



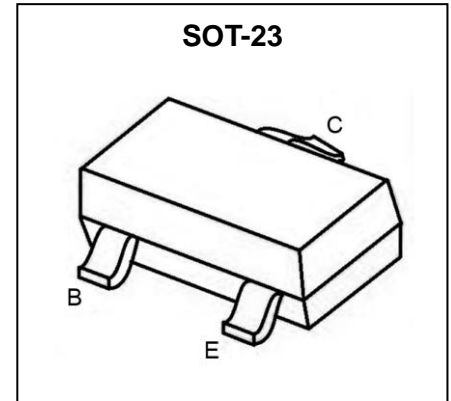
2SC2412 Transistor(NPN)

Feature

- For Switching and Amplifier Applications
- Low C_{ob} , $C_{ob}=2.0\text{pF}$ (Typ.)

CLASSIFICATION OF h_{FE}

Rank	Q	R	S
Range	120~270	180~390	270~560
Marking	BQ	BR	BS



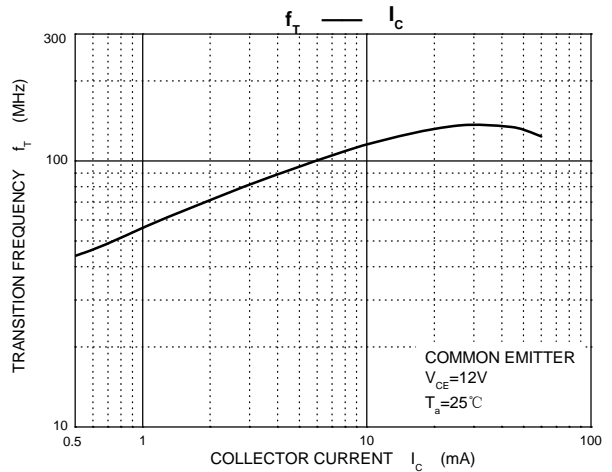
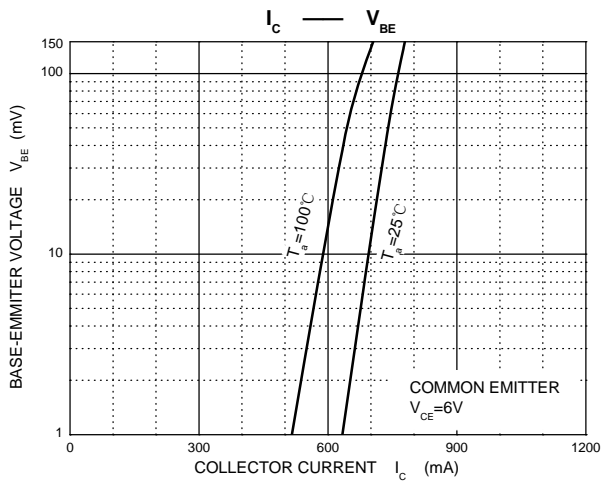
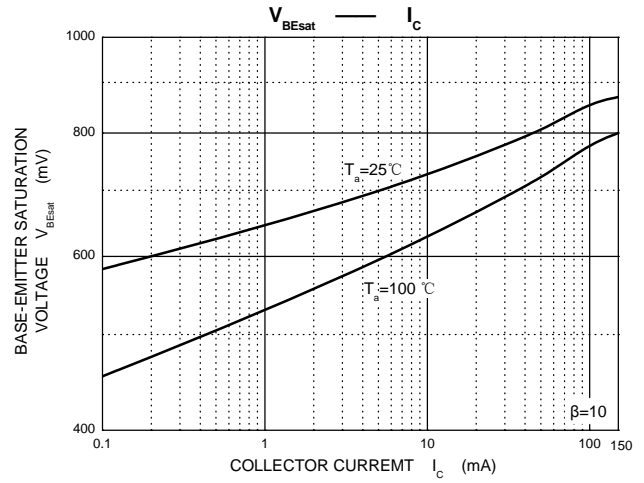
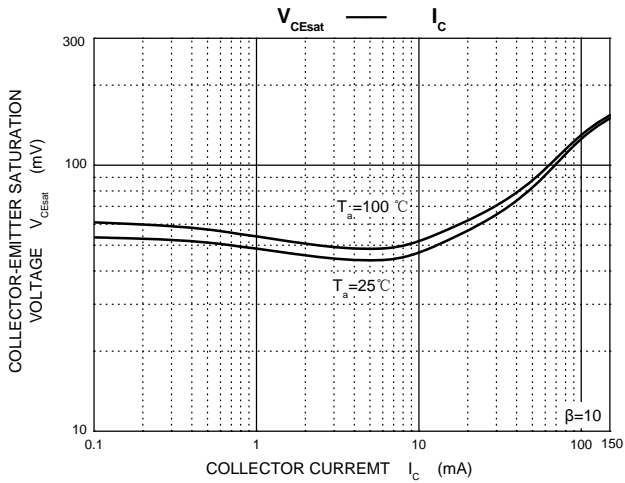
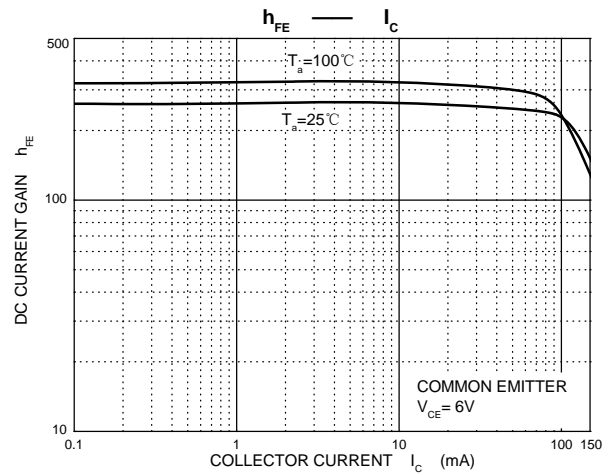
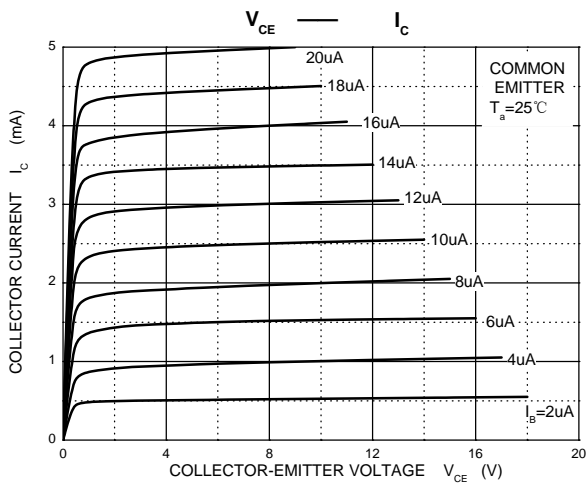
MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current -Continuous	I_c	0.15	A
Power Dissipation	P_d	0.2	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^\circ\text{C}$

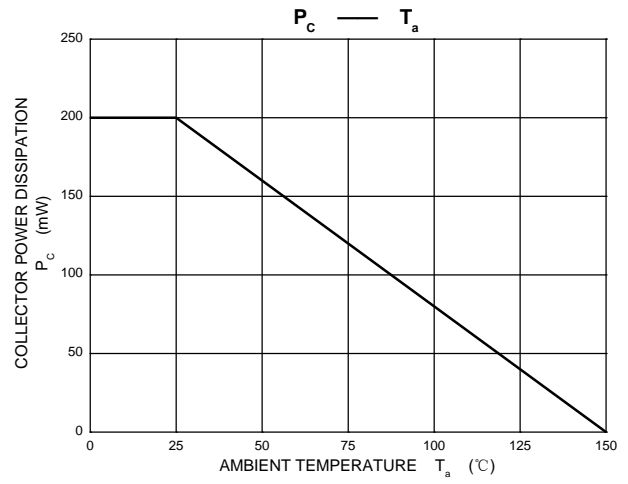
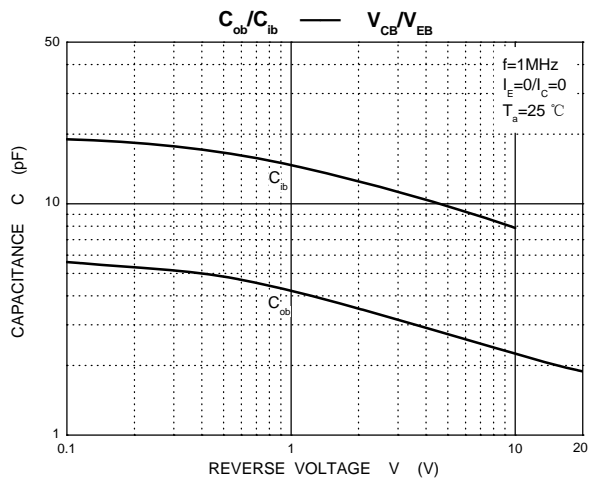
ELECTRICAL CHARACTERISTICS($T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_c=50\mu\text{A}$, $I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_c=1\text{mA}$, $I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu\text{A}$, $I_c=0$	7			V
Collector cut-off current	I_{CBO}	$V_{CB}=60\text{V}$, $I_E=0$			0.1	nA
Emitter cut-off current	I_{EBO}^*	$V_{EB}=7\text{V}$, $I_c=0$			0.1	nA
DC current gain	h_{FE}	$V_{CE}=6\text{V}$, $I_c=1\text{mA}$	120		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c=50\text{mA}$, $I_B=5\text{mA}$			0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_c=50\text{mA}$, $I_B=5\text{mA}$			0.8	V
Transition frequency	f_T	$V_{CE}=12\text{V}$, $I_c=2\text{mA}$, $f=100\text{MHz}$		160		MHZ
Collector output capacitance	C_{ob}	$V_{CB}=12\text{V}$, $I_E=0$, $f=1\text{MHz}$		2.0	3.5	pF

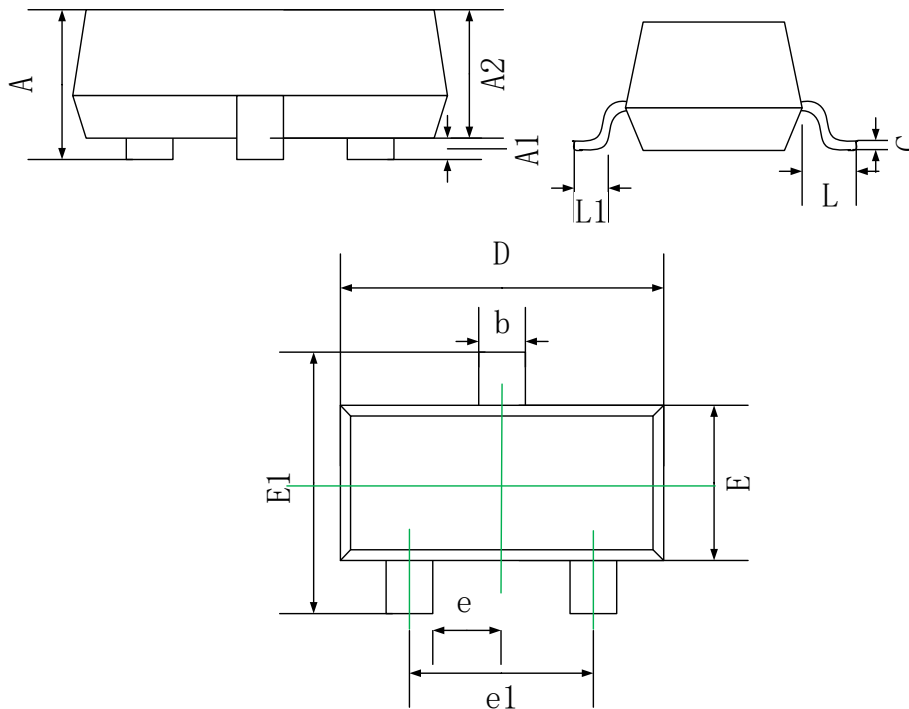
Typical Characteristics



Typical Characteristics

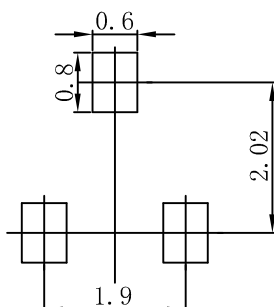


SOT-23 Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.90	1.15
A1	0.00	0.10
A2	0.90	1.05
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	1.20	1.40
E1	2.25	2.55
e	0.95 REF.	
e1	1.80	2.00
L	0.55 REF.	
L1	0.30	0.50

SOT-23 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.