

SOT-23 Plastic-Encapsulate Transistors

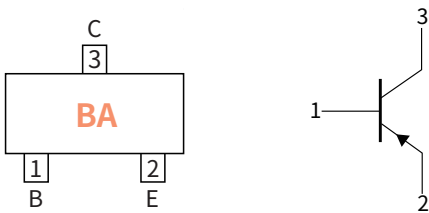
Features

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

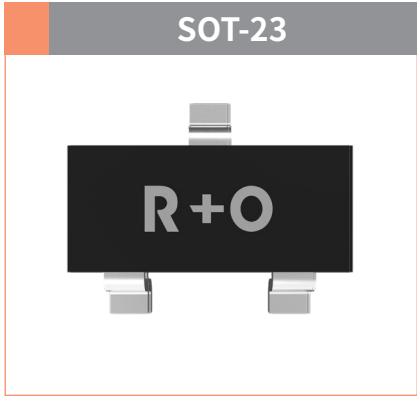
Mechanical Data

- 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 -50V
Collector Current
-0.15Ampere



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

PARAMETER	SYMBOL	UNIT	VALUE
Collector-Base Voltage	VCBO	V	-50
Collector-Emitter Voltage	VCEO		-50
Emitter-Base Voltage	VEBO		-5.0
Collector Current	IC	mA	-150
Collector Power Dissipation	PC	mW	200
Storage temperature	Tstg	°C	-55 ~+125
Junction temperature	Tj	°C	-55 ~+150
Typical Thermal Resistance	RθJA	°C /W	625

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

PARAMETER	SYMBOL	UNIT	Condition	Min	Typ	Max
Collector-Base Breakdown Voltage	V(BR)CBO	V	IC=-100μA, IE=0	-50	—	—
Collector-Emitter Breakdown Voltage	V(BR)CEO		IC=-1.0mA, IB=0	-50	—	—
Emitter-Base Breakdown Voltage	V(BR)EBO		IE=-100μA, IC=0	-5.0	—	—
Collector-Base cut-off current	ICBO	μA	VCB=-60V, IE=0	—	—	-0.1
Emitter-Base cut-off current	IEBO		VEB=-5.0V, IC=0	—	—	-0.1
DC Current Gain	hFE	—	IC=-2.0mA VCE=-6.0V	120	—	400
Collector-Emitter Saturation Voltage	VCE(sat)	V	IC=-100mA, IB=-10mA	—	—	-0.3
Base-Emitter Saturation Voltage	VBE(sat)	V	IC=-100mA, IB=-10mA	—	—	-1.1
Output Capacitance	Cob	pF	VCB=-6.0V,IE=0,f=1MHz	—	4.5	—

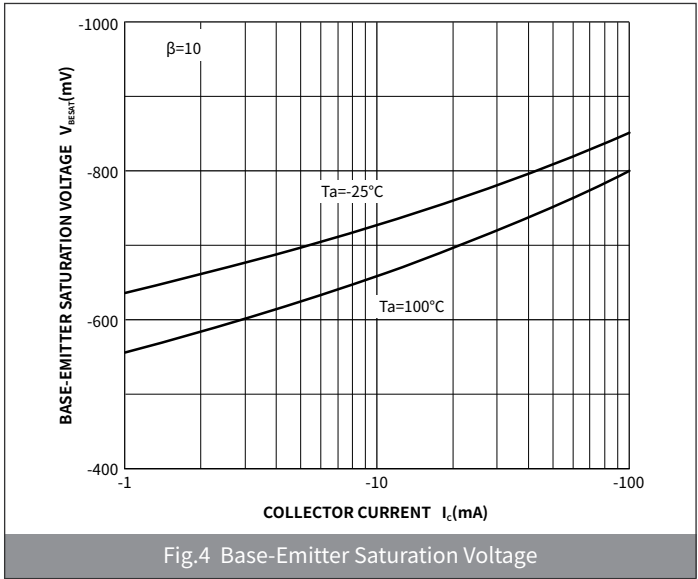
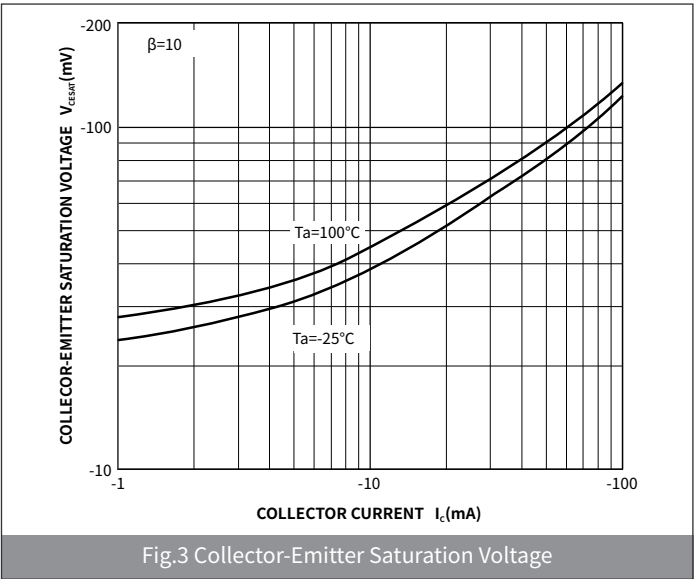
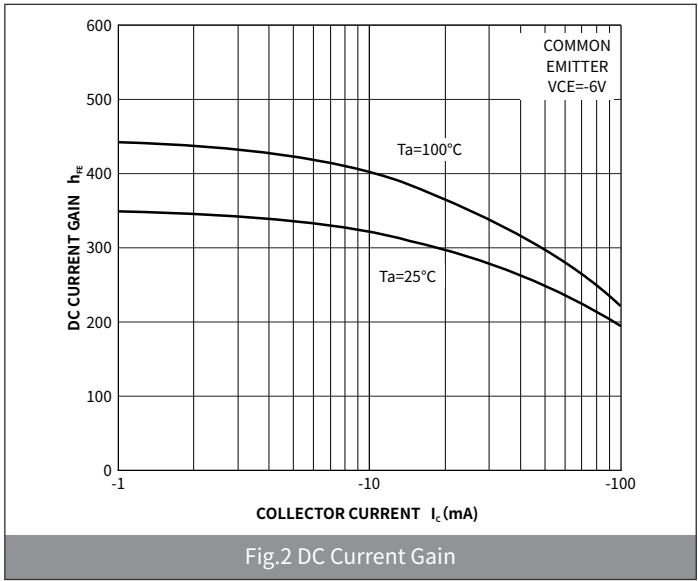
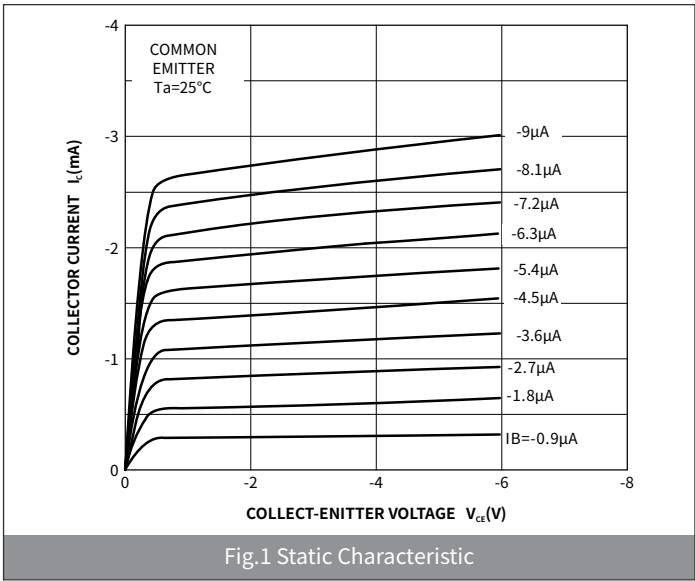
● Small-signal Characteristics

ITEM	SYMBOL	Condition	UNIT	Min	Max
Transition frequency	f_T	$I_C=-1.0\text{mA}$, $V_{CE}=-6.0\text{V}$	MHz	80	—

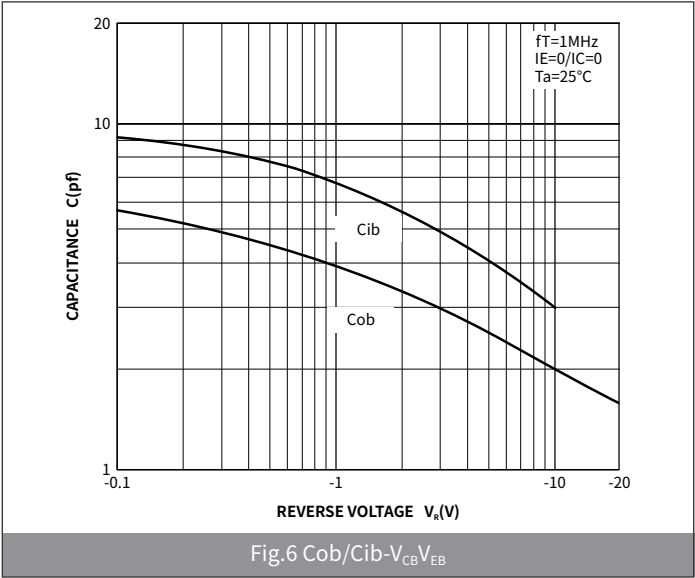
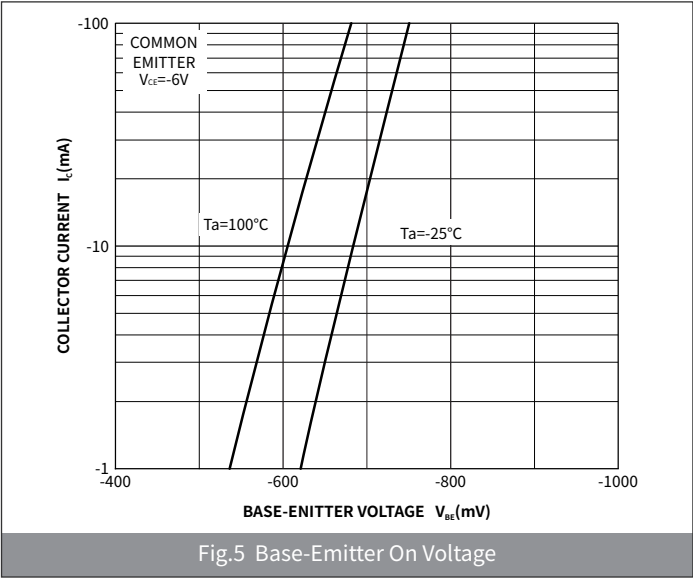
● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-23	R1	0.008	3000	45000	180000	7"

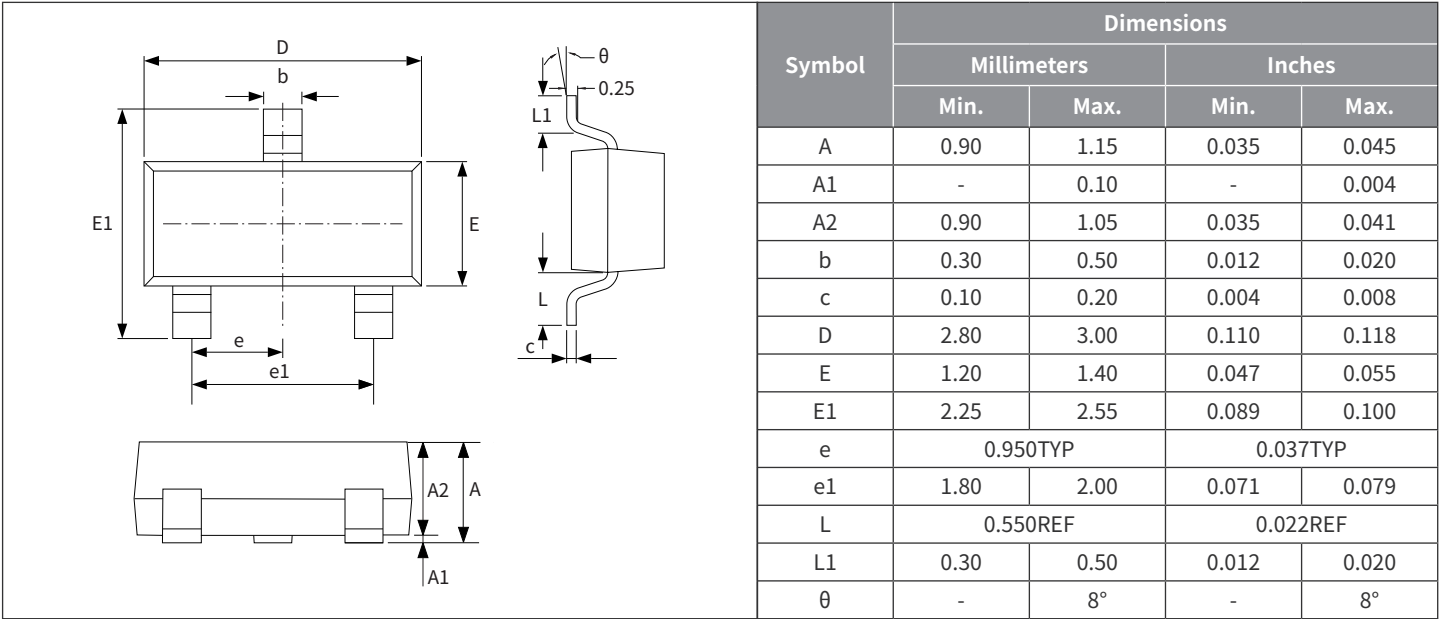
● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



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● Package Outline Dimensions (SOT-23)



● Suggested Pad Layout

