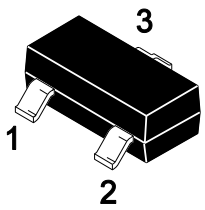
BC856~BC860
PNP Transistor

Features

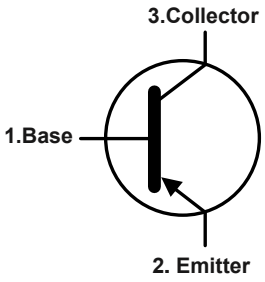
- For Switching and AF Amplifier Applications.

SOT-23



1.Base 2.Emitter 3.Collector

Equivalent Circuit



Marking Code :

BC856A : 3A BC856B : 3K BC856C : 3T
BC857A : 3C BC857B : 3W BC857C : 3G
BC858A : 3J BC858B : 3B BC858C : 3L
BC859A : 3M BC859B : 3N BC859C : 3P
BC860A : 3Q BC860B : 3R BC860C : 3S

Absolute Maximum Ratings

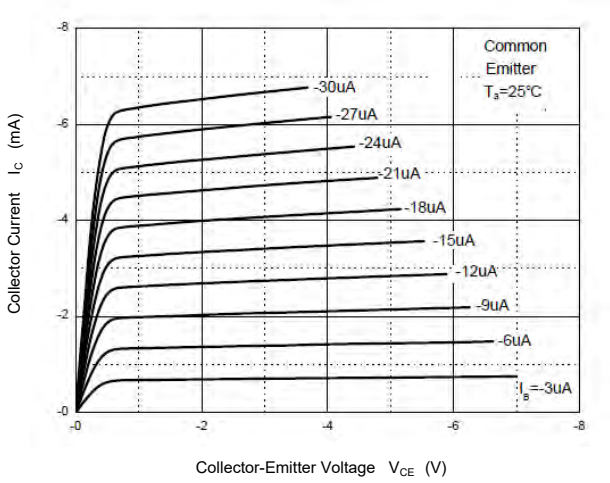
Ratings at 25℃ ambient temperature unless otherwise specified.

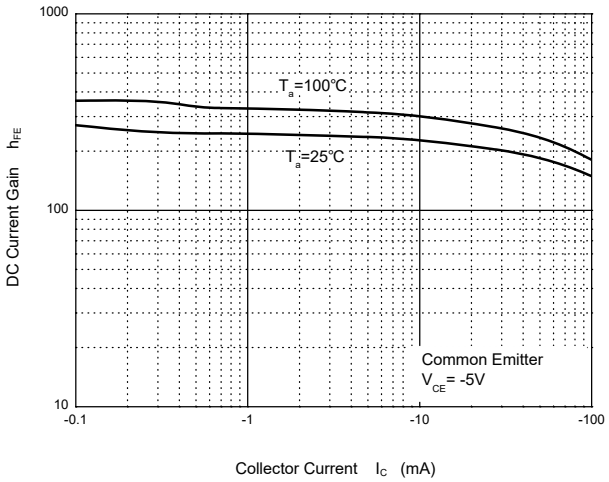
Parameter		Symbol	Value	Unit
Collector Base Voltage	BC856	$-V_{CBO}$	80	V
	BC857 BC860		50	
	BC858 BC859		30	
Collector Emitter Voltage	BC856	$-V_{CEO}$	65	V
	BC857 BC860		45	
	BC858 BC859		30	
Emitter Base Voltage		$-V_{EBO}$	5	V
Collector Current		$-I_C$	100	mA
Peak Collector Current		$-I_{CM}$	200	mA
Maximum Power Dissipation		P_D	200	mW
Junction Temperature		T_J	150	℃
Storage Temperature Range		T_{STG}	-65 to +150	℃

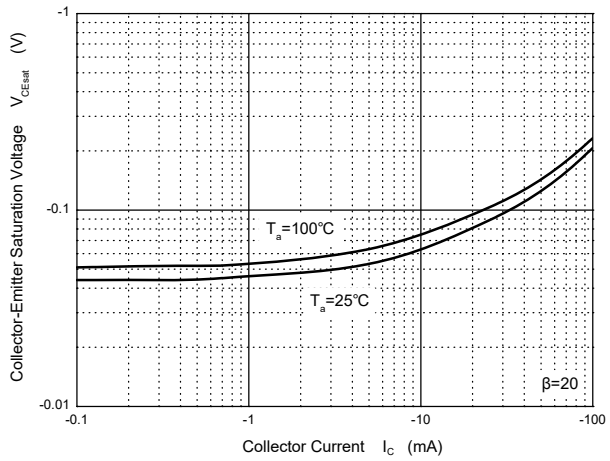
Electrical Characteristics (T_A=25℃)

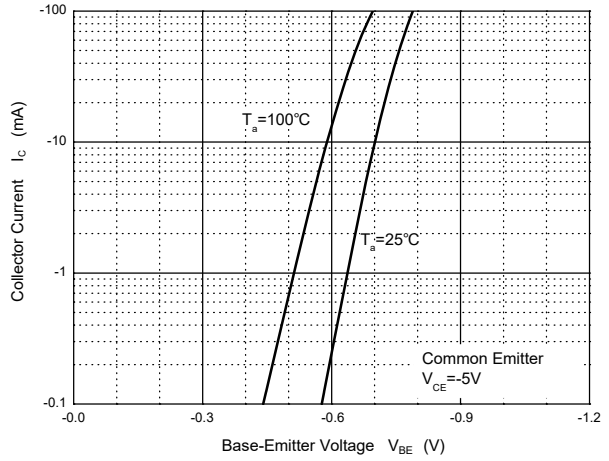
Parameter			Symbol	Min.	Max.	Unit
DC Current Gain at V_{CE} = -5 V, I_C = -2 mA	Gain Group	A B C	H_{FE}	125 220 420	250 475 800	--
Collector Base Cutoff Current at V_{CB} = -30V			$-I_{CBO}$	--	15	nA
Collector Base Breakdown Voltage at I_C = -10 μA		BC856 BC857 BC860 BC858 BC859	$-V_{(BR)CBO}$	80 50 30	-- -- --	V
Collector Emitter Breakdown Voltage at I_C = -10 mA		BC856 BC857 BC860 BC858 BC859	$-V_{(BR)CEO}$	65 45 30	-- -- --	V
Emitter Base Breakdown Voltage at I_E = -1 μA			$-V_{(BR)EBO}$	5	--	V
Collector Emitter Saturation Voltage at I_C = -10 mA, I_B = -0.5 mA at I_C = -100 mA, I_B = -5 mA			$-V_{CE(sat)}$	-- --	0.3 0.65	V
Base Emitter On Voltage at V_{CE} = -5 V, I_c = -2 mA at V_{CE} = -5 V, I_c = -10 mA			$-V_{BE(on)}$	0.6 --	0.75 0.82	V
Transition Frequency at V_{CE} = -5 V, I_C = -10 mA, f = 100 MHz			F_T	100	--	MHz
Output Capacitance at V_{CB} = -10 V, f = 1 MHz			C_{ob}	--	6	pF

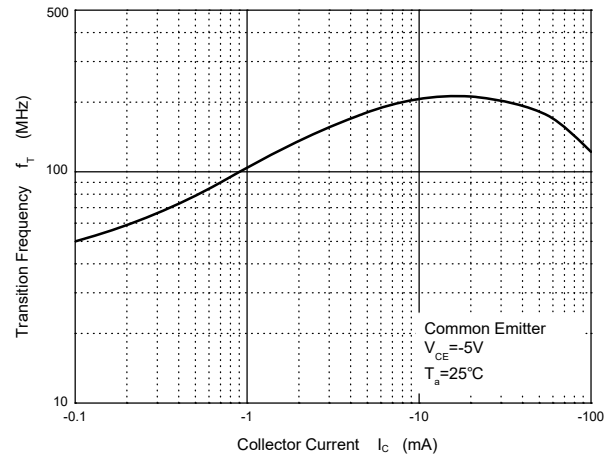
Typical Characteristic Curves

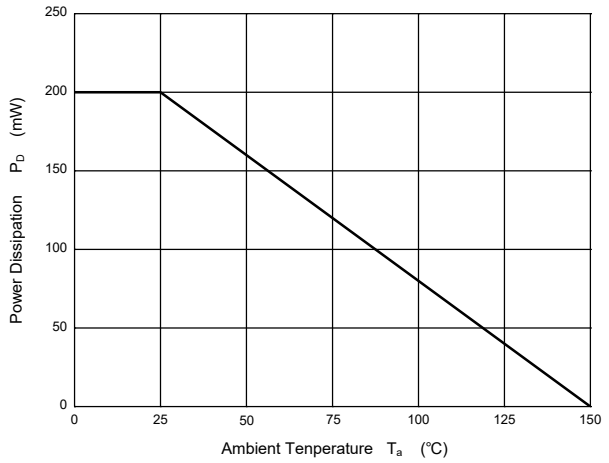








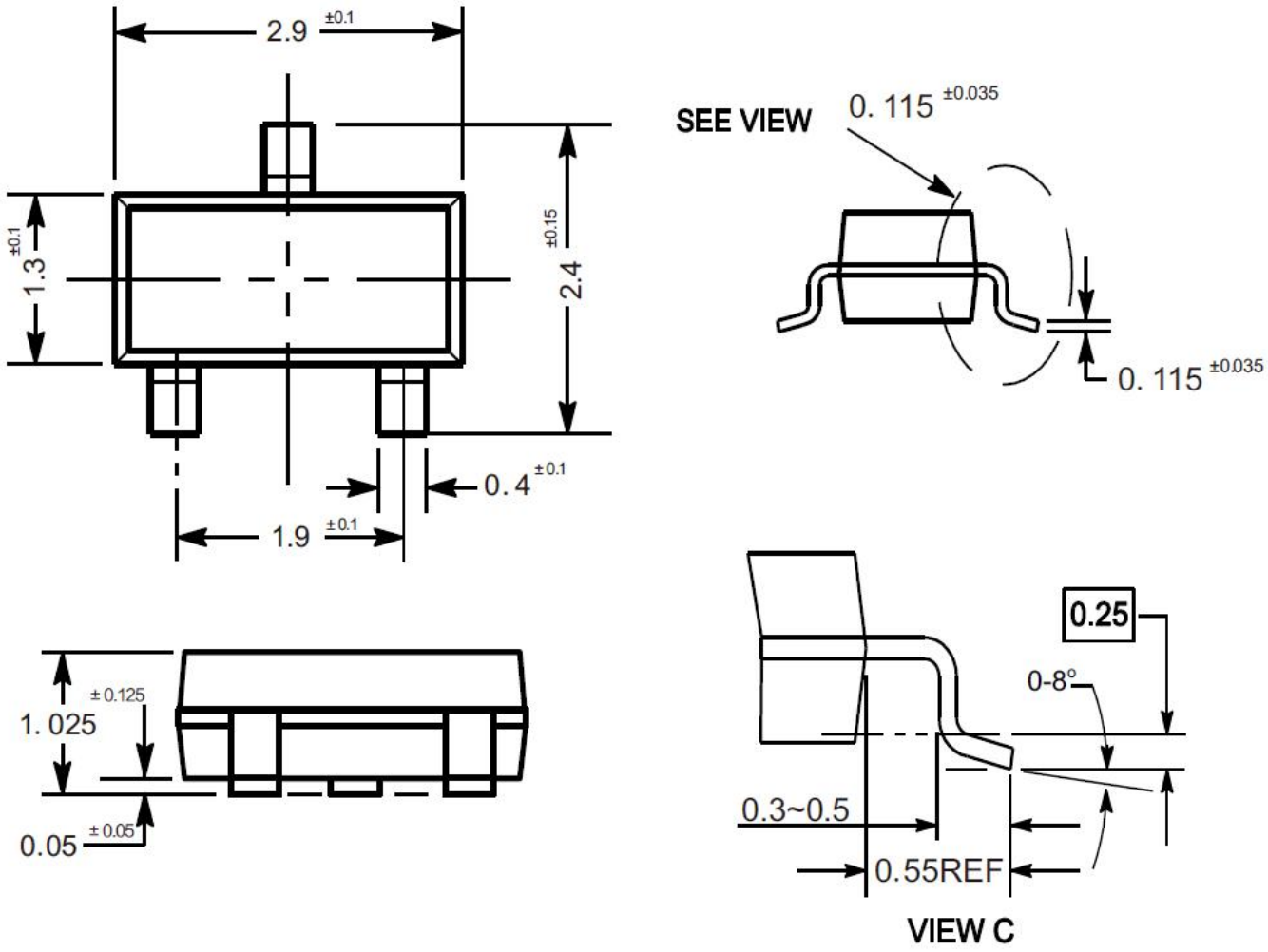




Package Outline

SOT-23

Dimensions in mm

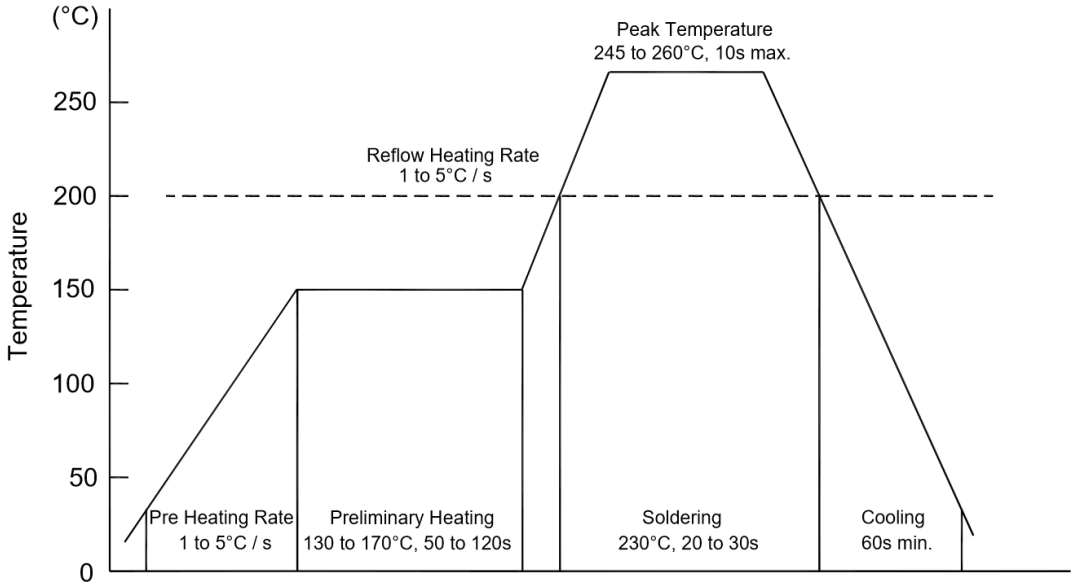


Ordering Information

Device	Package	Shipping
BC856~BC860	SOT-23	3,000PCS/Reel&7inches

Conditions of Soldering and Storage

◆ Recommended condition of reflow soldering



Recommended peak temperature is over 245 ^{O}C. If peak temperature is below 245 ^{O}C, you may adjust the following parameters:

- Time length of peak temperature (longer)
- Time length of soldering (longer)
- Thickness of solder paste (thicker)

◆ Conditions of hand soldering

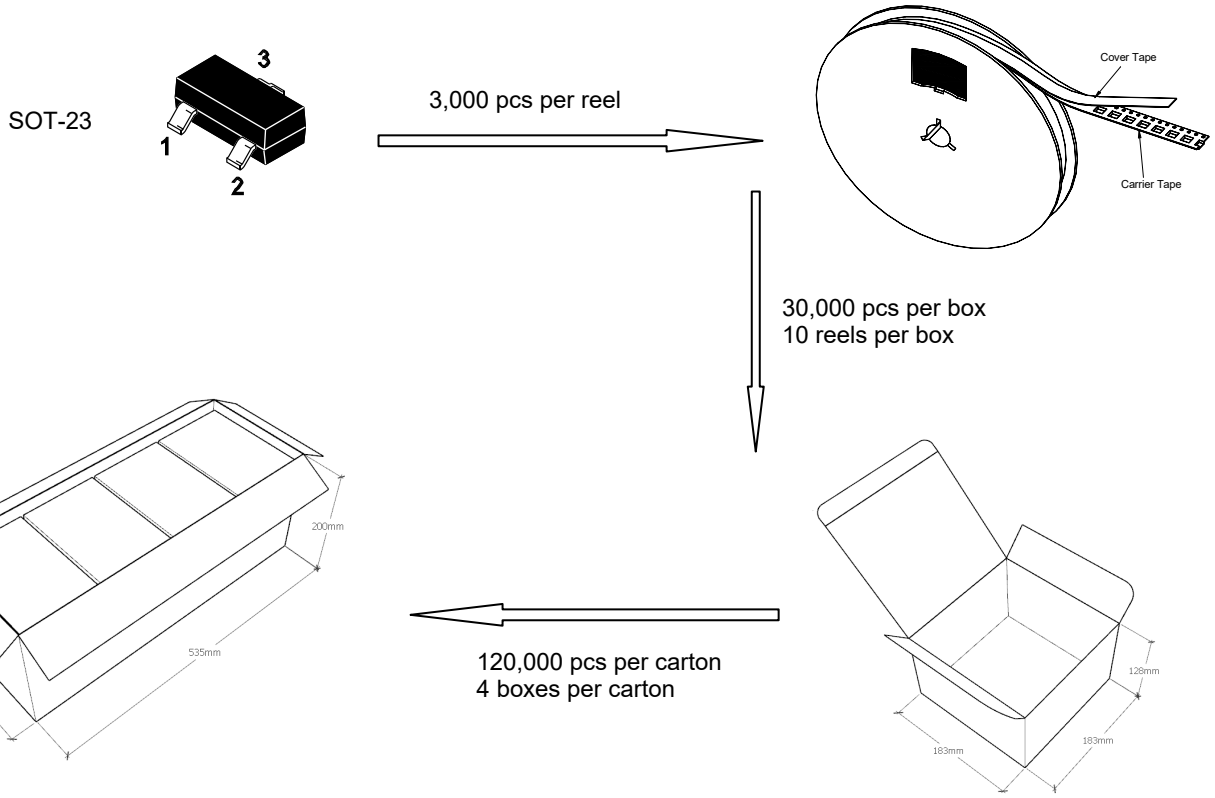
- Temperature: 370 ^{O}C
- Time: 3s max.
- Times: one time

◆ Storage conditions

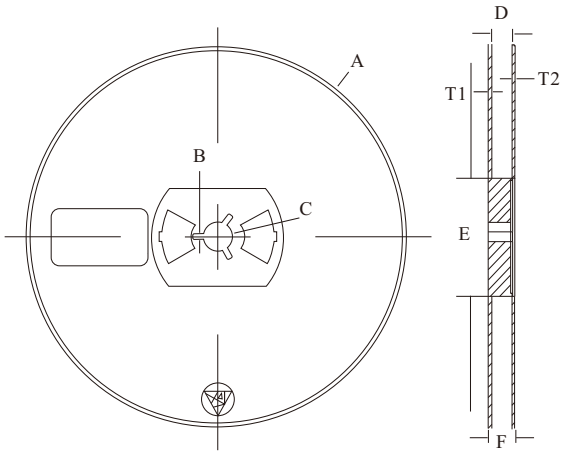
- **Temperature**
  5 to 40 ^{O}C
- **Humidity**
  30 to 80% RH
- **Recommended period**
  One year after manufacturing

Package Specifications

- The method of packaging



◆ Embossed tape and reel data



Symbol	Value (unit: mm)
A	Ø 177.8±1
B	2.7±0.2
C	Ø 13.5±0.2
E	Ø 54.5±0.2
F	12.3±0.3
D	9.6+2/-0.3
T1	1.0±0.2
T2	1.2±0.2

Reel (7")