



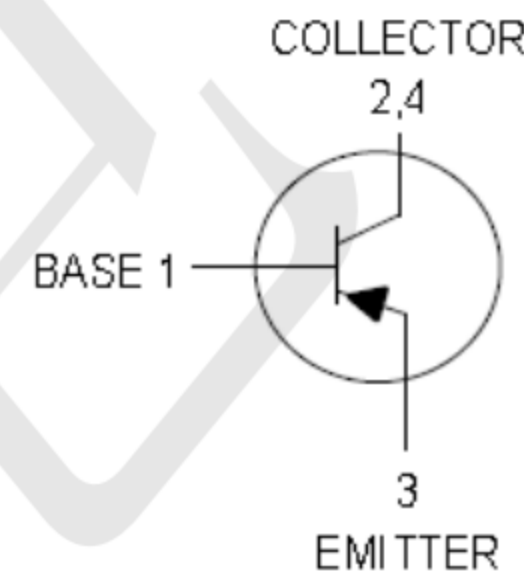
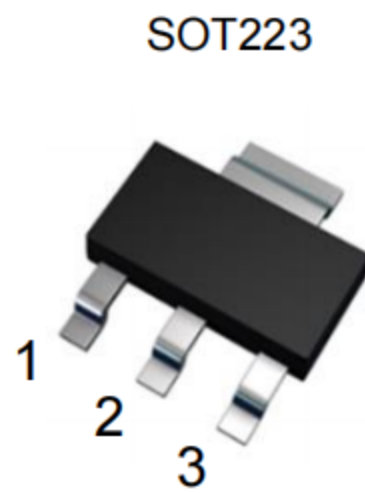
## Features

- High Collector Current
- Low Collector-emitter Saturation Voltage

## Mechanical Data

- Case: SOT-223
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Matte tin plated leads, solderable per MIL-STD-202, Method 208

## Circuit Diagram



Marking: ZT2907A

## Absolute Maximum Ratings (T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V <sub>CB0</sub>	-60	V
Collector-Emitter Breakdown Voltage	V <sub>CEO</sub>	-60	V
Emitter-Base Breakdown Voltage	V <sub>EB0</sub>	-5	V
Collector Current (Continuous)	I <sub>c</sub>	-0.6	A

## Thermal Characteristic

Parameter	Symbol	Value	Unit
Power Dissipation (Collector) *1	P <sub>D</sub>	1.15	W
Thermal Resistance (Junction-to-Ambient)	R <sub>θJA</sub>	108	°C/W
Junction Temperature	T <sub>J</sub>	-55 ~ +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ +150	°C



**Electrical Characteristics** (TA=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-60	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-60	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5	-	-	V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -50V, I_E = 0$	-	-	-10	nA
		$V_{CB} = -50V, I_E = 0, T_A = 125^\circ C$	-	-	-10	$\mu A$
Collector Cut-off Current	$I_{CEX}$	$V_{CE} = -30V, V_{EB(OFF)} = -0.5V$	-	-	-50	nA
Base Cut-off Current	$I_{BL}$	$V_{CE} = -30V, V_{EB(OFF)} = -0.5V$	-	-	-50	nA
DC Current Gain	$h_{FE}$	$V_{CE} = -10V, I_C = -0.1mA$	75	-	-	-
		$V_{CE} = -10V, I_C = -1mA$	100	-	-	-
		$V_{CE} = -10V, I_C = -10mA$	100	-	-	-
		$V_{CE} = -10V, I_C = -150mA$	100	-	300	-
		$V_{CE} = -10V, I_C = -500mA$	50	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -150mA, I_B = -15mA$	-	-	-0.4	V
		$I_C = -500mA, I_B = -50mA$	-	-	-1.6	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -150mA, I_B = -15mA$	-	-	-1.3	V
		$I_C = -500mA, I_B = -50mA$	-	-	-2.6	V
Output Capacitance	$C_{OBO}$	$V_{CB} = -10V, I_E = 0, f = 100MHz$	-	-	8	pF
Input Capacitance	$C_{IBO}$	$I_C = 0, V_{EB} = -2V, f = 100MHz$	-	-	30	pF
Transition Frequency	$f_T$	$I_C = -50mA, V_{CE} = -20V$ $f = 100MHz$	200	-	-	MHZ
Delay Time	$t_d$	$V_{CC} = -30V$	-	-	10	ns
Rise Time	$t_r$	$I_C = -150mA, I_{B1} = -15mA$	-	-	40	ns
Storage Time	$t_s$	$V_{CC} = -6V, I_C = -150mA$	-	-	225	ns
Fall Time	$t_f$	$I_{B1} = I_{B2} = -15mA$	-	-	60	ns

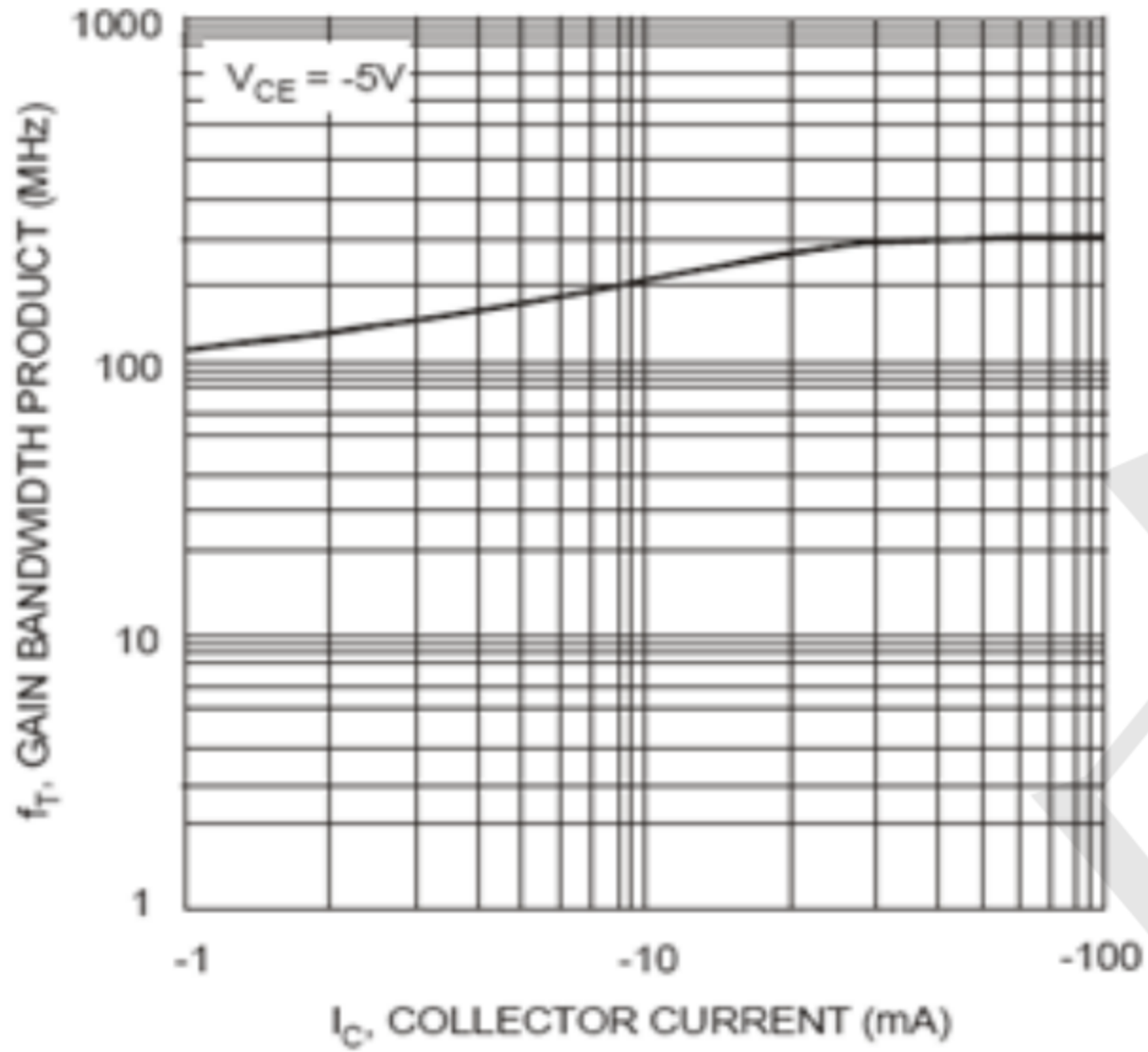


Fig. 1 Gain Bandwidth Product vs. Collector Current

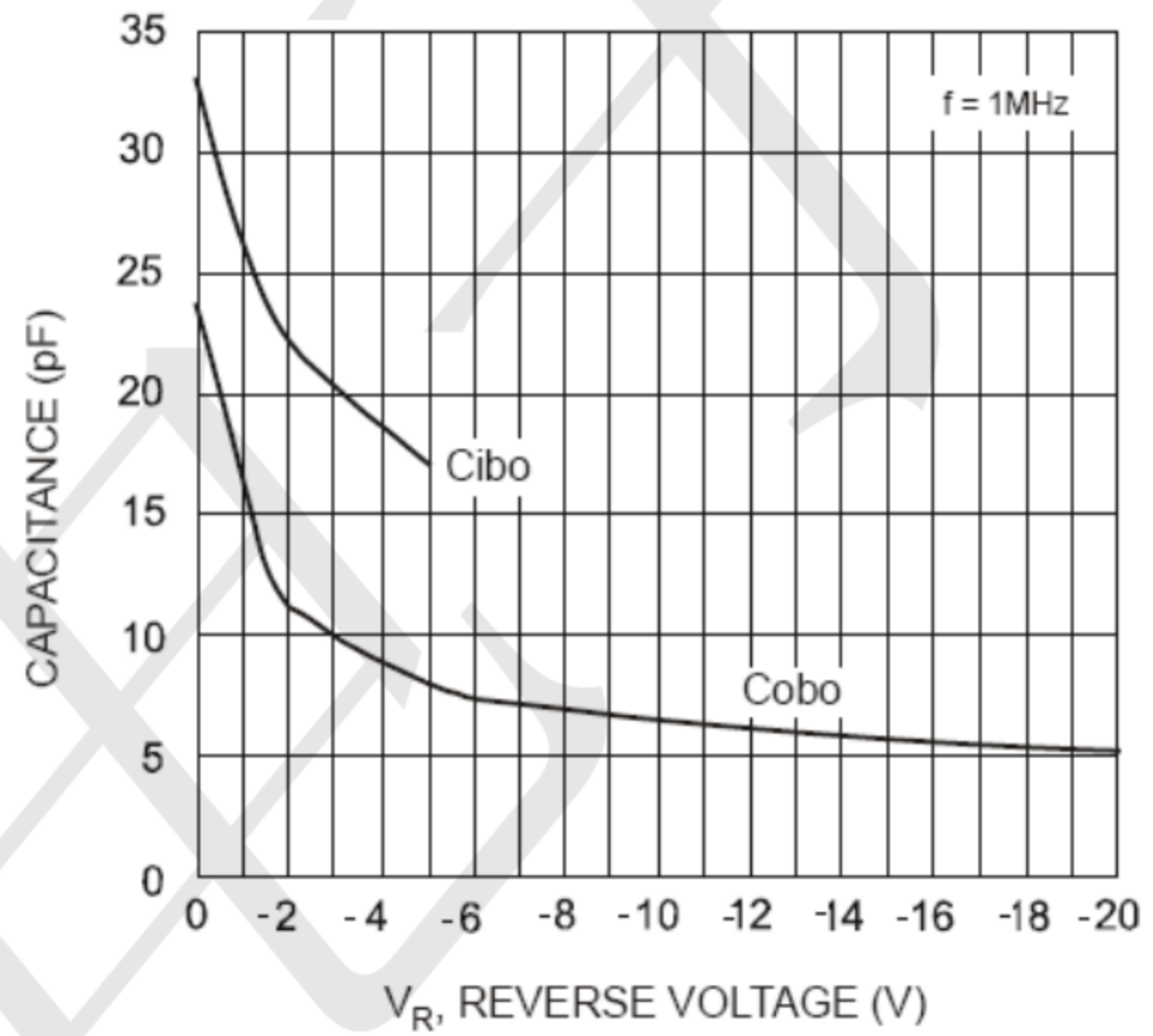


Fig. 2, Typical Capacitance Characteristics

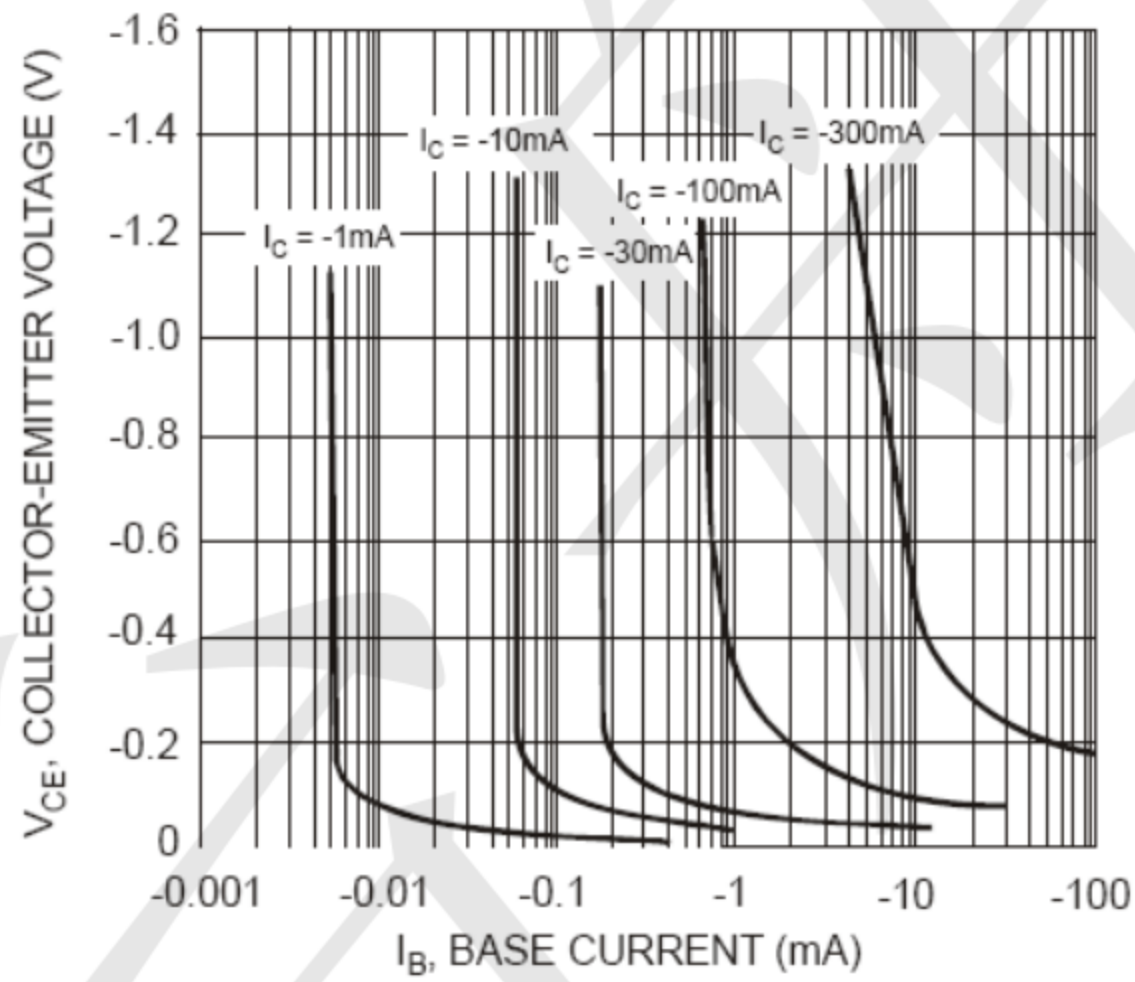


Fig. 3, Typical Collector Saturation Region

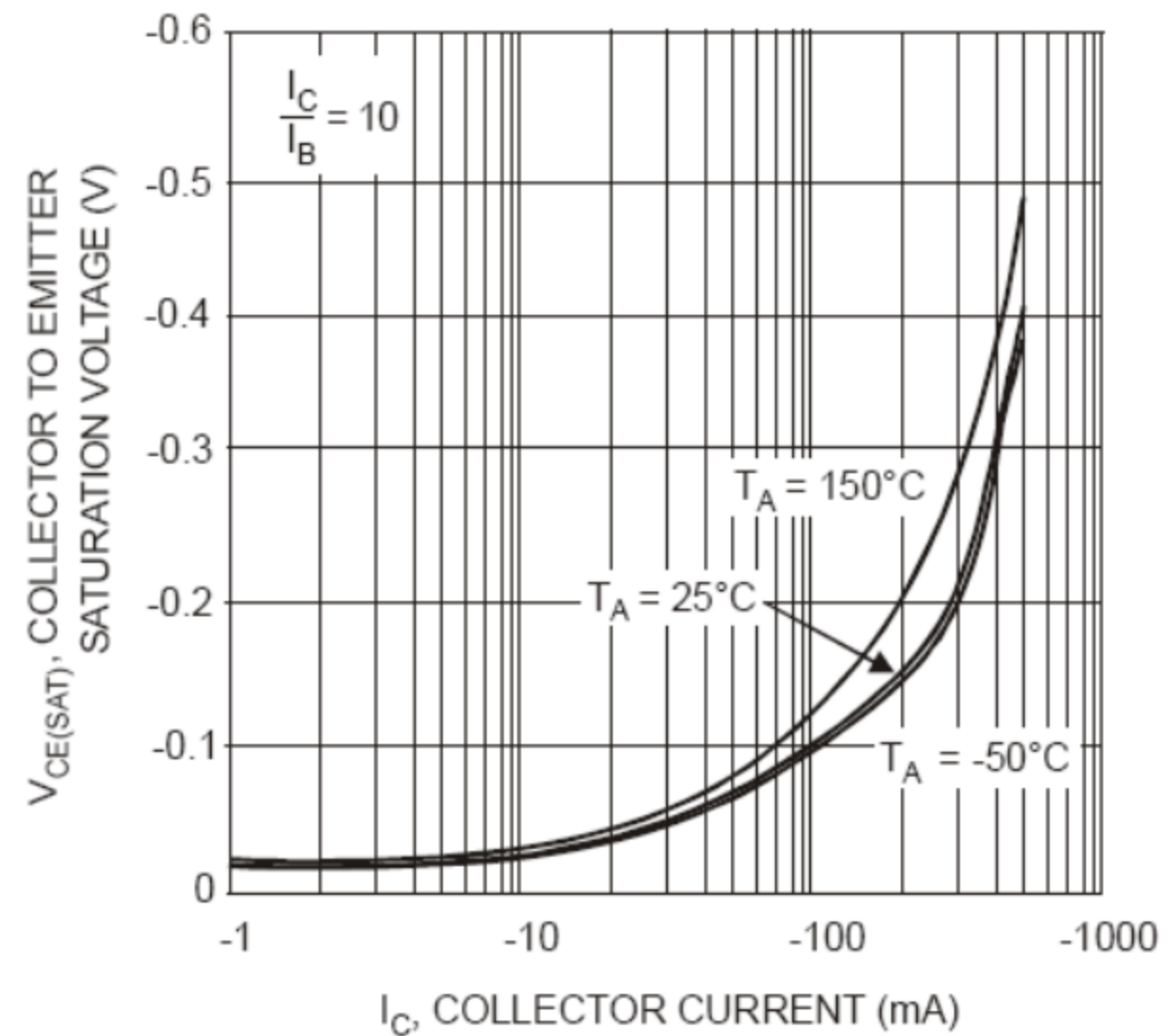
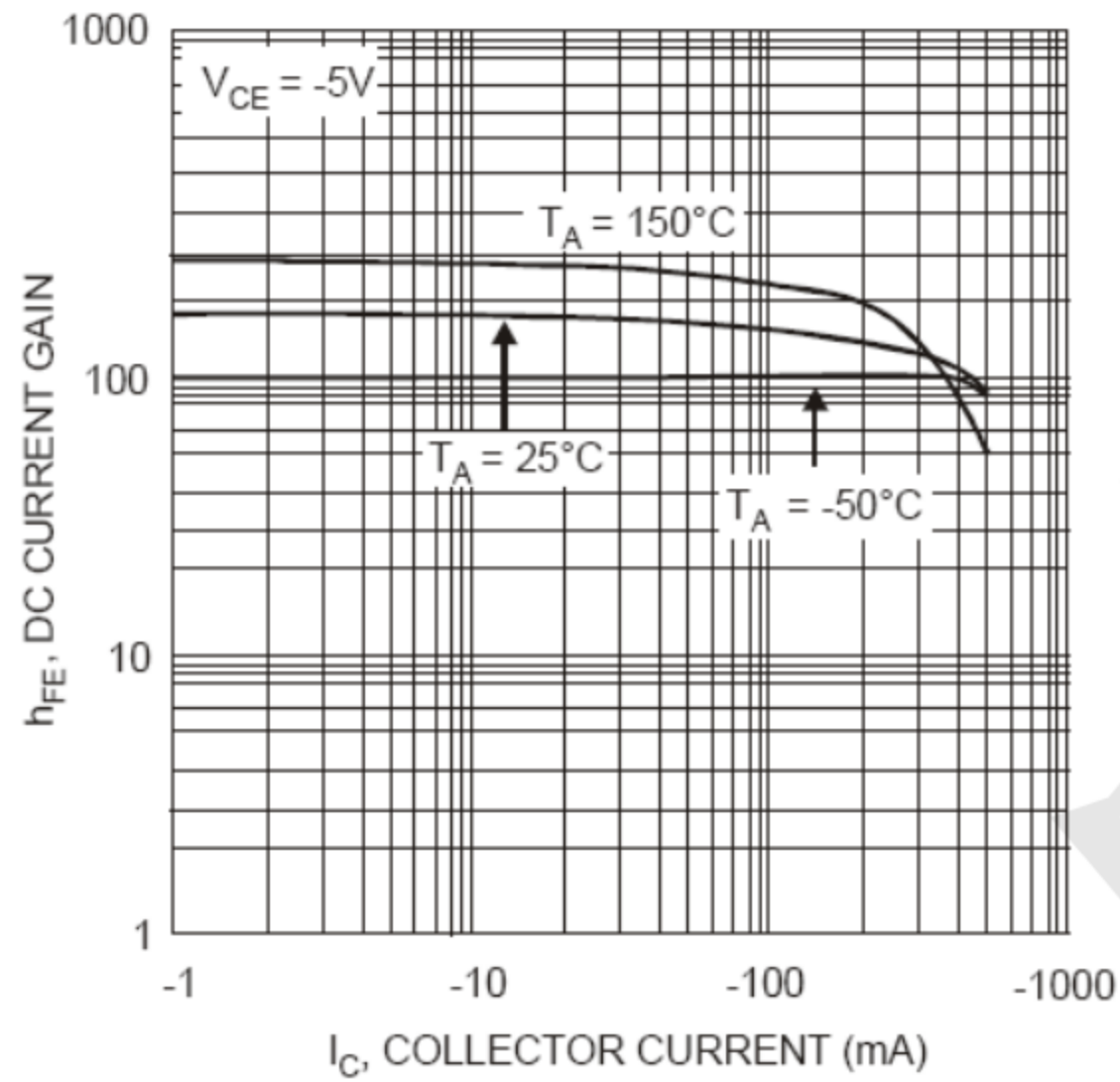
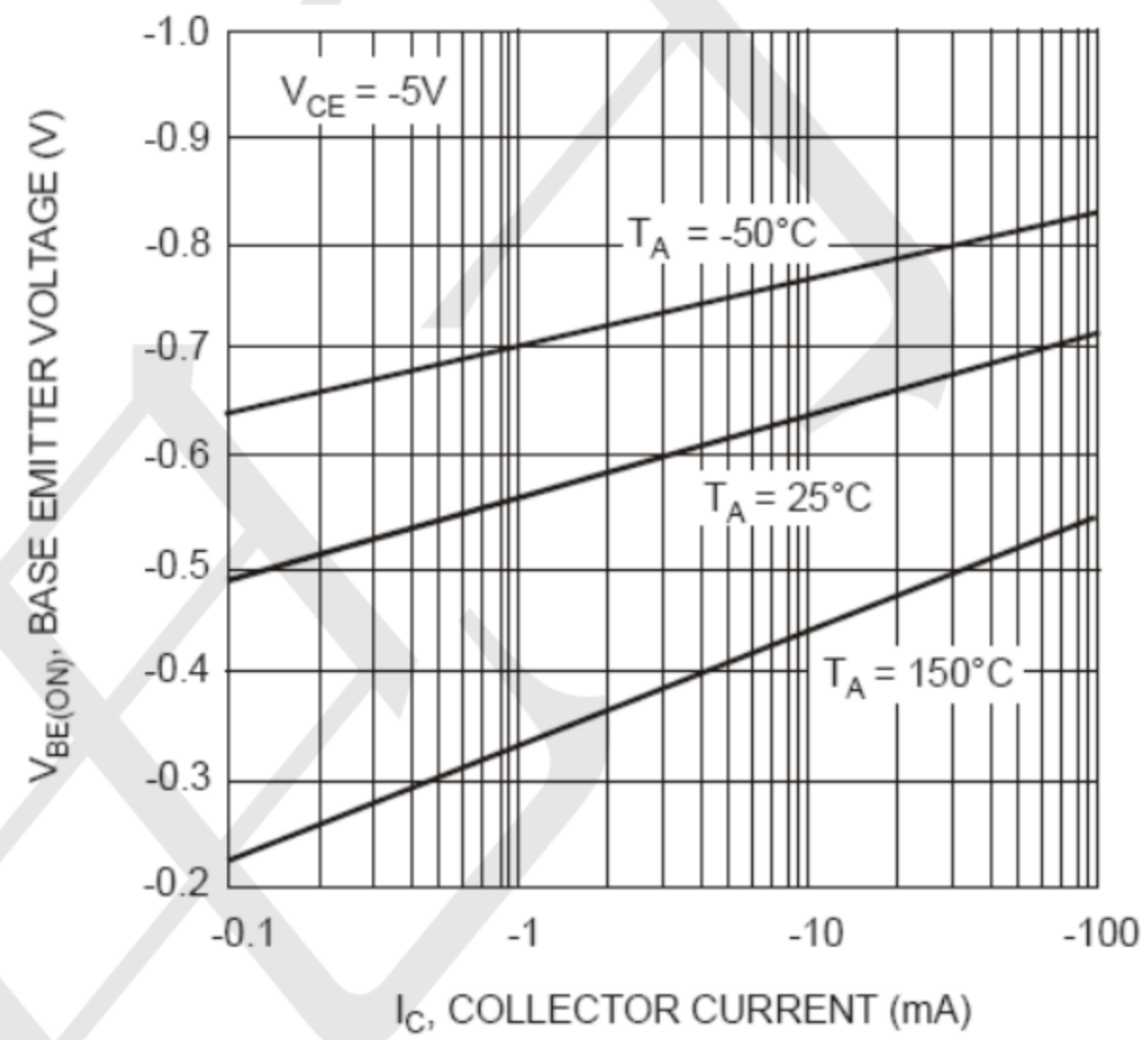


Fig. 4, Collector-Emitter Saturation Voltage vs. Collector Current



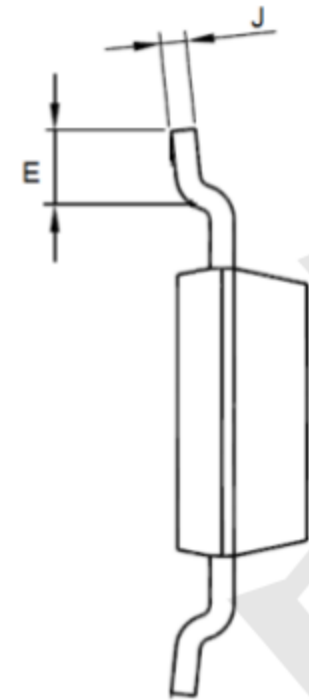
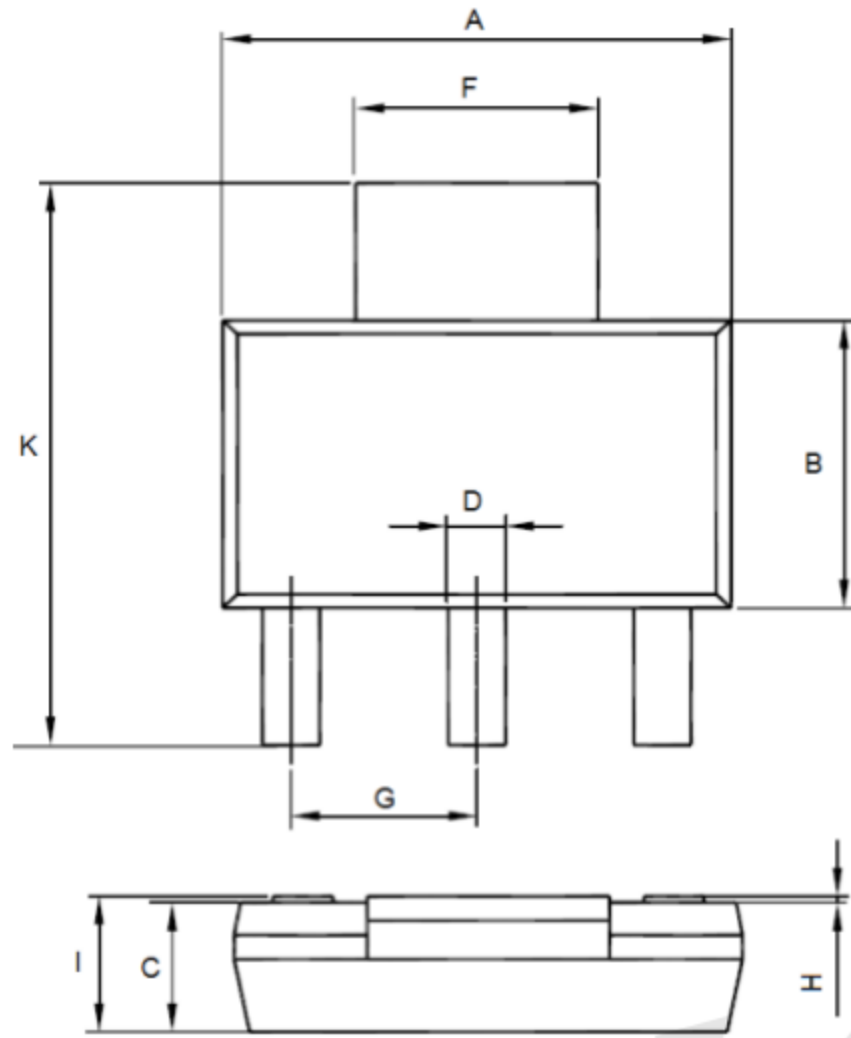
$I_C$ , COLLECTOR CURRENT (mA)  
Fig. 5, DC Current Gain vs  
Collector Current



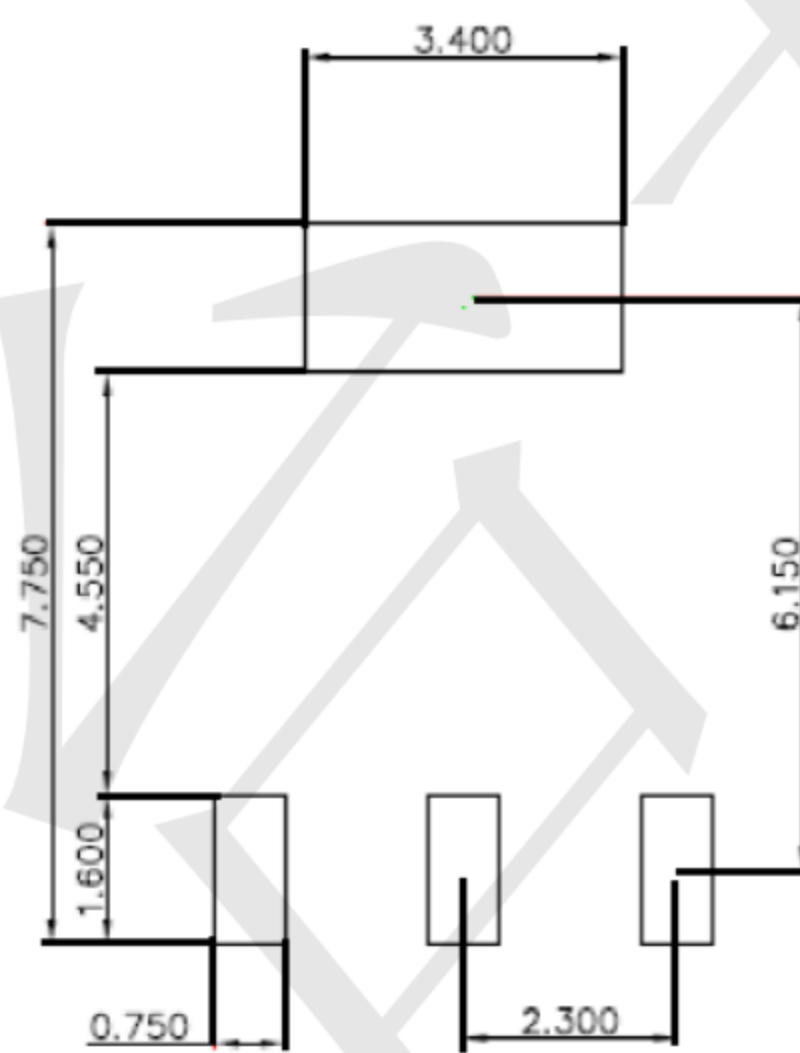
$I_C$ , COLLECTOR CURRENT (mA)  
Fig. 6, Base-Emitter Voltage  
vs. Collector Current



Outline Drawing - SOT223



SOT-223		
Dim	Min	Max
A	6.10	6.50
B	3.30	3.70
C	1.50	1.70
D	0.66	0.82
E	0.90	1.15
F	2.90	3.10
G	2.20	2.40
H	0.02	0.10
I	1.52	1.80
J	0.20	0.40
K	6.70	7.30



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Bipolar Transistors - BJT category](#):*

*Click to view products by [TECH PUBLIC manufacturer](#):*

Other Similar products are found below :

[BC559C](#) [MCH4017-TL-H](#) [MMBT-2369-TR](#) [BC546/116](#) [NJVMJD148T4G](#) [NTE16](#) [NTE195A](#) [IMX9T110](#) [2N4401-A](#) [2N6728](#) [2SA1419T-TD-H](#) [2SB1204S-TL-E](#) [2SC5488A-TL-H](#) [FMC5AT148](#) [2N2369ADCSM](#) [2N2907A](#) [2N3904-NS](#) [2N5769](#) [2SC4618TLN](#) [CPH6501-TL-E](#) [US6T6TR](#) [BAX18/A52R](#) [BC556/112](#) [IMZ2AT108](#) [MMST8098T146](#) [MCH6102-TL-E](#) [BC846B-13-F](#) [2N3879](#) [30A02MH-TL-E](#) [NTE13](#) [NTE282](#) [NTE323](#) [NTE350](#) [NTE81](#) [JANTX2N2920L](#) [JANSR2N2907AUB](#) [CMLT3946EG TR](#) [SNSS40600CF8T1G](#) [CMLT3906EG TR](#) [GRP-DATA-JANS2N2907AUB](#) [GRP-DATA-JANS2N2222AUA](#) [MMDT3946FL3-7](#) [2N4240](#) [JANS2N3019](#) [MSB30KH-13](#) [2N2221AUB](#) [2SD1815T-TL-E](#) [2N6678](#) [2N2907Ae4](#) [JAN2N3507](#)