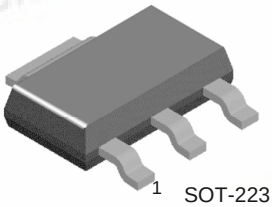
FAIRCHILD
SEMICONDUCTOR®

SB29003

High Voltage Transistor



1 SOT-223
Marking: 5463003

1.Base 2.Collector 3.Emitter

Absolute Maximum Ratings T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	300	mA
P_C	Collector Dissipation (T_C = 25°C)	2	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

Electrical Characteristics T_C = 25°C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C = 100μA, I_B = 0	500		V
BV_{CER}	Collector-Emitter Breakdown Voltage *	I_C = 1mA, I_B = 0	400		V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = 100μA, I_C = 0	6		V
I_{CBO}	Collector Cut-off Current	V_{CB} = 400V, I_E = 0		0.1	μA
I_{CES}	Collector Cut-off Current	V_{CE} = 400V, I_B = 0		0.5	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 4V, I_C = 0		0.1	μA
h_{FE}	DC Current Gain *	V_{CE} = 10V, I_C = 1mA V_{CE} = 10V, I_C = 10mA V_{CE} = 10V, I_C = 50mA V_{CE} = 10V, I_C = 100mA	40 50 45 40	200	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage *	I_C = 1mA, I_B = 0.1mA I_C = 10mA, I_B = 1mA I_C = 50mA, I_B = 5mA		0.4 0.5 0.75	V V V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage *	I_C = 10mA, I_B = 1mA		0.75	V
C_{ob}	Output Capatitance	V_{CB} = 20V, I_E = 0, f = 1MHz		7	pF

* Pulse Test: PW ≤ 300μs, Duty Cycle ≤ 2%

Typical Performance Characteristics

Figure 1. DC Current Gain

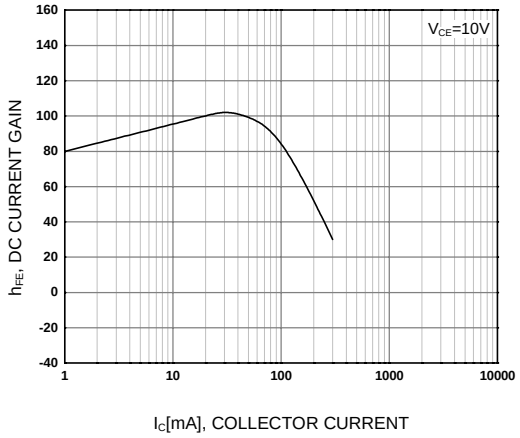


Figure 2. Capacitance

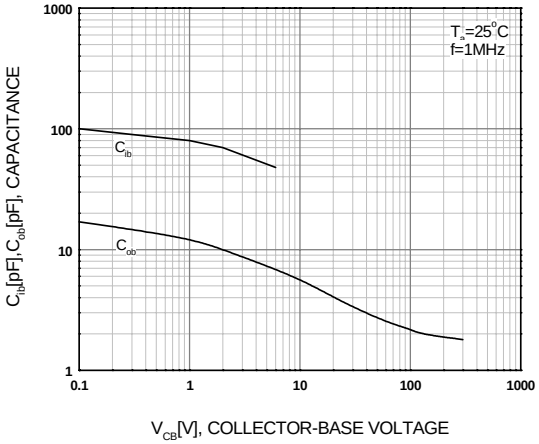


Figure 3. On Voltage

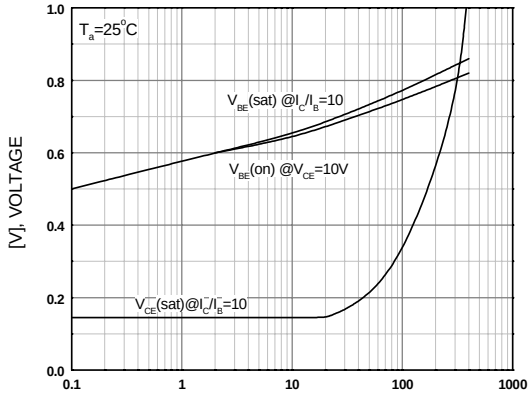


Figure 4. Collector Saturation Region

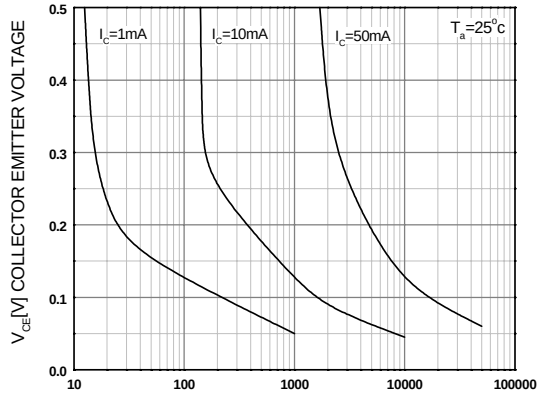
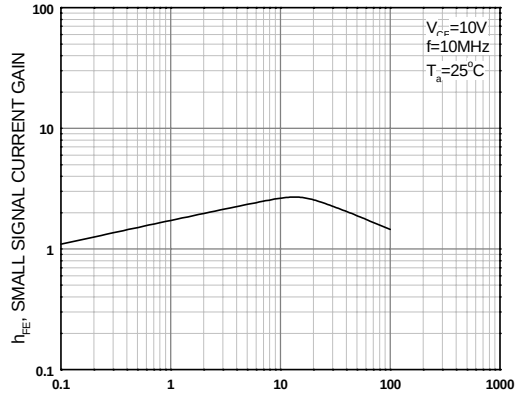
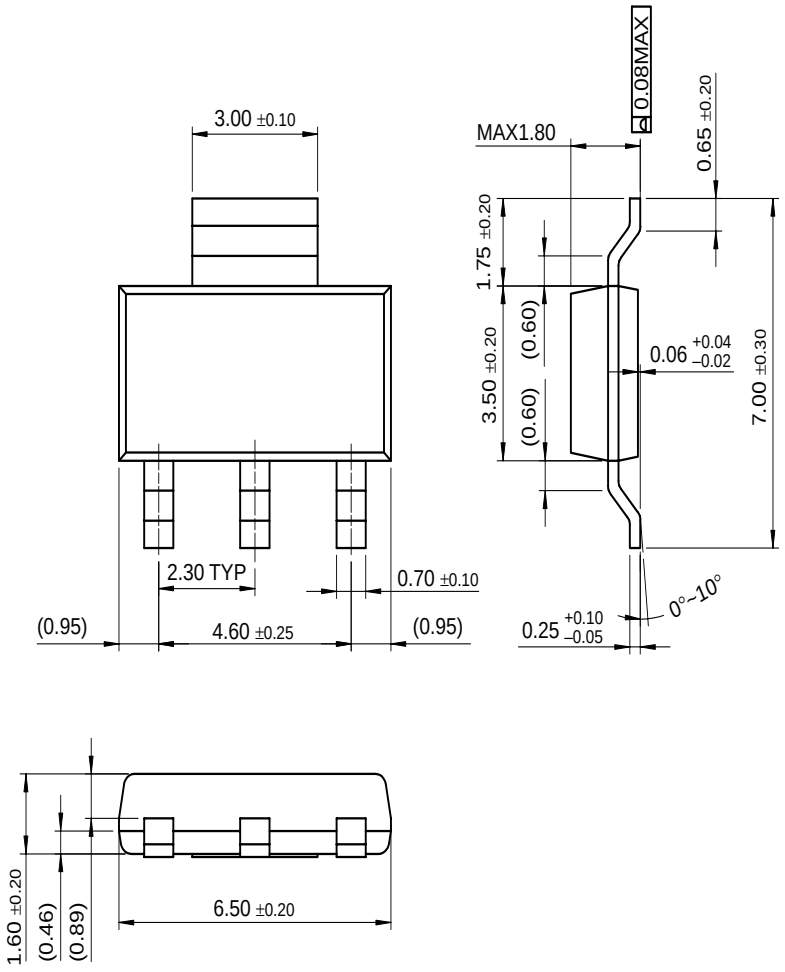


Figure 5. High Frequency Current Gain



Mechanical Dimensions

SOT-223



Dimensions in Millimeters

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