

SOT-23 Plastic-Encapsulate Transistors

BCX19 TRANSISTOR (NPN)

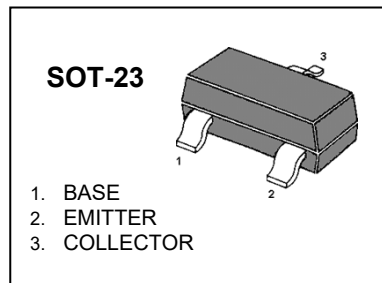
FEATURES

- Low voltage

MARKING : U1

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

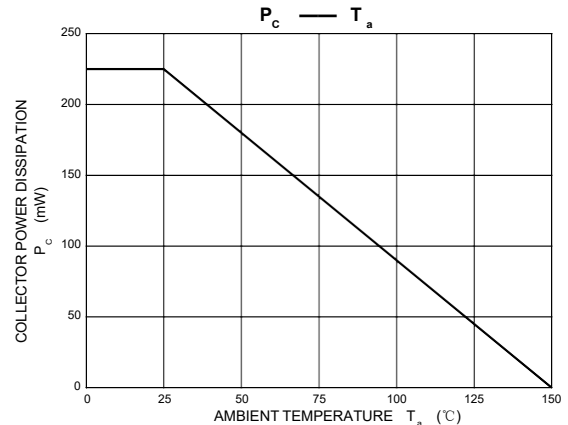
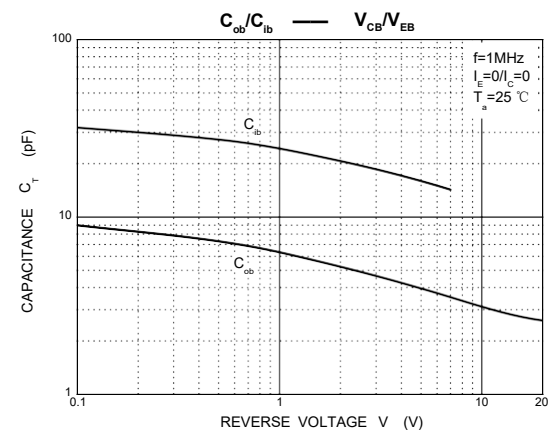
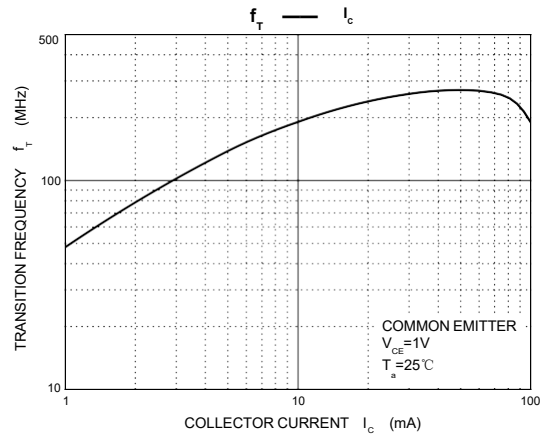
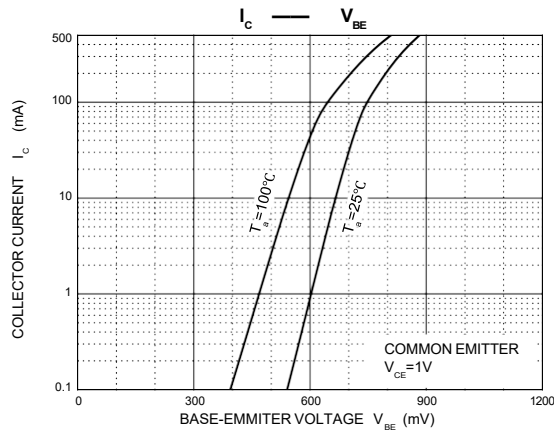
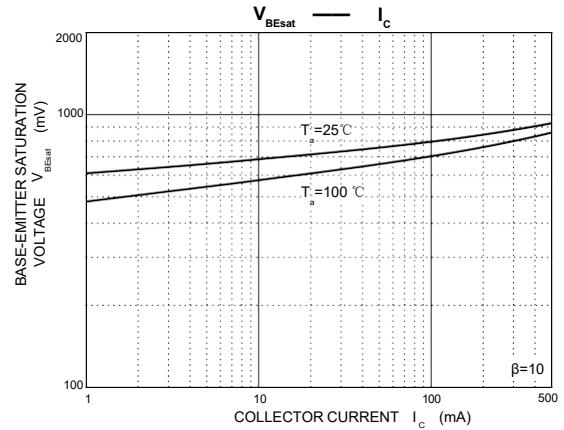
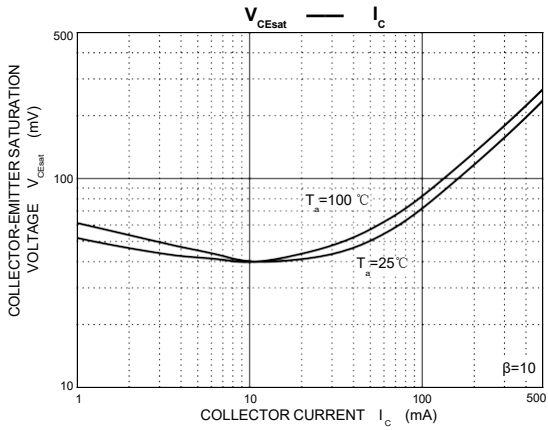
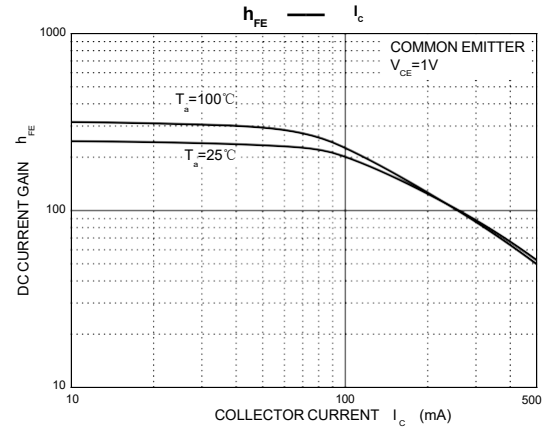
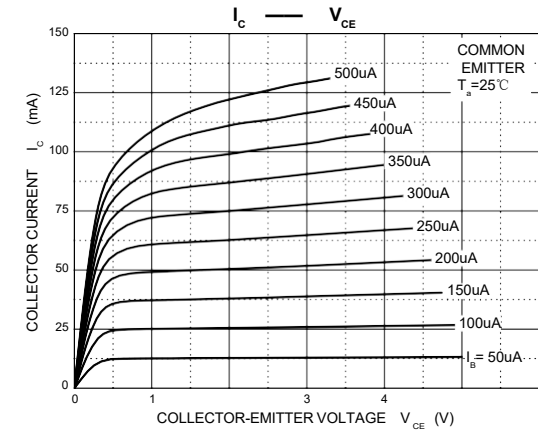
Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	50	V
V_{CE0}	Collector-Emitter Voltage	45	V
V_{EB0}	Emitter-Base Voltage	5	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	225	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	556	$^\circ\text{C}/\text{W}$
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^\circ\text{C}$



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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-emitter breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$, $I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}$, $I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$, $I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=20\text{V}$, $I_E=0$			0.1	μA
Collector cut-off current	I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$			10	μA
DC current gain	h_{FE1}	$V_{CE}=1\text{V}$, $I_C=100\text{mA}$	100		600	
	h_{FE2}	$V_{CE}=1\text{V}$, $I_C=300\text{mA}$	70			
	h_{FE3}	$V_{CE}=1\text{V}$, $I_C=500\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}$, $I_B=50\text{mA}$			0.62	V
Base-emitter voltage	$V_{BE(on)}$	$I_C=500\text{mA}$, $V_{CE}=1\text{V}$			1.2	V

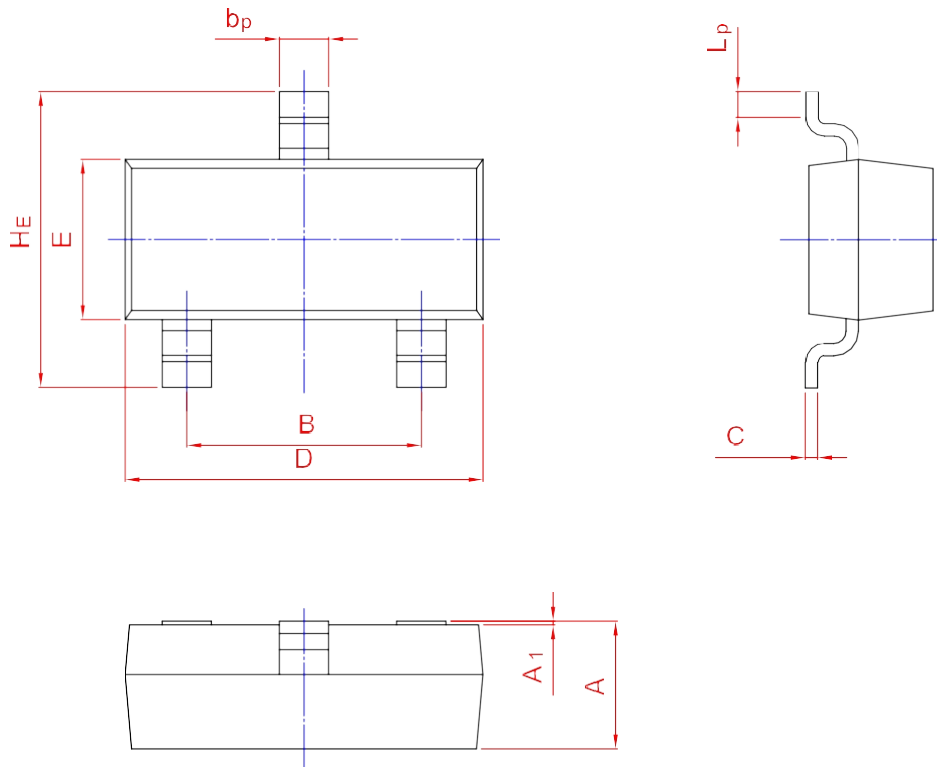
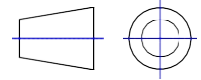
Typical Characteristics



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b _p	C	D	E	H _E	A ₁	L _p
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20