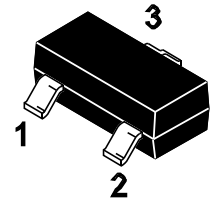


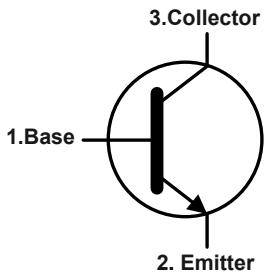
Features

- For Switching and AF Amplifier Applications.

SOT-23



Equivalent Circuit



1.Base 2.Emitter 3.Collector

Marking Code:

BC817-16 : 6CQ
 BC818-16 : 6CW
 BC817-25 : 6CS
 BC818-25 : 6CX
 BC817-40 : 6CT
 BC818-40 : 6CY

Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter		Symbol	Value	Unit
Collector Base Voltage	BC817	V_{CBO}	50	V
	BC818		30	
Collector Emitter Voltage	BC817	V_{CEO}	45	V
	BC818		25	
Emitter Base Voltage		V_{EBO}	5	V
Collector Current		I_C	500	mA
Maximum Power Dissipation		P_D	300	mW
Junction Temperature		T_J	150	°C
Storage Temperature Range		T_{STG}	-55 to +150	°C

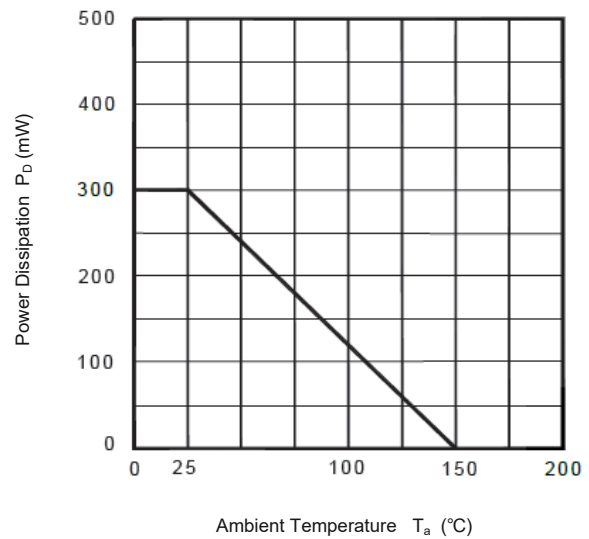
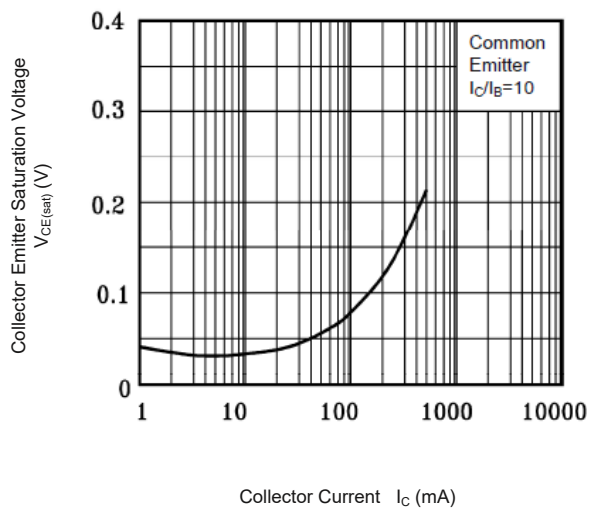
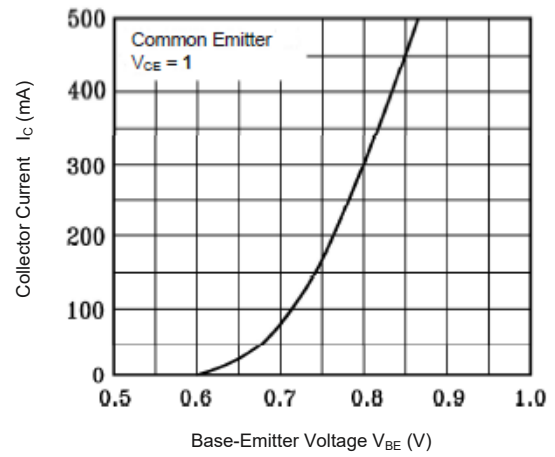
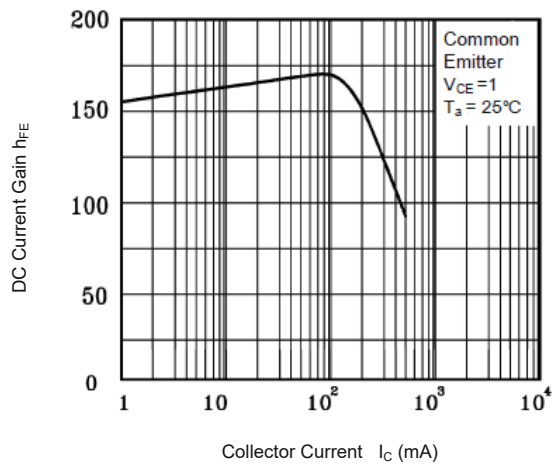


Electrical Characteristics (T_A=25°C)

Parameter	Symbol	Min.	Tpy.	Max.	Unit
DC Current Gain at V _{CE} = 1 V, I _C = 100 mA	H _{FE}	100	--	250	--
Gain Group -16		160	--	400	
-25		250	--	600	
-40		40	--	--	
at V _{CE} = 1 V, I _C = 500 mA					
Collector Base Cutoff Current at V _{CB} = 20V	I _{CBO}	--	--	100	nA
Emitter Base Cutoff Current at V _{EB} = 5 V	I _{EBO}	--	--	100	nA
Collector Emitter Saturation Voltage at I _C = 500 mA, I _B = 50 mA	V _{CE(sat)}	--	--	0.7	V
Base Emitter On Voltage at V _{CE} = 1 V, I _C = 500 mA	V _{BE(on)}	--	--	1.2	V
Transition Frequency at V _{CE} = 5 V, I _C = 10 mA, f = 50 MHz	F _T	100	--	--	MHz
Output Capacitance at V _{CB} = 10 V, f = 1 MHz	C _{ob}	--	5	--	pF



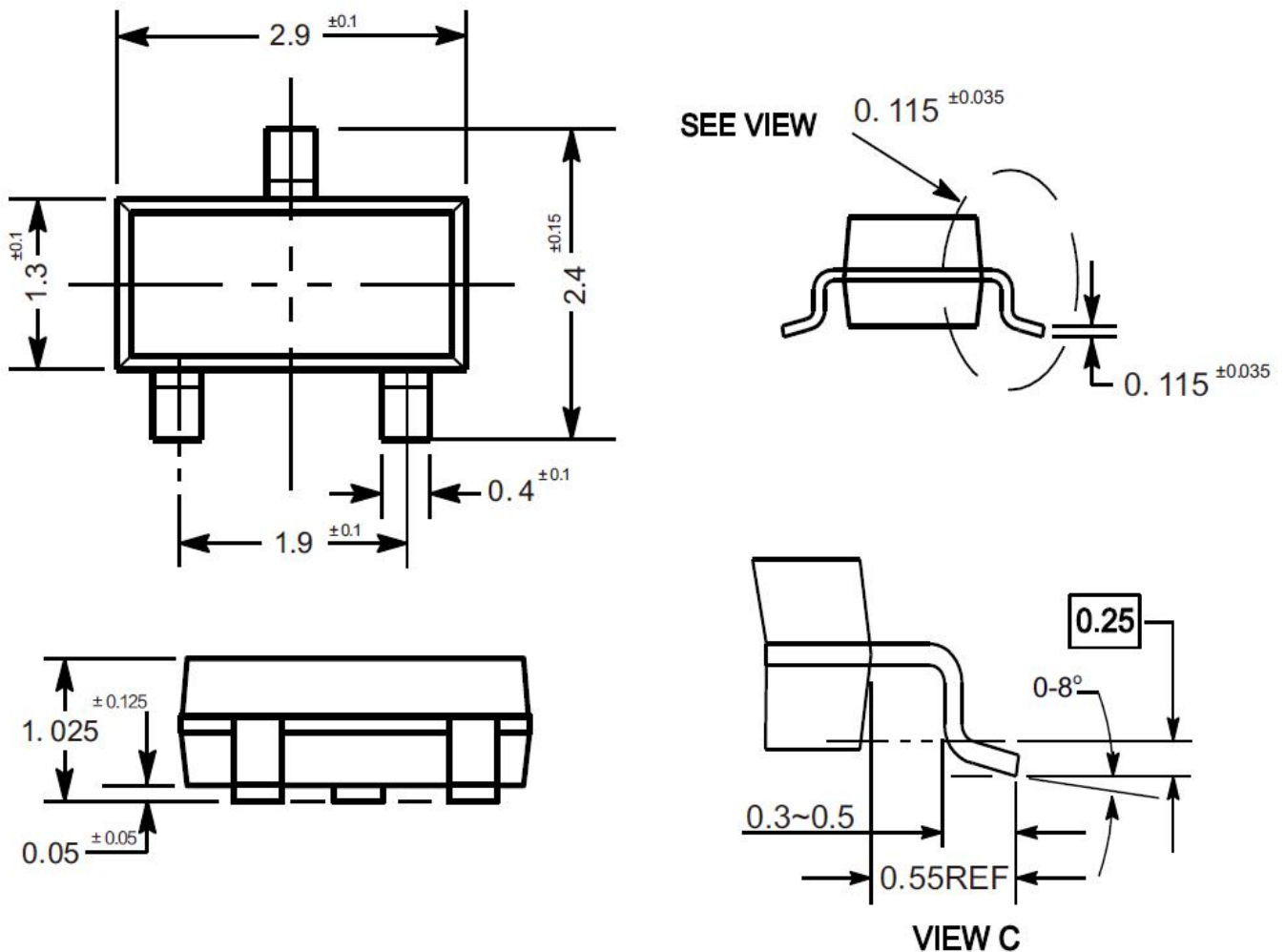
Typical Characteristic Curves



Package Outline

SOT-23

Dimensions in mm

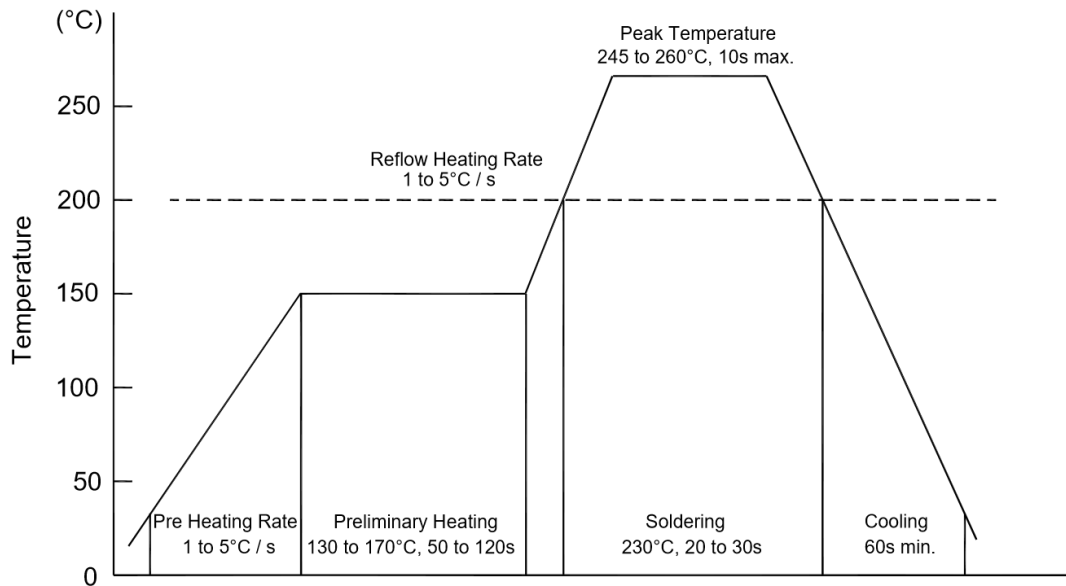


Ordering Information

Device	Package	Shipping
BC817~BC818	SOT-23	3,000PCS/Reel&7inches

Conditions of Soldering and Storage

◆ Recommended condition of reflow soldering



Recommended peak temperature is over 245 °C. If peak temperature is below 245 °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

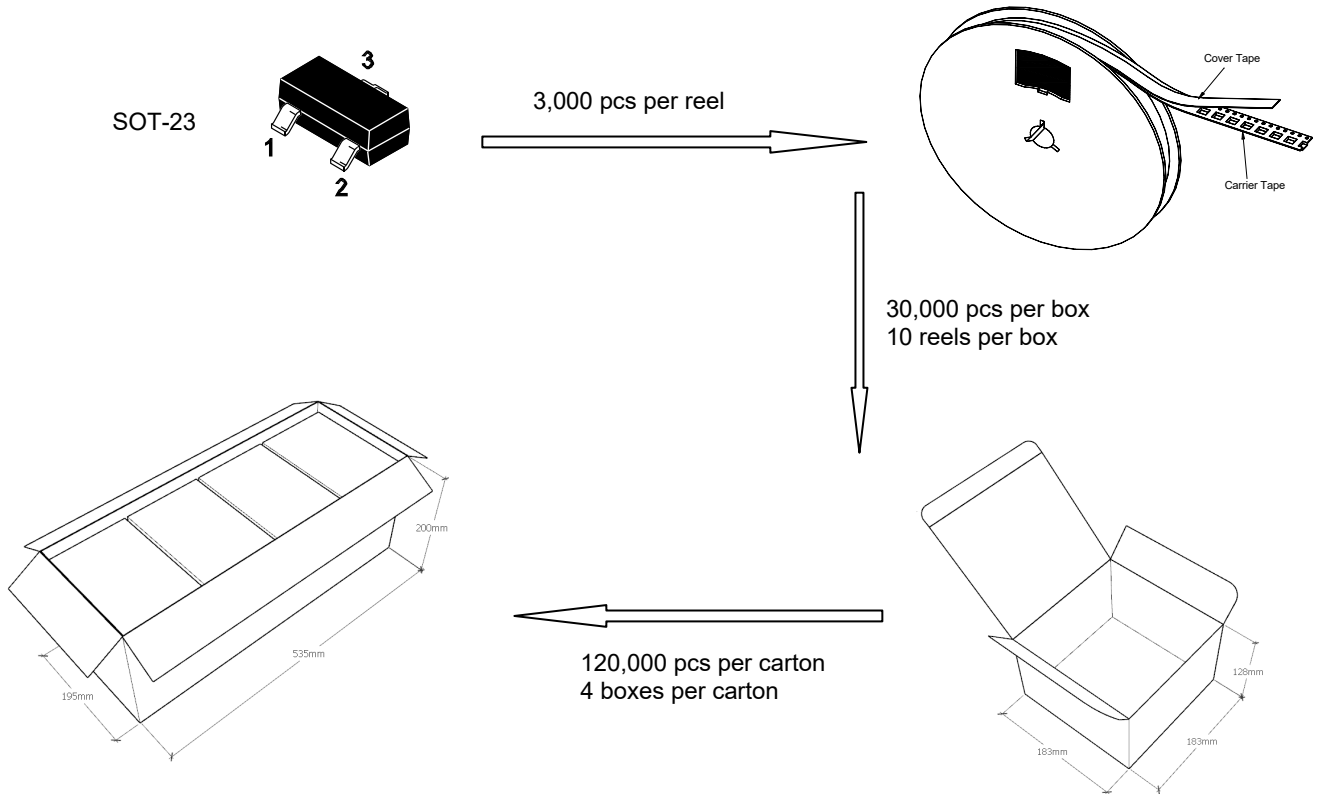
- Temperature: 370 °C
- Time: 3s max.
- Times: one time

◆ Storage conditions

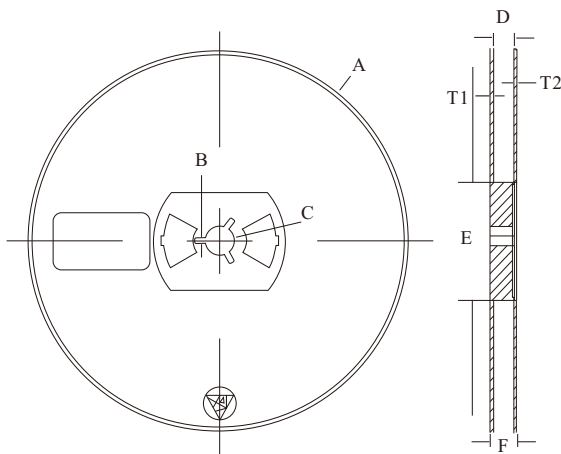
- **Temperature**
5 to 40 °C
- **Humidity**
30 to 80% RH
- **Recommended period**
One year after manufacturing

Package Specifications

- The method of packaging



◆ Embossed tape and reel data



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

Reel (7")

