

## SOT-23 Plastic-Encapsulate Transistors

### Features

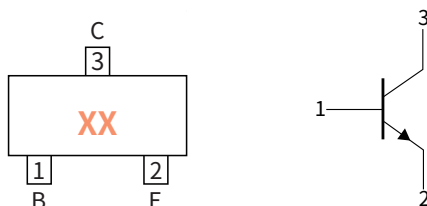
- Power dissipation of 200mW
- High stability and high reliability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

### Mechanical Data

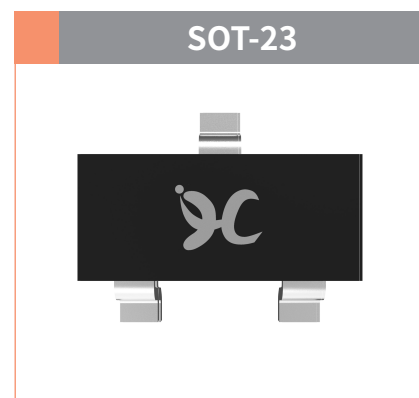
- Case: SOT-23  
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

### Function Diagram

XX = Device Code  
L4 = 2SC1623-L4  
L5 = 2SC1623-L5  
L6 = 2SC1623-L6  
L7 = 2SC1623-L7



**Collector-Base Voltage**  
VCBO 60V  
**Collector Current**  
0.1 Ampere



### Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Collector-Base Voltage	$V_{CB0}$	V	60
Collector-Emitter Voltage	$V_{CE0}$		50
Emitter-Base Voltage	$V_{EB0}$		5.0
Collector Current	$I_C$	A	0.1
Collector Power Dissipation	$P_C$	mW	200
Storage temperature	$T_{stg}$	°C	-55 ~+150
Junction temperature	$T_j$	°C	-55 ~+150
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	417

### Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	SYMBOL	UNIT	Condition	Min	Max
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	$I_C=100\mu A, I_E=0$	60	—
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$		$I_C=1.0mA, I_B=0$	50	—
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$		$I_E=100\mu A, I_C=0$	5.0	—
Collector-Base cut-off current	$I_{CBO}$	nA	$V_{CB}=60V, I_E=0$	—	100
Emitter-Base cut-off current	$I_{EBO}$		$V_{EB}=5.0V, I_C=0$	—	100
DC Current Gain	$h_{FE}$	—	$I_C=1.0mA, V_{CE}=6.0V$	90	600
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=100mA, I_B=10mA$	—	0.3
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=100mA, I_B=10mA$	—	1.0

## Classification Of $h_{FE}$

RANK	L4	L5	L6	L7
Range	90-180	135-270	200-400	300-600

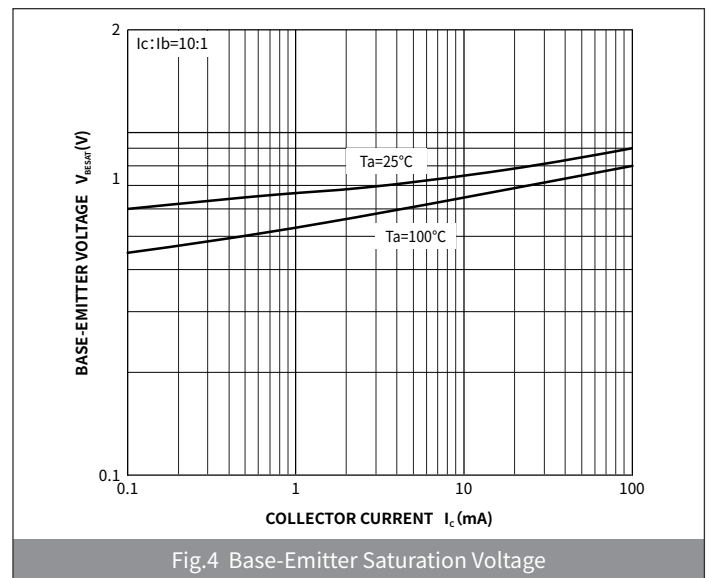
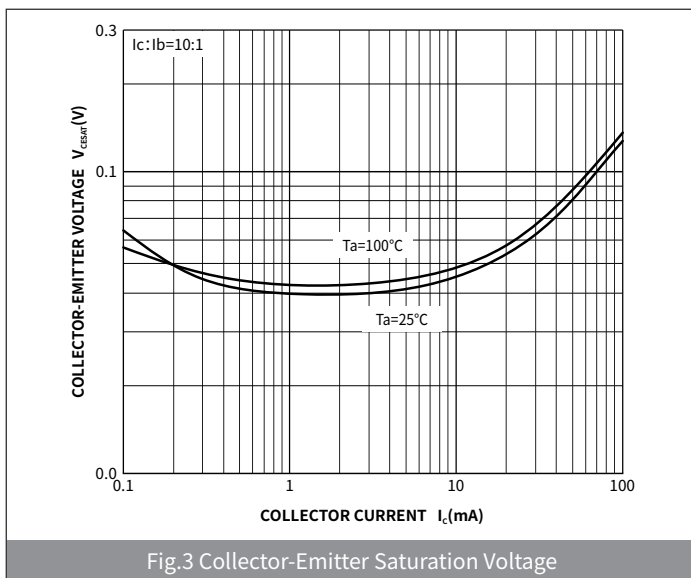
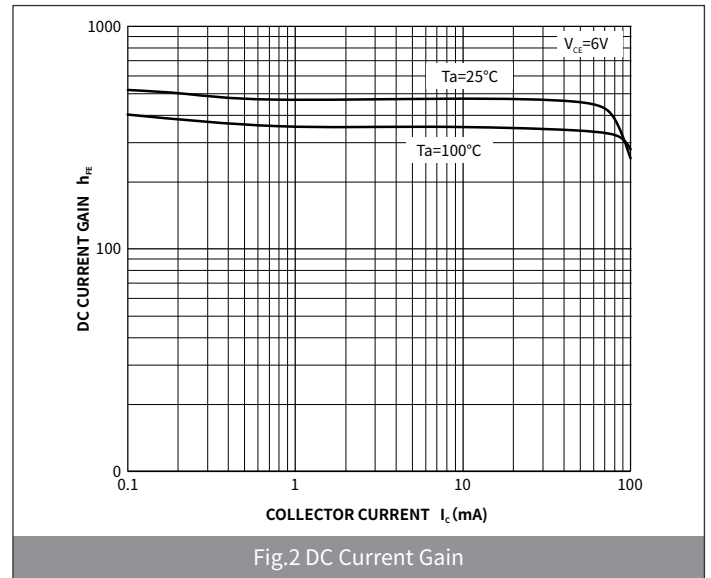
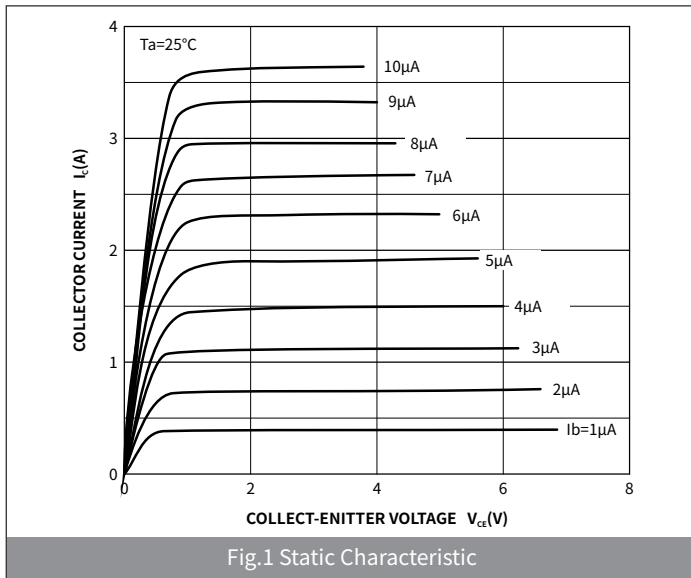
## Small-signal Characteristics

ITEM	SYMBOL	Condition	UNIT	Min	Typ	Max
Transition frequency	$f_T$	$I_C=10\text{mA}, V_{CE}=6.0\text{V}$	MHz	—	250	—

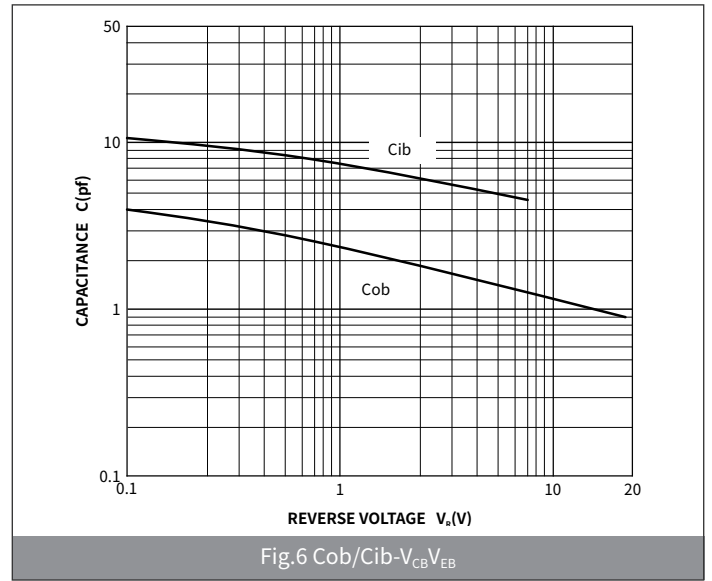
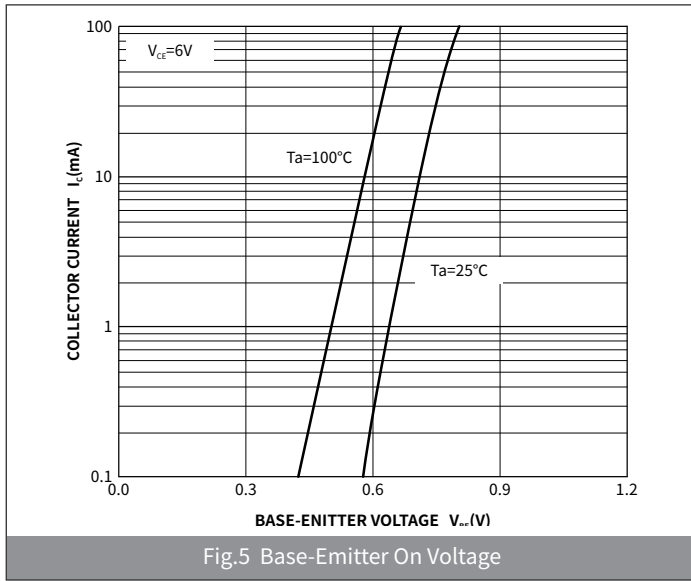
## Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-23	R1	0.008	3000	30000	120000	7"

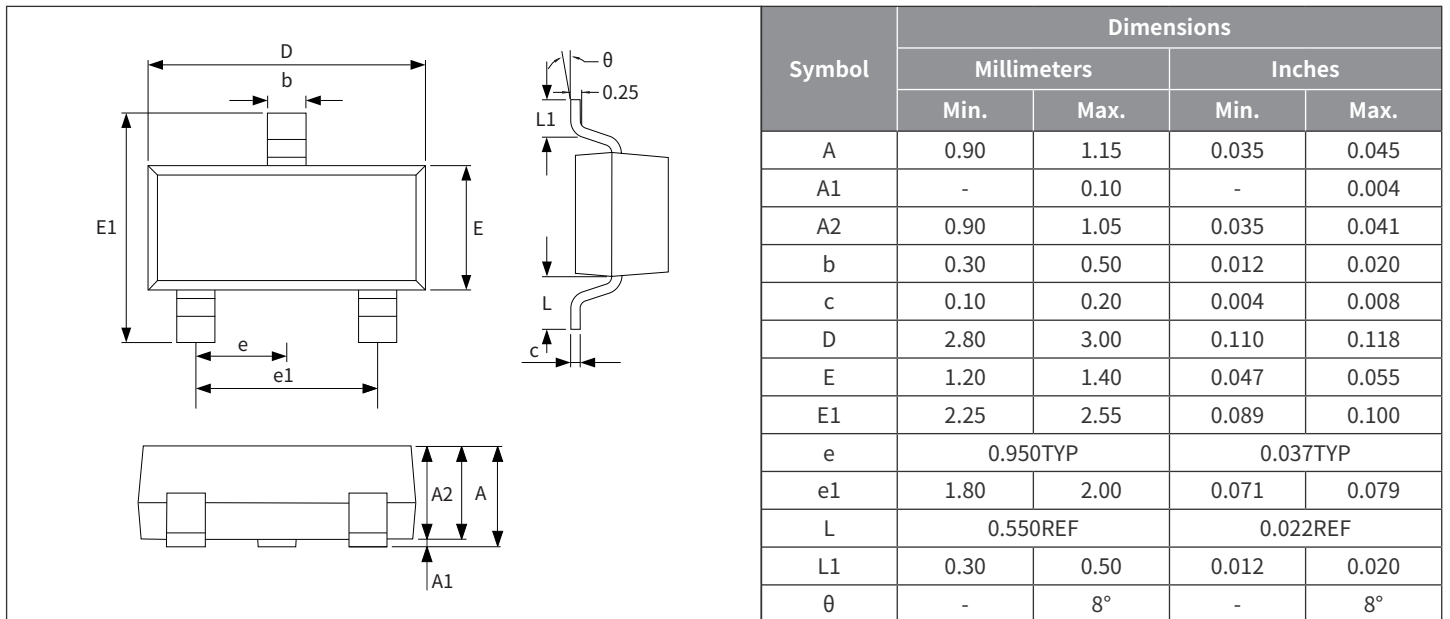
## Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



## ● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



## ● Package Outline Dimensions (SOT-23)



## ● Suggested Pad Layout

