



**FUKUCOM COMPANY LTD.**

**福 靈 有 限 公 司**

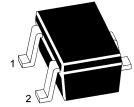
FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,  
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

## BC856W...BC860W

### PNP Silicon Epitaxial Planar Transistor

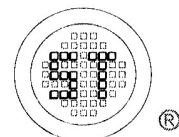
for general purpose and switching applications



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

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

Parameter	Symbol	Value	Unit	
Collector Base Voltage	$-V_{CBO}$	BC856W	80	V
		BC857W	50	
		BC858W	30	
		BC859W	30	
		BC860W	50	
Collector Emitter Voltage	$-V_{CEO}$	BC856W	65	V
		BC857W	45	
		BC858W	30	
		BC859W	30	
		BC860W	45	
Emitter Base Voltage	$-V_{EBO}$	5	V	
Collector Current	$-I_C$	100	mA	
Peak Collector Current	$-I_{CM}$	100	mA	
Total Power Dissipation	$P_{tot}$	200	mW	
Junction Temperature	$T_j$	150	$^\circ\text{C}$	
Storage Temperature Range	$T_s$	- 55 to + 150	$^\circ\text{C}$	



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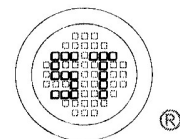
Dated : 2/10/2006

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**BC856W...BC860W****Characteristics at T<sub>a</sub> = 25 °C**

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at -V <sub>CE</sub> = 5 V, -I <sub>C</sub> = 2 mA				
BC856AW~BC860AW	h <sub>FE</sub>	125	250	-
BC856BW~BC860BW	h <sub>FE</sub>	220	475	-
BC856CW~BC860CW	h <sub>FE</sub>	420	800	-
Collector Base Voltage at -I <sub>C</sub> = 10 μA				
BC856W	-V <sub>CBO</sub>	80	-	V
BC857W		50	-	
BC858W		30	-	
BC859W		30	-	
BC860W		50	-	
Collector Emitter Voltage at -I <sub>C</sub> = 10 mA				
BC856W	-V <sub>CEO</sub>	65	-	V
BC857W		45	-	
BC858W		30	-	
BC859W		30	-	
BC860W		45	-	
Emitter Base Voltage at -I <sub>E</sub> = 1 μA	-V <sub>EBO</sub>	5	-	V
Collector Base Cutoff Current at -V <sub>EB</sub> = 30 V	-I <sub>CBO</sub>	-	15	nA
Emitter Base Cutoff Current at -V <sub>EB</sub> = 5 V	-I <sub>EBO</sub>	-	100	nA
Collector Emitter Saturation Voltage at -I <sub>C</sub> = 10 mA, -I <sub>B</sub> = 0.5 mA -I <sub>C</sub> = 100 mA, -I <sub>B</sub> = 5 mA	-V <sub>CE(sat)</sub>	-	0.3 0.65	V
Base Emitter Voltage at -V <sub>CE</sub> = 5 V, -I <sub>C</sub> = 2 mA -V <sub>CE</sub> = 5 V, -I <sub>C</sub> = 10 mA	-V <sub>BE</sub>	0.6 -	0.75 0.82	V
Transition Frequency at -V <sub>CE</sub> = 5 V, -I <sub>C</sub> = 10 mA, f = 100 MHz	f <sub>T</sub>	100	-	MHz
Output Capacitance at -V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz	C <sub>ob</sub>	-	4.5	pF

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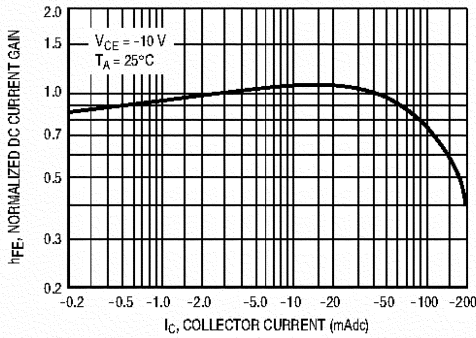


Figure 1. Normalized DC Current Gain

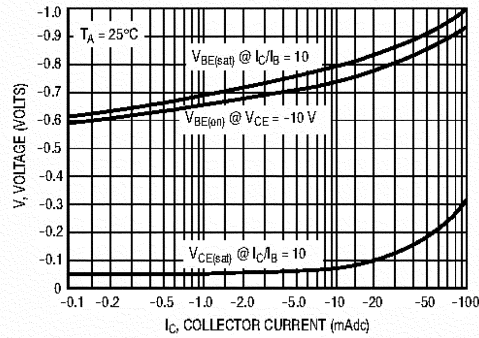


Figure 2. "Saturation" and "On" Voltages

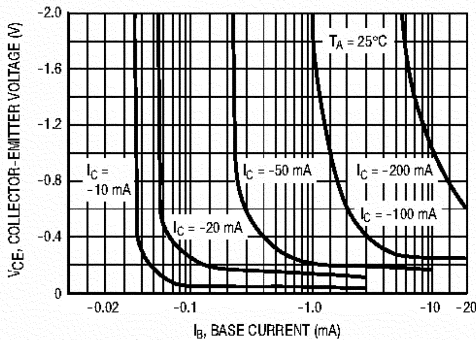


Figure 3. Collector Saturation Region

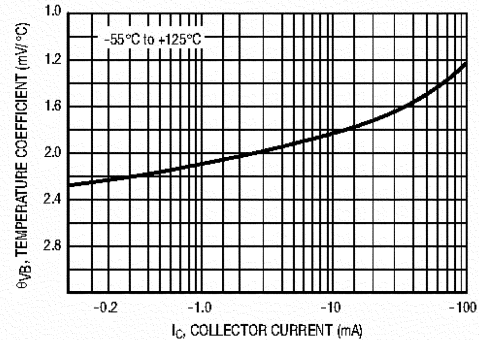


Figure 4. Base-Emitter Temperature Coefficient

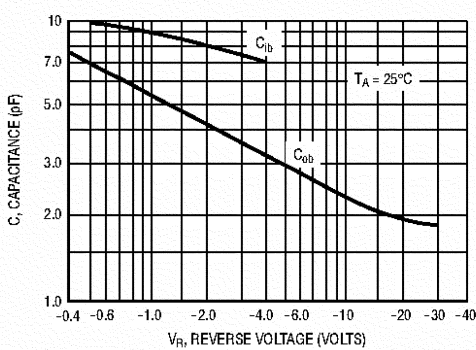


Figure 5. Capacitances

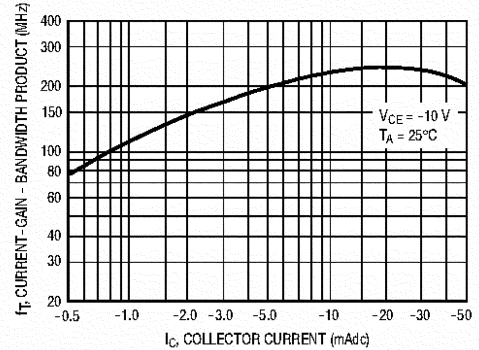
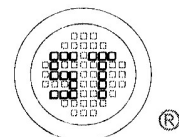


Figure 6. Current-Gain - Bandwidth Product



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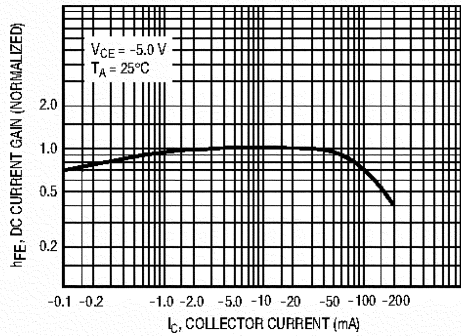


Figure 7. DC Current Gain

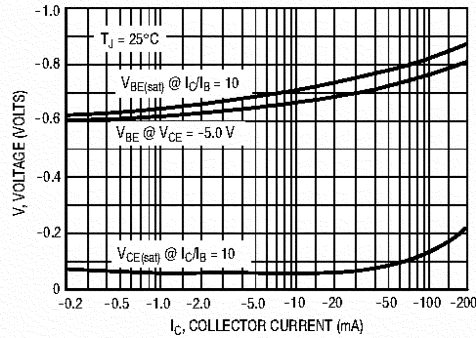


Figure 8. "On" Voltage

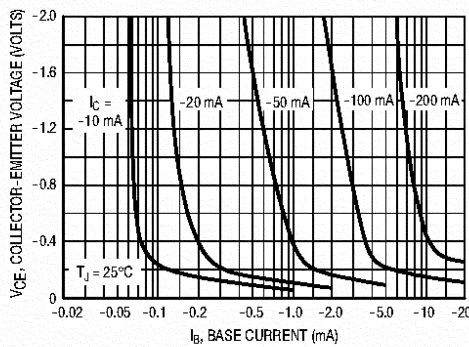


Figure 9. Collector Saturation Region

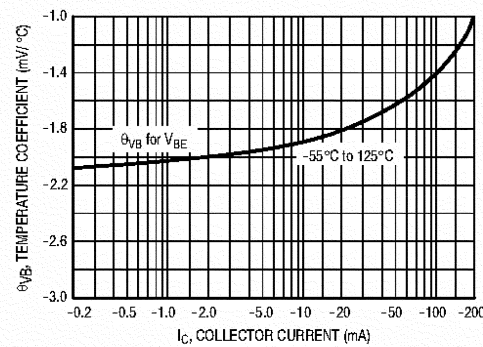


Figure 10. Base-Emitter Temperature Coefficient

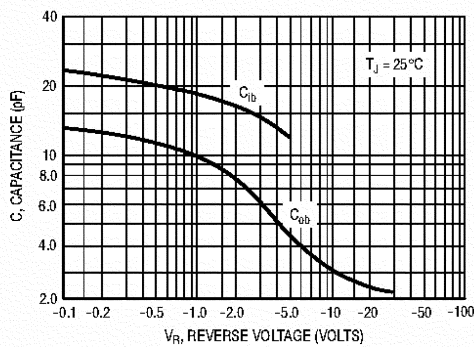


Figure 11. Capacitance

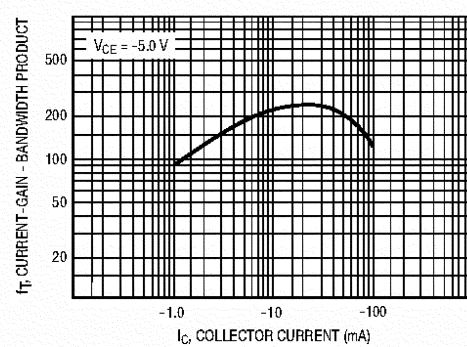
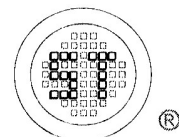


Figure 12. Current-Gain - Bandwidth Product



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