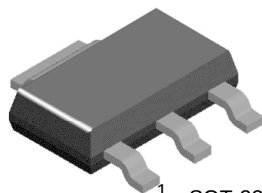


SB29003

High Voltage Transistor



1 SOT-223
Marking: 5463003
1.Base 2.Collector 3.Emitter

Absolute Maximum Ratings $T_a = 25^\circ\text{C}$ 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 ($T_C = 25^\circ\text{C}$)	2	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

Electrical Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

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

* Pulse Test: $PW \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

Typical Performance Characteristics

Figure 1. DC Current Gain

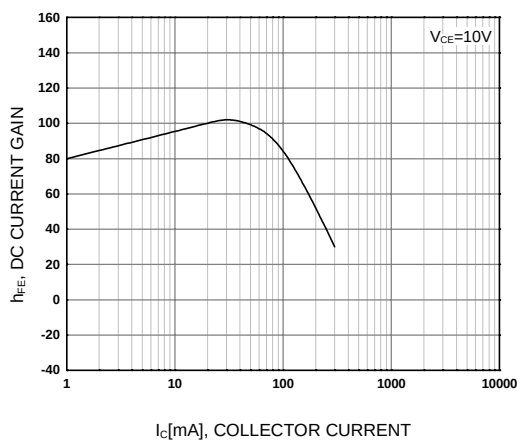


Figure 2. Capacitance

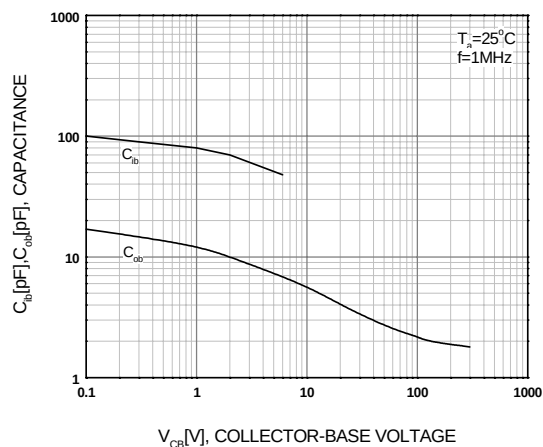


Figure 3. On Voltage

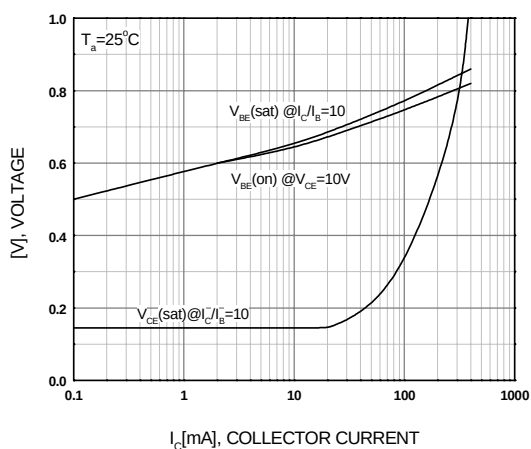


Figure 4. Collector Saturation Region

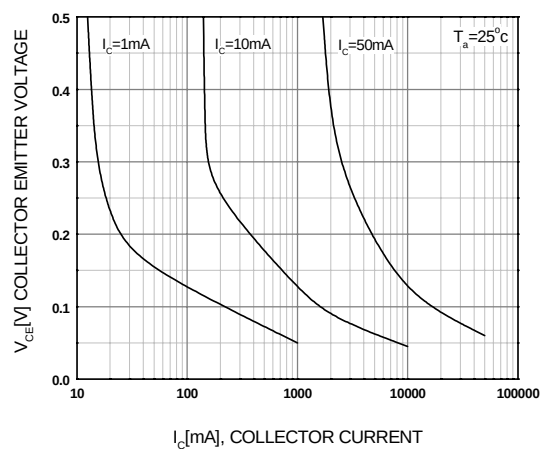
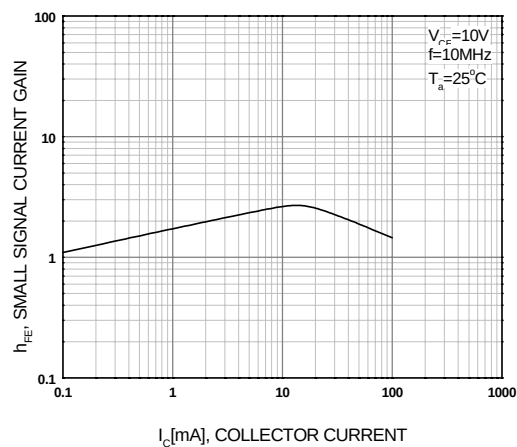
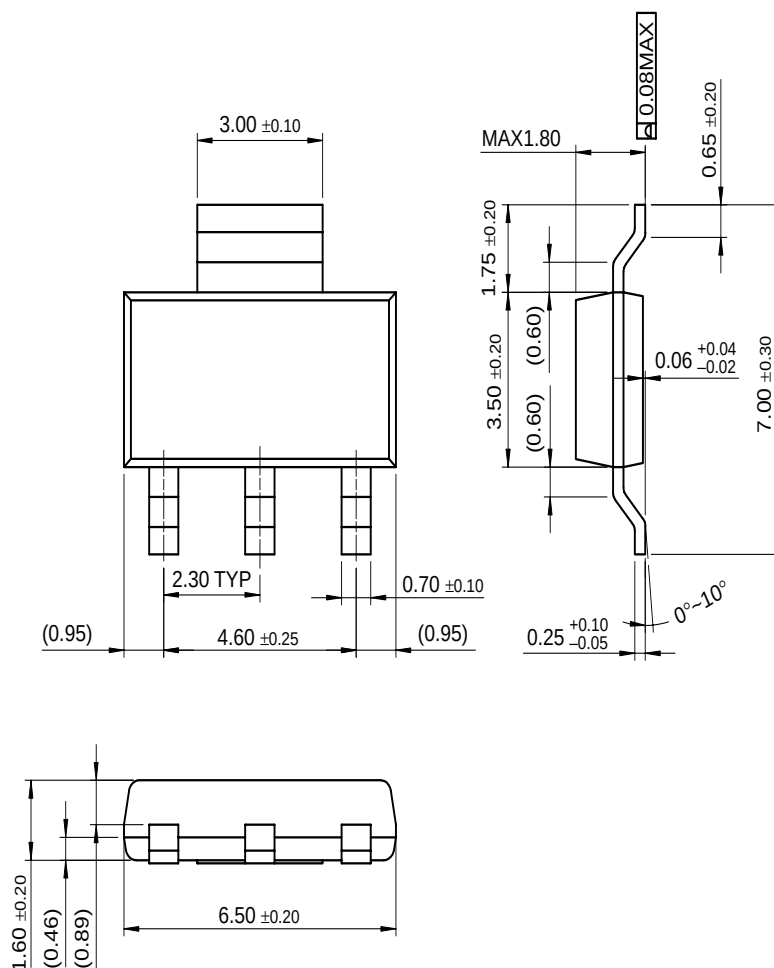


Figure 5. High Frequency Current Gain



Mechanical Dimensions

SOT-223



Dimensions in Millimeters

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EnSigna TM	i-Lo TM	OCX TM	RapidConfigure TM	TruTranslation TM
FACT TM	ImpliedDisconnect TM	OCXPro TM	RapidConnect TM	UHC TM
FACT Quiet Series TM		OPTOLOGIC [®]	μSerDes TM	UltraFET [®]
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