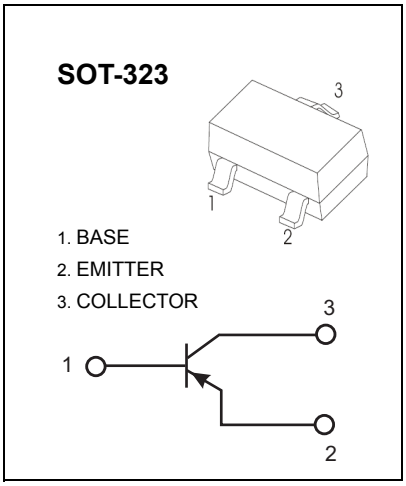
BC856AW-Q1 THRU BC858CW-Q1

PNP Transistors

Features

- High Conductance
- Surface Mount Package Ideally Suited For Automatic Insertion
- Compliant to Halogen-free
- Suffix “-Q1” for AEC-Q101



Mechanical Data

- **Package**: SOT-323
  Molding compound meets UL 94 V-0 flammability rating
- **Terminals:** Tin plated leads, solderable per
  J-STD-002 and JESD22-B102

Maximum Ratings (Ta=25℃ unless otherwise noted)

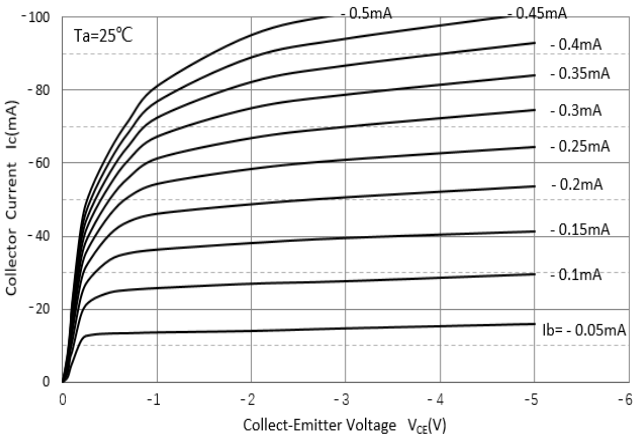
Parameter	Symbol	BC856AW-Q1 BC856BW-Q1	BC857AW-Q1 BC857BW-Q1 BC857CW-Q1	BC858AW-Q1 BC858BW-Q1 BC858CW-Q1	Unit
Collector-Base Voltage	V_{CBO}	-80	-50	-30	V
Collector-Emitter Voltage	V_{CEO}	-65	-45	-30	V
Emitter-Base Voltage	V_{EBO}	-5	-5	-5	V
Collector Current (Continuous)	I_C	-100			mA
Power Dissipation	P_D	200			mW
Operating Junction Temperature	T_J	-55 ~ +150			°C
Storage Temperature Range	T_{STG}	-55 ~ +150			°C

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

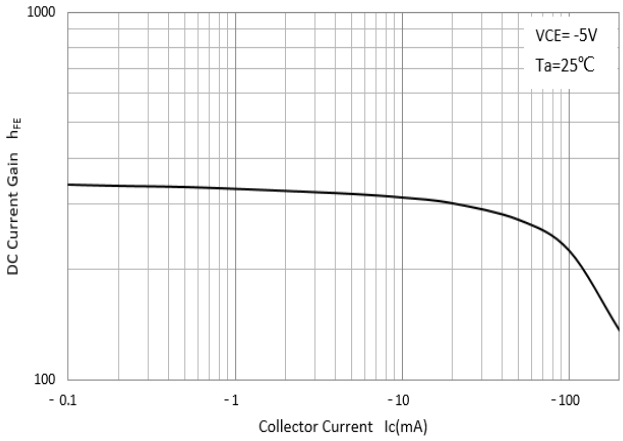
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage BC856-Q1	$V_{(BR)CBO}$	I_C = -10μA, I_E = 0	-80	-	-	V
Collector-Base Breakdown Voltage BC857-Q1			-50	-	-	
Collector-Base Breakdown Voltage BC858-Q1			-30	-	-	
Collector-Emitter Breakdown Voltage BC856-Q1	$V_{(BR)CEO}$	I_C = -10mA, I_B = 0	-65	-	-	V
Collector-Emitter Breakdown Voltage BC857-Q1			-45	-	-	V
Collector-Emitter Breakdown Voltage BC858-Q1			-30	-	-	V
Emitter-Base Breakdown Voltage BC856-Q1	$V_{(BR)EBO}$	I_E = -1μA, I_C = 0	-5	-	-	V
Emitter-Base Breakdown Voltage BC857-Q1			-5	-	-	V
Emitter-Base Breakdown Voltage BC858-Q1			-5	-	-	V
Collector Cut-off Current	I_{CBO}	V_{CB} = -30V, I_E = 0	-	-	-100	nA
Emitter-base Cut-off Current	I_{EBO}	V_{EB} = -5V, I_C = 0	-	-	-100	nA
DC Current Gain BC856/857/858AW-Q1	h_{FE}	V_{CE} = -5V, I_C = -2mA	125	-	250	-
DC Current Gain BC856/857/858BW-Q1			220	-	475	-
DC Current Gain BC857/858CW-Q1			420	-	800	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = -100mA, I_B = -5mA	-	-	-0.65	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = -100mA, I_B = -5mA	-	-0.85	-	V
Transition Frequency	f_T	V_{CE} = -5V, I_C= -10mA f = 100MHz	100	-	-	MHz
Collector Capacitance	C_C	V_{CB} = -10V, f = 1MHz	-	4.5	-	pF

Characteristics (Typical)

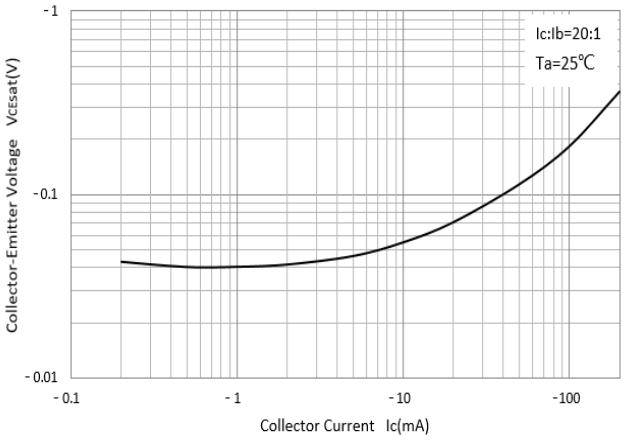
Static Characteristic



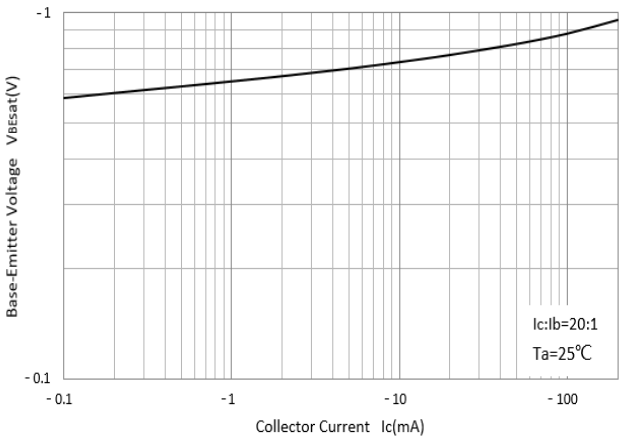
DC Current Gain



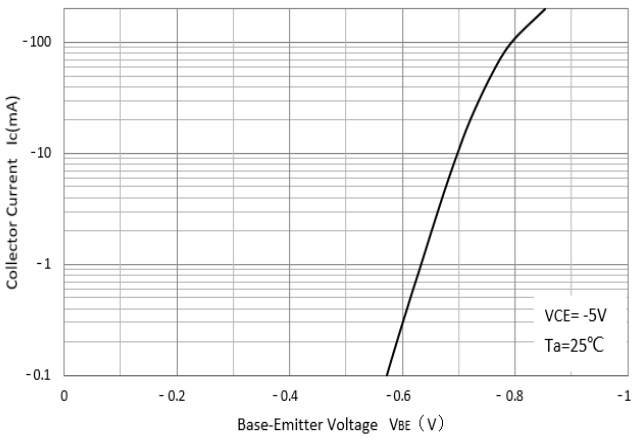
Collector-Emitter Saturation Voltage



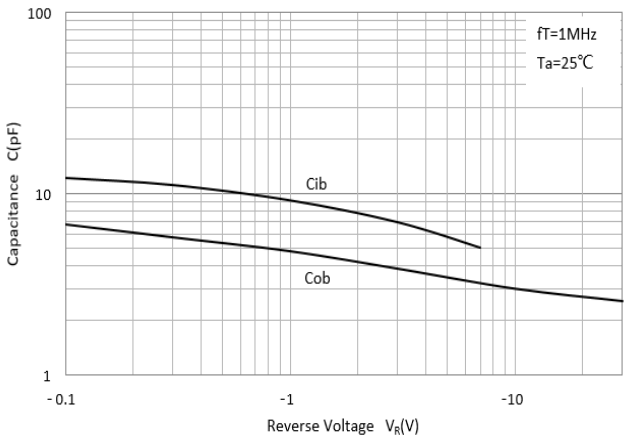
Base-Emitter Saturation Voltage



Base-Emitter On Voltage



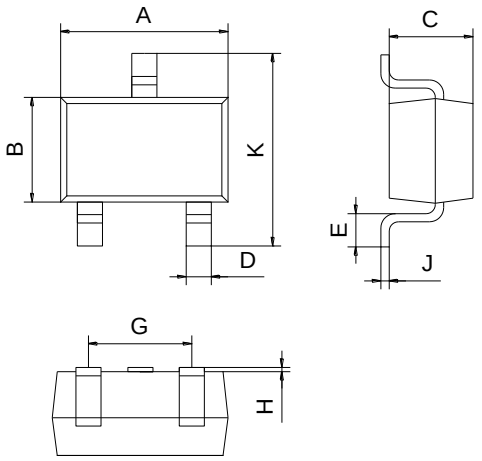
Cob/Cib-V_{CB}/V_{EB}



Marking

Type number	Marking code
BC856AW-Q1	3A
BC856BW-Q1	3B
BC857AW-Q1	3E
BC857BW-Q1	3F
BC857CW-Q1	3G
BC858AW-Q1	3J
BC858BW-Q1	3K
BC858CW-Q1	3L

SOT-323 Package Outline Dimensions



SOT-323		
Dimension	**Min.**	**Max.**
A	1.80	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.40
E	0.25	0.40
G	1.20	1.40
H	0.00	0.10
J	0.05	0.25
K	2.10	2.45

SOT-323 Soldering Footprint (mm)