

SOT-23 Plastic-Encapsulate Transistors

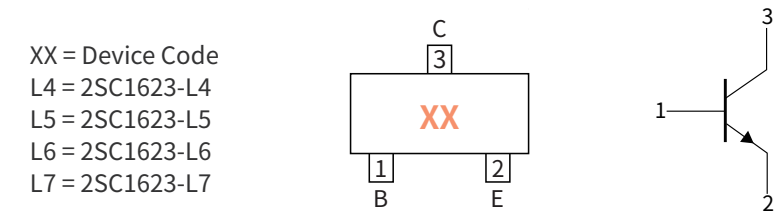
Features

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

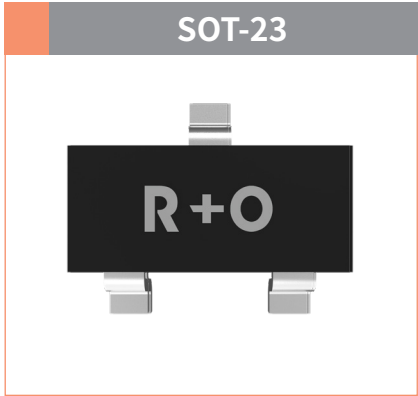
Mechanical Data

- 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



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_{CBO}	V	60
Collector-Emitter Voltage	V_{CEO}		50
Emitter-Base Voltage	V_{EBO}		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 hFE

Table with 5 columns: RANK, L4, L5, L6, L7. Row 1: Range, 90-180, 135-270, 200-400, 300-600.

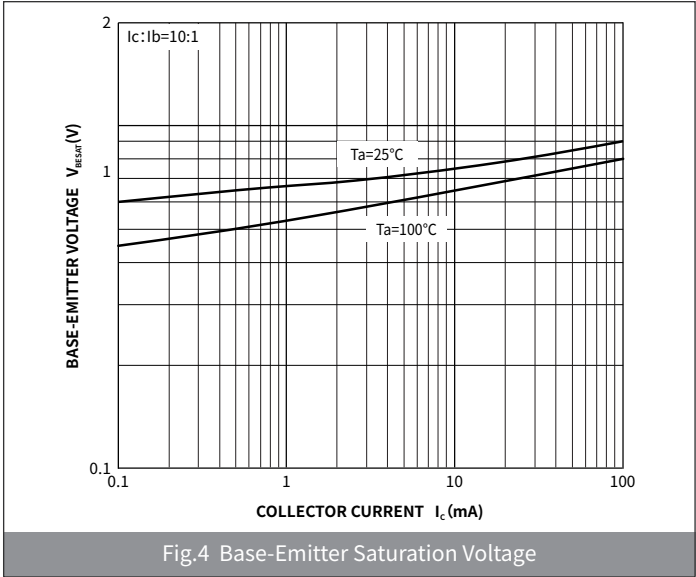
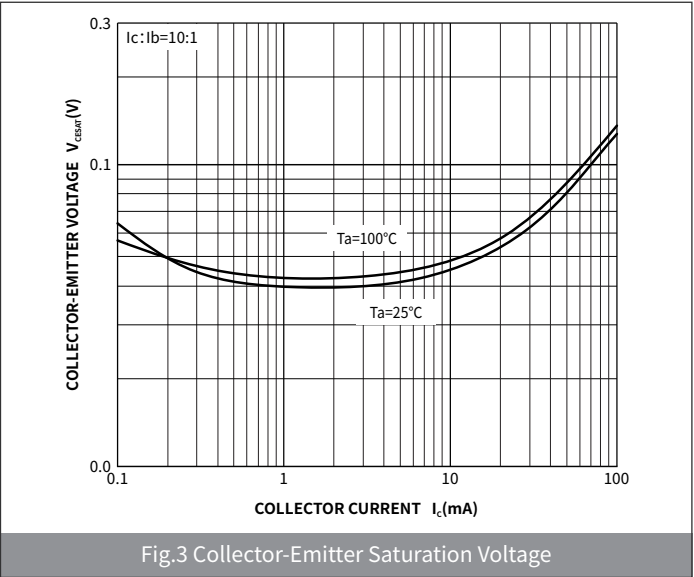
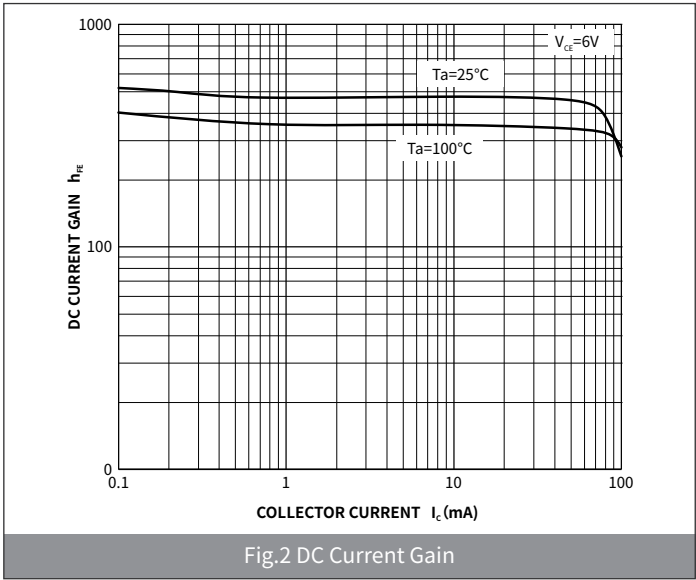
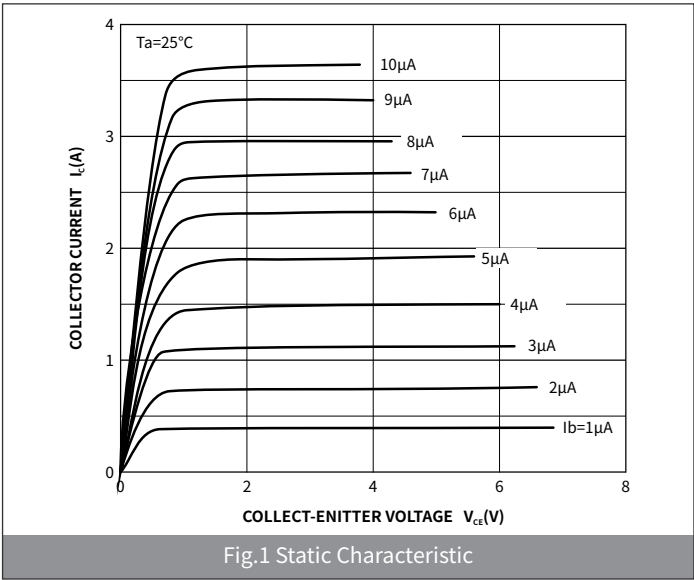
Small-signal Characteristics

Table with 7 columns: ITEM, SYMBOL, Condition, UNIT, Min, Typ, Max. Row 1: Transition frequency, fT, IE=10mA, VCE= 6.0V, MHz, —, 250, —.

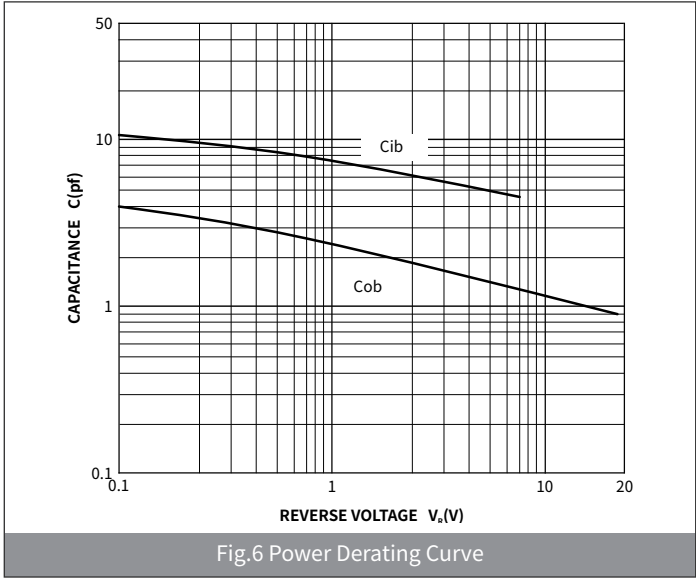
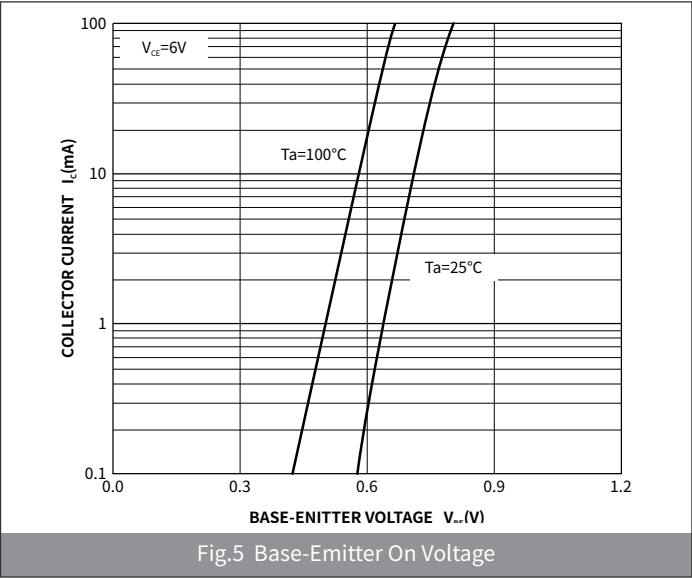
Ordering Information

Table with 7 columns: PACKAGE, PACKAGE CODE, UNIT WEIGHT(g), REEL(pcs), BOX(pcs), CARTON(pcs), DELIVERY MODE. Row 1: SOT-23, R1, 0.008, 3000, 45000, 180000, 7".

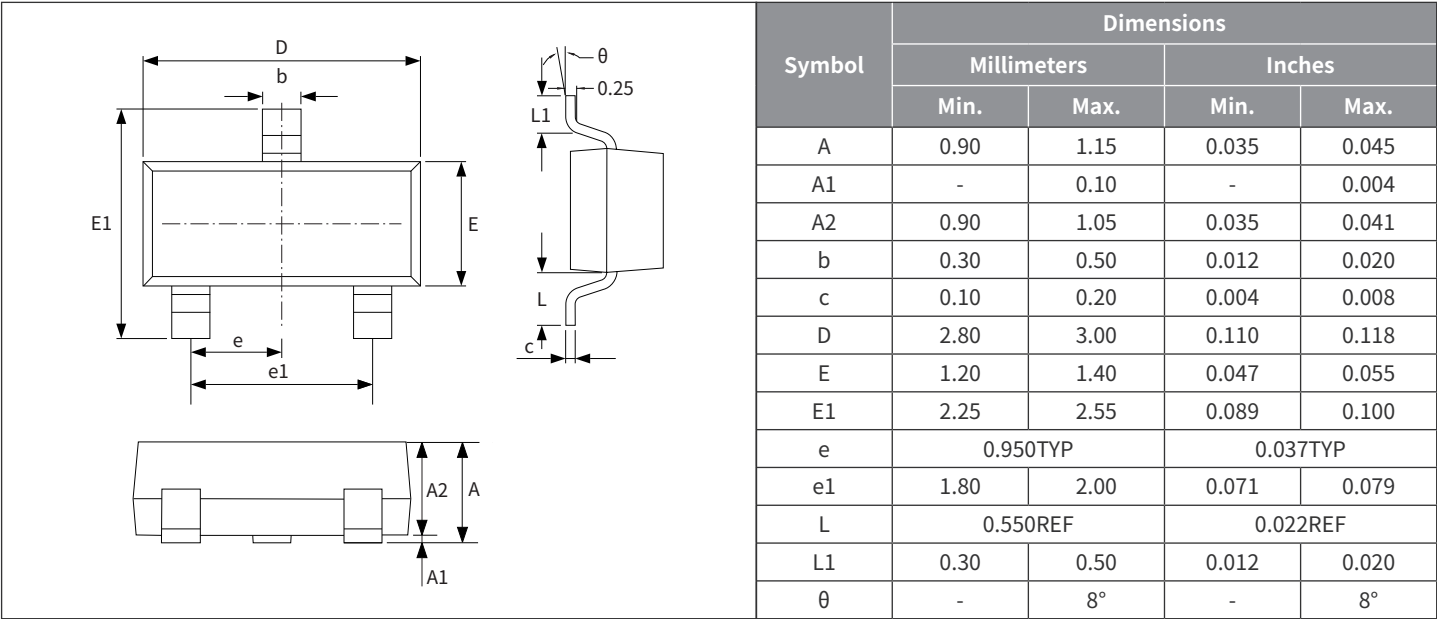
Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



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



● Package Outline Dimensions (SOT-23)



● Suggested Pad Layout

