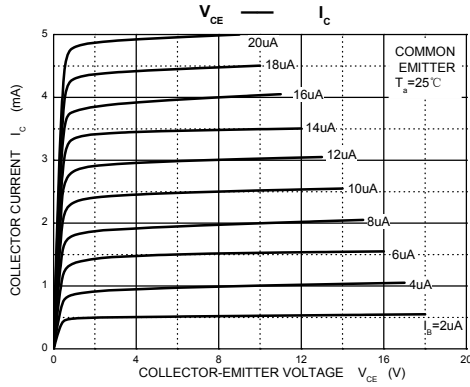
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V <sub>CB0</sub>	I <sub>c</sub> = 50 μA, I <sub>E</sub> = 0	60			V
Collector- emitter breakdown voltage	V <sub>CEO</sub>	I <sub>c</sub> = 1 mA, I <sub>B</sub> = 0	50			
Emitter - base breakdown voltage	V <sub>EB0</sub>	I <sub>E</sub> = 50 μA, I <sub>c</sub> = 0	7			
Collector-base cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = 60 V, I <sub>E</sub> = 0			100	nA
Emitter cut-off current	I <sub>EB0</sub>	V <sub>EB</sub> = 7V, I <sub>c</sub> =0			100	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =50 mA, I <sub>B</sub> =5mA			0.4	V
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>c</sub> =50 mA, I <sub>B</sub> =5mA			1.2	
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 6V, I <sub>c</sub> = 1mA	120		560	
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 12V, I <sub>E</sub> = 0,f=1MHz		2	3.5	pF
Transition frequency	f <sub>t</sub>	V <sub>CE</sub> = 12V, I <sub>E</sub> = -2mA,f=100MHz	80			MHz

■ hFE Classification

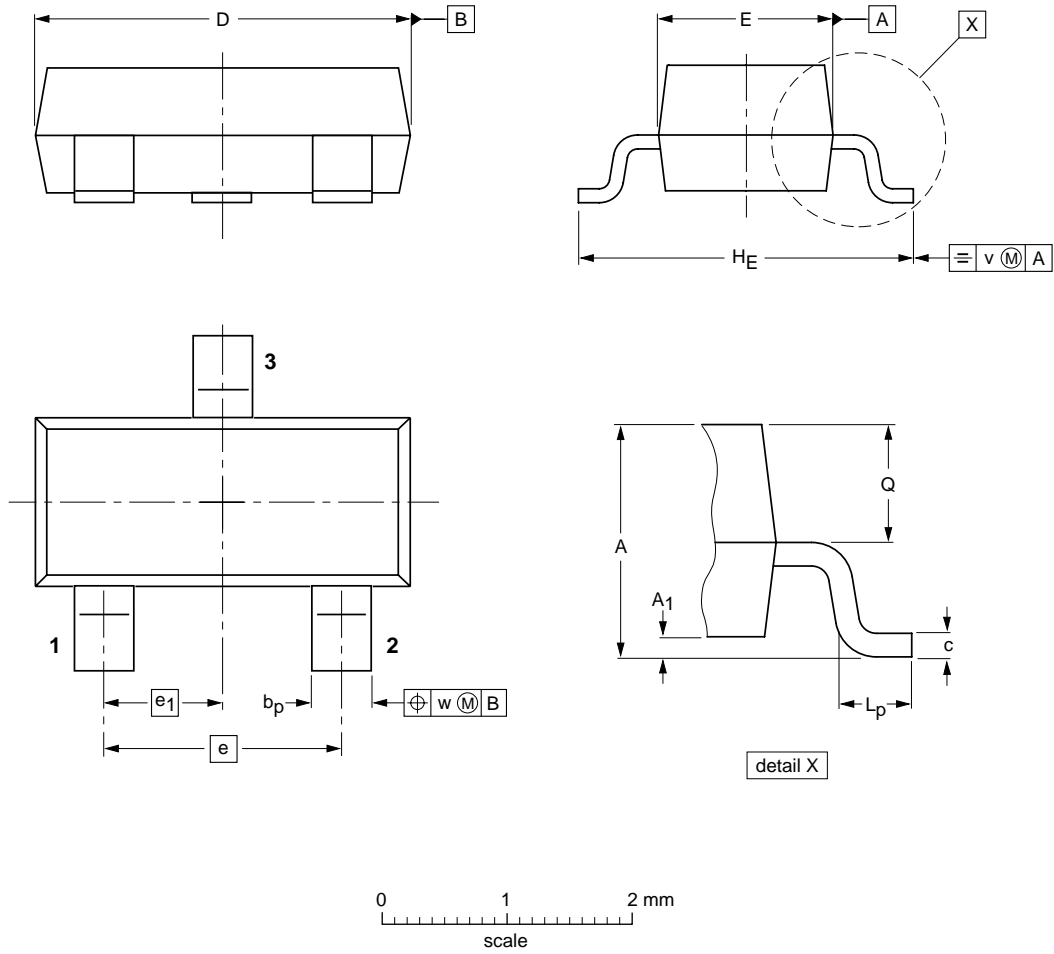
Type	2SC2412/K-Q	2SC2412/K-R	2SC2412/K-S
Range	120-270	180-390	270-560
Marking	BQ	BR	BS

■ 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