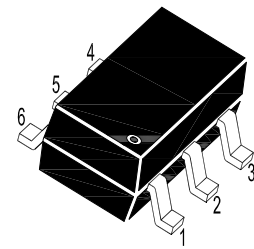
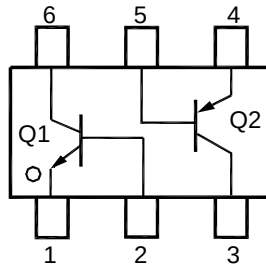


BC8456DW~BC8458DW-AH

NPN / PNP Silicon Epitaxial Planar Transistors

Features

- AEC-Q101 Qualified
- Halogen and Antimony Free(HAF),
RoHS compliant



1. Emitter 2. Base 3. Collector
4. Emitter 5. Base 6. Collector
SOT-363 Plastic Package

Q1 Maximum Ratings ($T_a = 25^\circ\text{C}$)

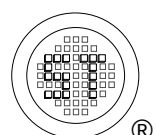
Parameter		Symbol	Value	Unit
Collector Base Voltage	BC8456DW BC8457DW BC8458DW	V_{CBO}	80 50 30	V
Collector Emitter Voltage	BC8456DW BC8457DW BC8458DW	V_{CEO}	65 45 30	V
Emitter Base Voltage	BC8456DW BC8457DW BC8458DW	V_{EBO}	6 6 5	V

Q2 Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter		Symbol	Value	Unit
Collector Base Voltage	BC8456DW BC8457DW BC8458DW	$-V_{CBO}$	80 50 30	V
Collector Emitter Voltage	BC8456DW BC8457DW BC8458DW	$-V_{CEO}$	65 45 30	V
Emitter Base Voltage		$-V_{EBO}$	5	V

Q1Q2 Maximum Ratings ($T_a = 25^\circ\text{C}$)

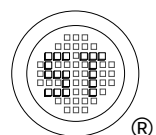
Parameter	Symbol	Value	Unit
Collector Current	I_C	100	mA
Peak Collector Current	I_{CM}	200	mA
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$



BC8456DW~BC8458DW-AH

Q1 Electrial Characteristics at $T_a = 25^\circ\text{C}$

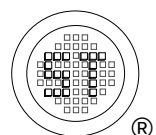
Parameter		Symbol	Min.	Max.	Unit
DC Current Gain at V _{CE} = 5 V, I _C = 2 mA	BC8456ADW~BC8458ADW BC8456BDW~BC8458BDW BC8456CDW~BC8458CDW	h _{FE} h _{FE} h _{FE}	110 200 420	220 450 800	- - -
Collector Base Voltage at I _C = 10 μA	BC8456DW BC8457DW BC8458DW	V _{CBO}	80 50 30	- - -	V
Collector Emitter Voltage at I _C = 10 mA	BC8456DW BC8457DW BC8458DW	V _{CEO}	65 45 30	- - -	V
Emitter Base Voltage at I _E = 1 μA	BC8456DW BC8457DW BC8458DW	V _{EBO}	6 6 5	- - -	V
Collector Base Cutoff Current at V _{CB} = 30 V		I _{CBO}	-	15	nA
Emitter Base Cutoff Current at V _{EB} = 5 V		I _{EBO}	-	100	nA
Collector Emitter Saturation Voltage at I _C = 10 mA, I _B = 0.5 mA at I _C = 100 mA, I _B = 5 mA		V _{CE(sat)}	- -	0.25 0.6	V
Base Emitter Voltage at V _{CE} = 5 V, I _C = 2 mA at V _{CE} = 5 V, I _C = 10 mA		V _{BE}	0.58 -	0.7 0.77	V
Transition Frequency at V _{CE} = 5 V, I _C = 10 mA, f = 100 MHz		f _T	100	-	MHz
Collector Output Capacitance at V _{CB} = 10 V, I _E = 0, f = 1 MHz		C _{ob}	-	4.5	pF



BC8456DW~BC8458DW-AH

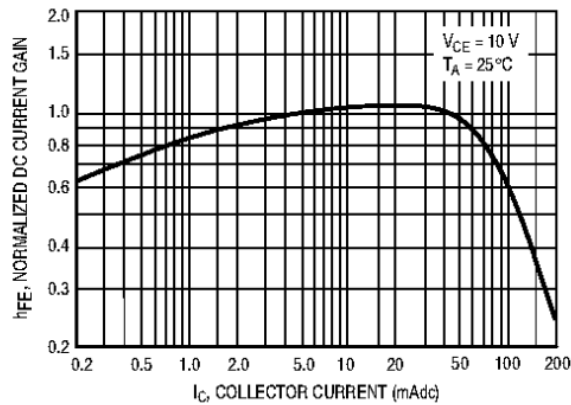
Q2 Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE} = 5\text{ V}$, $-I_C = 2\text{ mA}$	BC8456ADW~BC8458ADW BC8456BDW~BC8458BDW BC8456CDW~BC8458CDW	h_{FE} h_{FE} h_{FE}	125 220 420	250 475 800	- - -
Collector Base Voltage at $-I_C = 10\text{ }\mu\text{A}$	BC8456DW BC8457DW BC8458DW	$-V_{CBO}$	80 50 30	- - -	V
Collector Emitter Voltage at $-I_C = 10\text{ mA}$	BC8456DW BC8457DW BC8458DW	$-V_{CEO}$	65 45 30	- - -	V
Emitter Base Voltage at $-I_E = 1\text{ }\mu\text{A}$		$-V_{EBO}$	5	-	V
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 $-I_C = 10\text{ mA}$, $-I_B = 0.5\text{ mA}$ $-I_C = 100\text{ mA}$, $-I_B = 5\text{ mA}$		$-V_{CE(sat)}$	- -	0.3 0.65	V
Base Emitter Voltage at $-V_{CE} = 5\text{ V}$, $-I_C = 2\text{ mA}$ $-V_{CE} = 5\text{ V}$, $-I_C = 10\text{ mA}$		$-V_{BE}$	0.6 -	0.75 0.82	V
Transition Frequency at $-V_{CE} = 5\text{ V}$, $-I_C = 10\text{ mA}$, $f = 100\text{ MHz}$		f_T	100	-	MHz
Output Capacitance at $-V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$		C_{ob}	-	4.5	pF

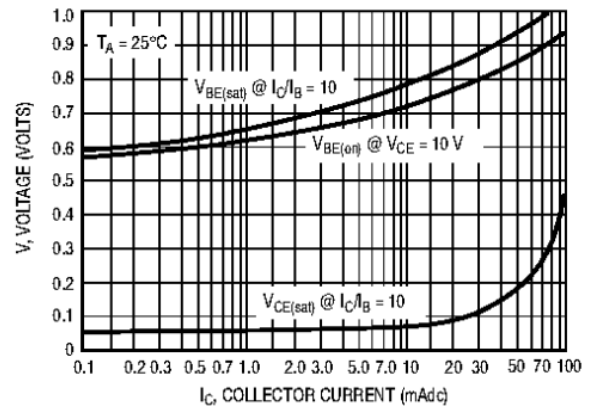


BC8456DW~BC8458DW-AH

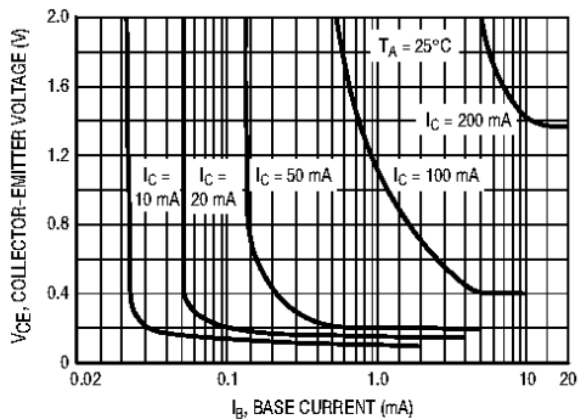
Q1(NPN transistor)



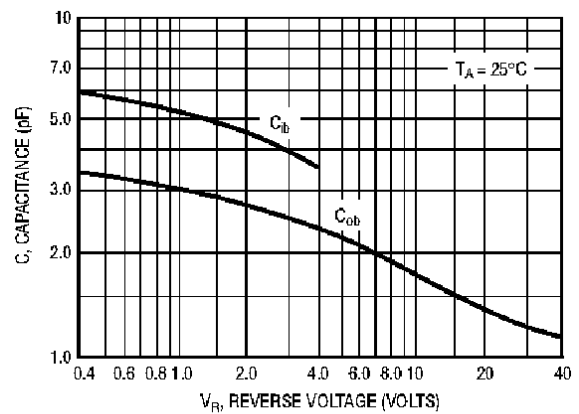
Normalized DC Current Gain



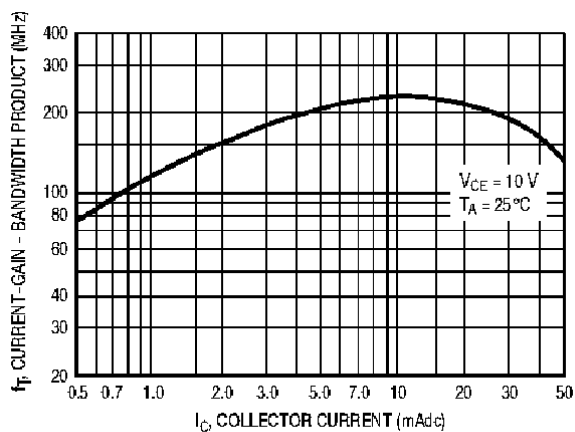
"Saturation" and "On" Voltages



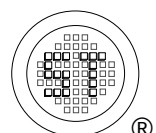
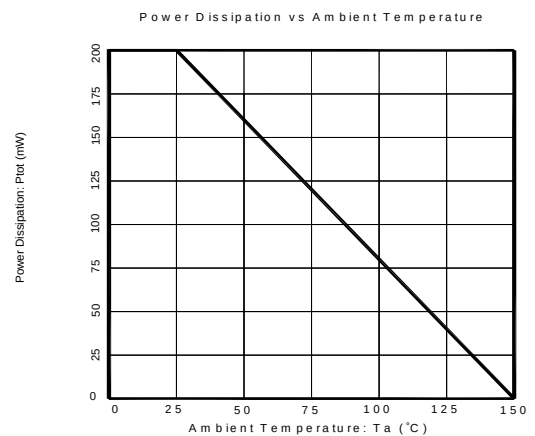
Collector Saturation Region



Capacitances

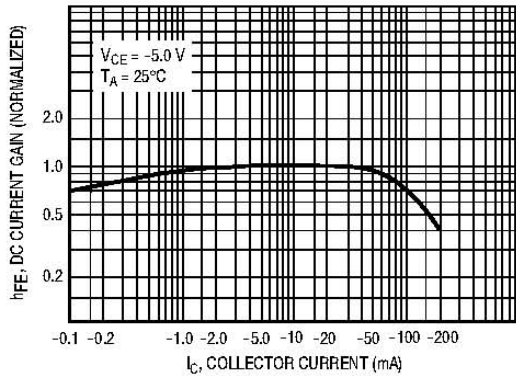


Current-Gain - Bandwidth Product

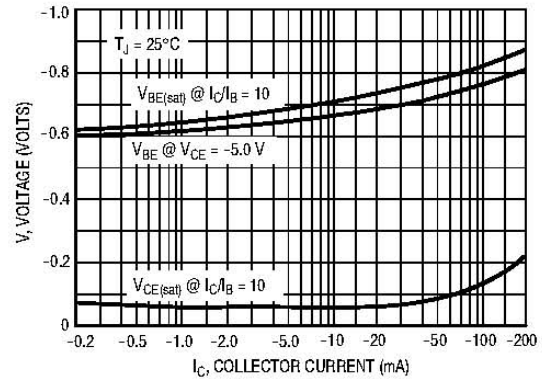


BC8456DW~BC8458DW-AH

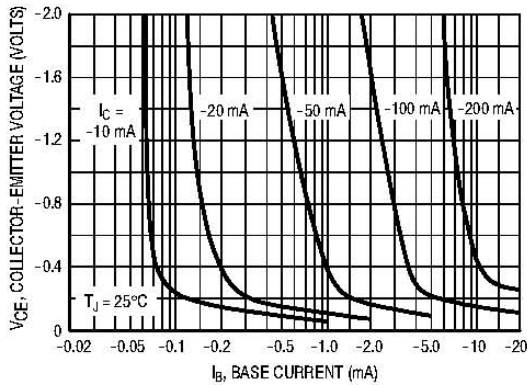
Q2(PNP transistor)



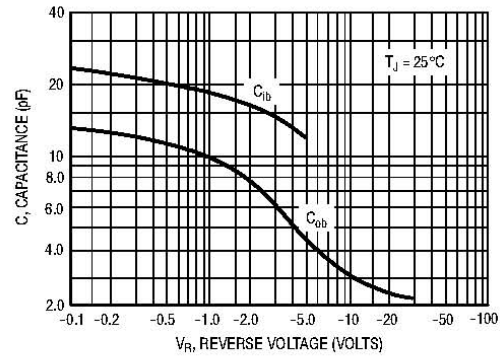
DC Current Gain



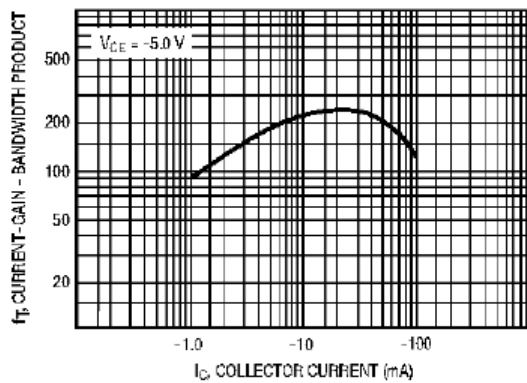
"On" Voltage



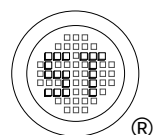
Collector Saturation Region



Capacitance



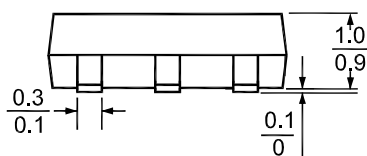
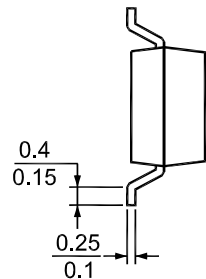
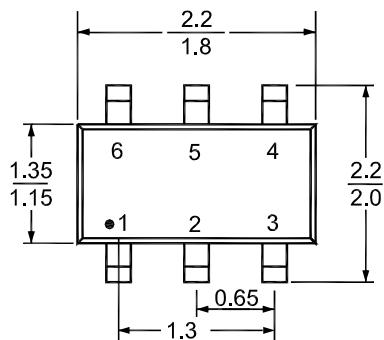
Current-Gain - Bandwidth Product



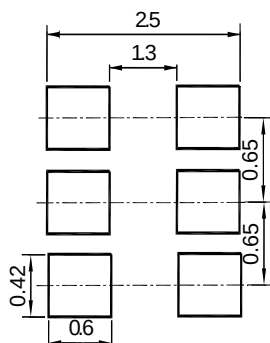
BC8456DW~BC8458DW-AH

Package Outline Dimensions (Units: mm)

SOT-363



Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-363	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" • " = HAF (Halogen and Antimony Free(HAF))

" ** " = Part No.

"YM" = Date Code Marking

"Y" = Year

"M" = Month

Font type: Arial

