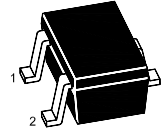


# NPN Silicon Epitaxial Planar Transistor

for general purpose and switching applications



1.Base 2.Emitter 3.Collector  
SOT-323 Plastic Package

## Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Collector Base Voltage BC846W BC847W BC848W BC849W BC850W	$V_{CBO}$	80 50 30 30 50	V
Collector Emitter Voltage BC846W BC847W BC848W BC849W BC850W	$V_{CEO}$	65 45 30 30 45	V
Emitter Base Voltage BC846W BC847W BC848W BC849W BC850W	$V_{EBO}$	6 6 5 5 5	V
Collector Current	$I_C$	100	mA
Peak Collector Current	$I_{CM}$	200	mA
Total Power Dissipation	$P_{tot}$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

**Characteristics at  $T_a = 25\text{ }^\circ\text{C}$** 

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 5\text{ V}$ , $I_C = 2\text{ mA}$	BC846AW~BC850AW $h_{FE}$	110	220	-
	BC846BW~BC850BW $h_{FE}$	200	450	-
	BC846CW~BC850CW $h_{FE}$	420	800	-
Collector Base Voltage at $I_C = 10\text{ }\mu\text{A}$	BC846W $V_{CBO}$	80	-	V
	BC847W	50	-	
	BC848W	30	-	
	BC849W	30	-	
	BC850W	50	-	
Collector Emitter Voltage at $I_C = 10\text{ mA}$	BC846W $V_{CEO}$	65	-	V
	BC847W	45	-	
	BC848W	30	-	
	BC849W	30	-	
	BC850W	45	-	
Emitter Base Voltage at $I_E = 1\text{ }\mu\text{A}$	BC846W $V_{EBO}$	6	-	V
	BC847W	6	-	
	BC848W	5	-	
	BC849W	5	-	
	BC850W	5	-	
Collector Base Cutoff Current at $V_{CB} = 30\text{ V}$	$I_{CBO}$	-	15	nA
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	$I_{EBO}$	-	100	nA
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$ , $I_B = 0.5\text{ mA}$ $I_C = 100\text{ mA}$ , $I_B = 5\text{ mA}$	$V_{CE(sat)}$	-	0.25	V
		-	0.6	
Base Emitter Voltage at $V_{CE} = 5\text{ V}$ , $I_C = 2\text{ mA}$ $V_{CE} = 5\text{ V}$ , $I_C = 10\text{ mA}$	$V_{BE}$	0.58	0.7	V
		-	0.77	
Transition Frequency at $V_{CE} = 5\text{ V}$ , $I_C = 10\text{ mA}$ , $f = 100\text{ MHz}$	$f_T$	100	-	MHz
Collector Output Capacitance at $V_{CB} = 10\text{ V}$ , $I_E = 0$ , $f = 1\text{ MHz}$	$C_{ob}$	-	4.5	pF

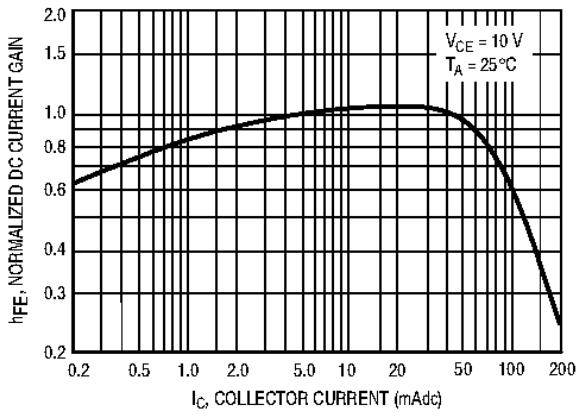


Figure 1. Normalized DC Current Gain

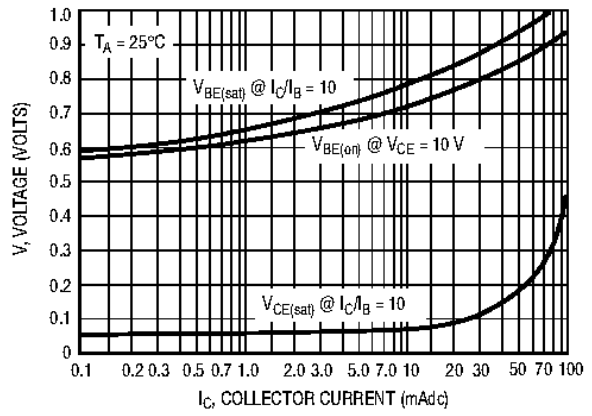


Figure 2. "Saturation" and "On" Voltages

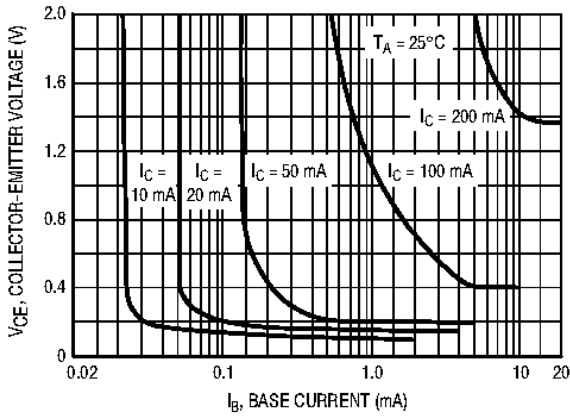


Figure 3. Collector Saturation Region

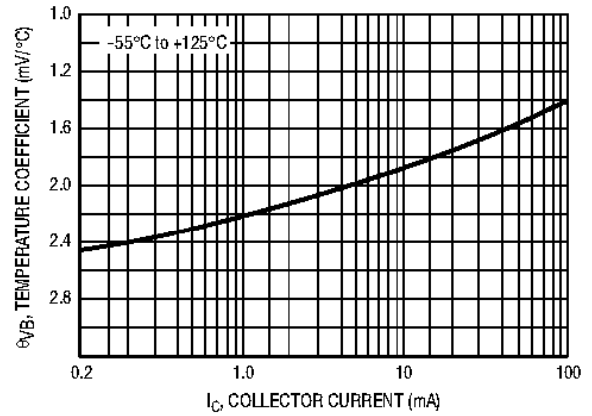


Figure 4. Base-Emitter Temperature Coefficient

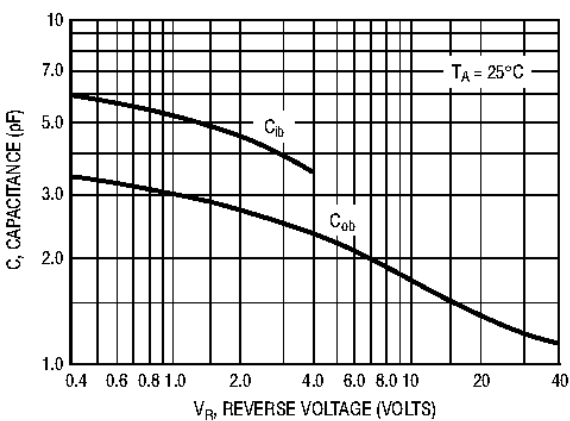


Figure 5. Capacitances

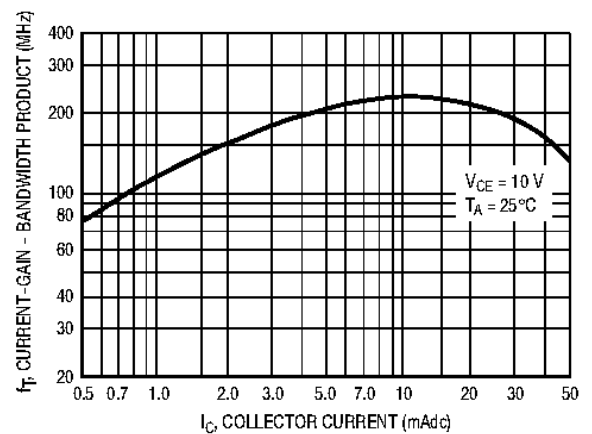
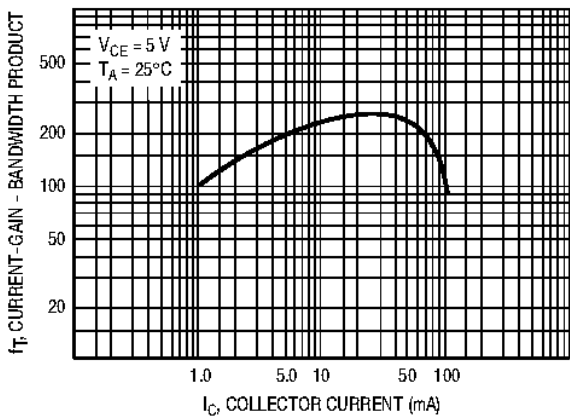
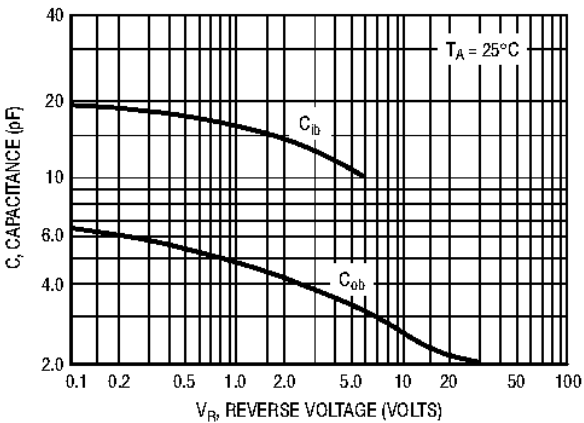
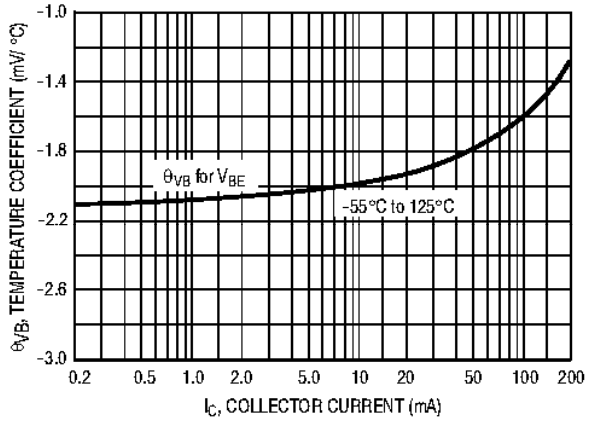
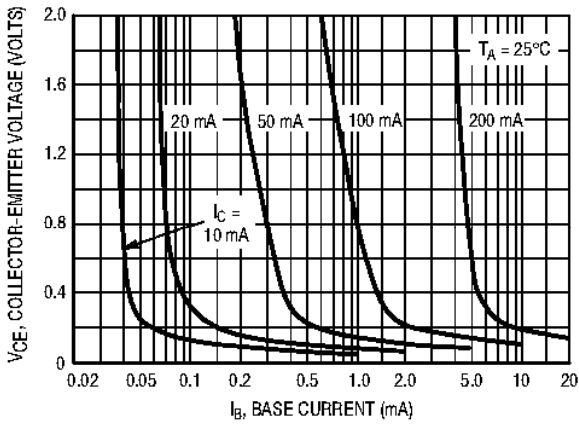
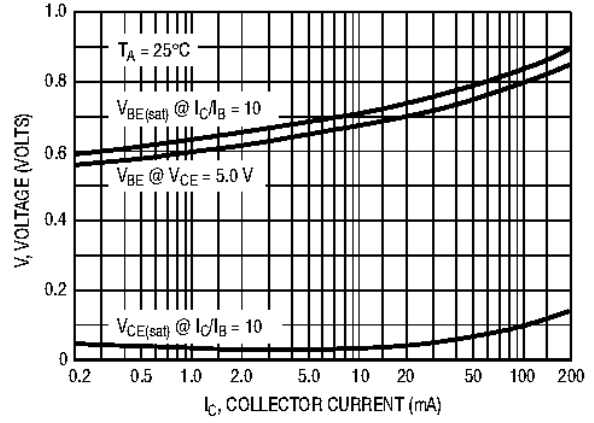
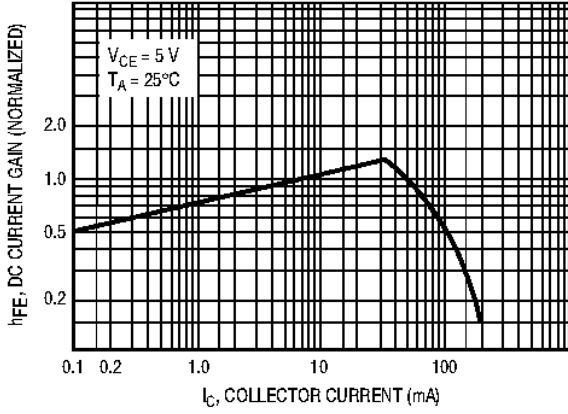


Figure 6. Current-Gain - Bandwidth Product



## SOT-323 PACKAGE OUTLINE DIMENSIONS

## 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 [Hong Kong Chuangji manufacturer](#):*

Other Similar products are found below :

[BC559C](#) [MCH4017-TL-H](#) [MMBT-2369-TR](#) [BC546/116](#) [NJVMJD148T4G](#) [NTE16](#) [NTE195A](#) [IMX9T110](#) [2N4401-A](#) [2N4403](#) [2N6728](#)  
[2SA1419T-TD-H](#) [2SA2126-E](#) [2SB1204S-TL-E](#) [FMC5AT148](#) [2N2369ADCSM](#) [2N2907A](#) [2N3904-NS](#) [2N5769](#) [2SC4618TLN](#) [CPH6501-](#)  
[TL-E](#) [MCH4021-TL-E](#) [Jantx2N5416](#) [US6T6TR](#) [BAX18/A52R](#) [BC556/112](#) [IMZ2AT108](#) [MMST8098T146](#) [UMX21NTR](#) [MCH6102-TL-E](#)  
[TTA1452B,S4X\(S](#) [2N3879](#) [NTE13](#) [NTE282](#) [NTE323](#) [NTE350](#) [NTE81](#) [JANTX2N2920L](#) [JANTX2N3735](#) [JANSR2N2222AUB](#)  
[CMLT3946EG TR](#) [SNSS40600CF8T1G](#) [CMLT3906EG TR](#) [GRP-DATA-JANS2N2907AUB](#) [GRP-DATA-JANS2N2222AUA](#)  
[MMDT3946FL3-7](#) [2N4240](#) [JANS2N3019](#) [MSB30KH-13](#) [2N2221AUB](#)