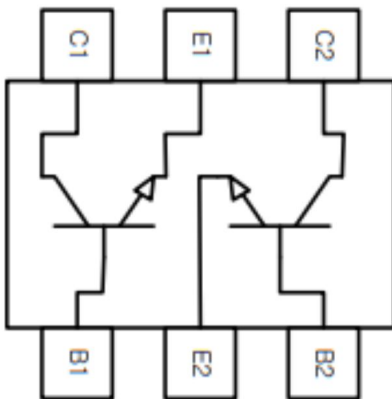


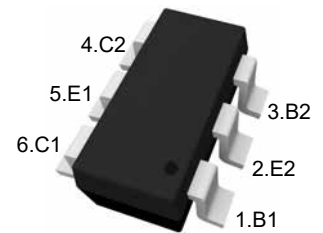
Features

- For switching and amplifier applications

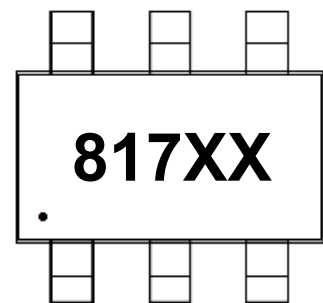
Equivalent Circuit



SOT-23-6



Marking Code



XX: Current Gain Group
e.g. BC817SG-25: 81725

Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

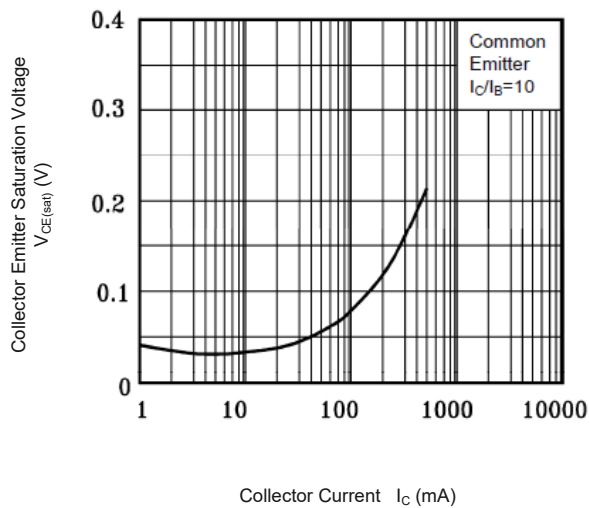
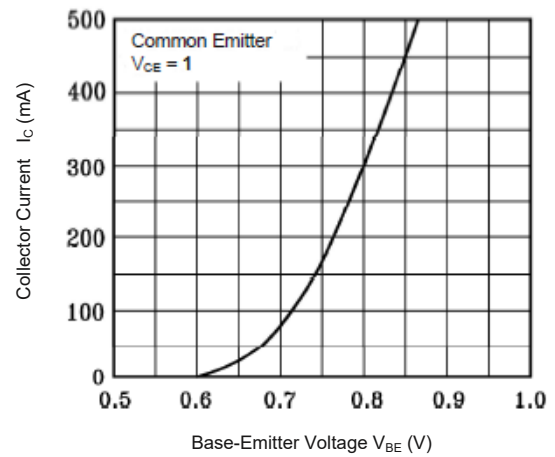
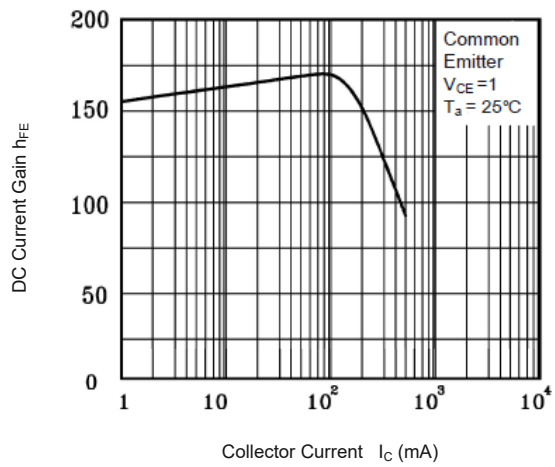
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	50	V
Collector Emitter Voltage	V_{CEO}	45	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	500	mA
Maximum Power Dissipation	P_D	950	mW
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C



Electrical Characteristics (T_A=25°C)

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

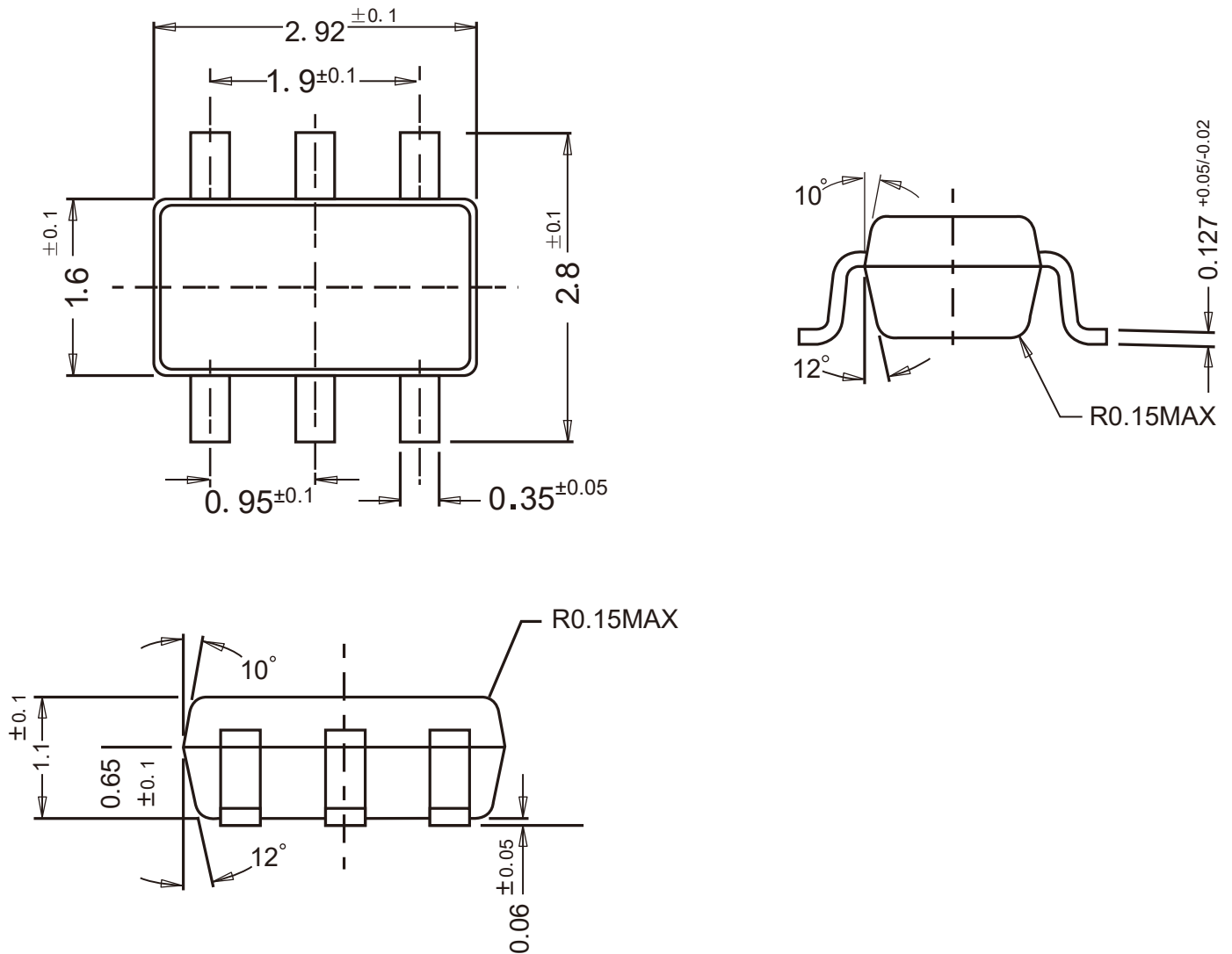
Typical Characteristic Curves



Package Outline

SOT-23-6

Dimensions in mm

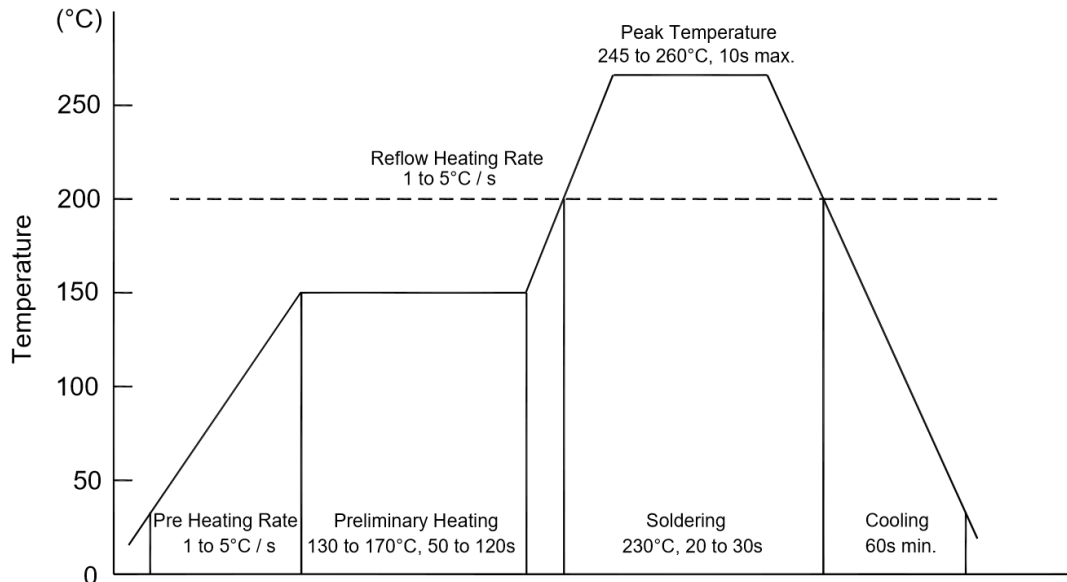


Ordering Information

Device	Package	Shipping
BC817SG	SOT-23-6	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

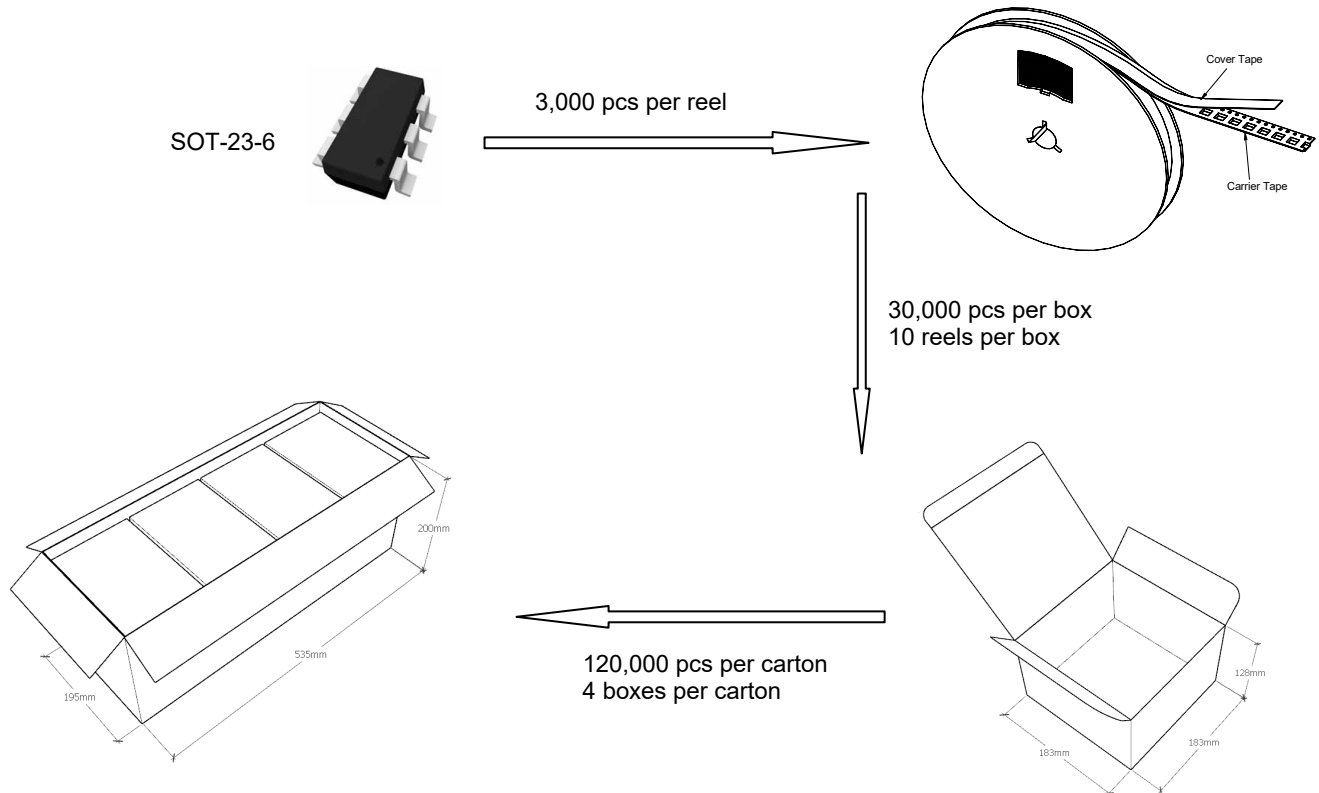
- Temperature: 370 °C
- Time: 3s max.
- Times: one time

◆ Storage conditions

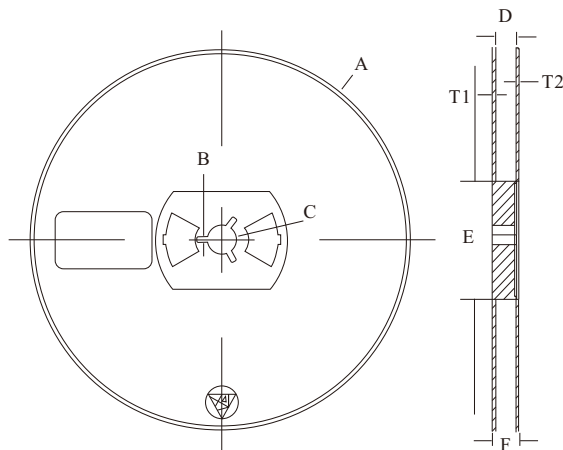
- **Temperature**
5 to 40 °C
- **Humidity**
30 to 80% RH
- **Recommended period**
One year after manufacturing

Package Specifications

- The method of packaging



◆ Embossed tape and reel data



Symbol	Value (unit: mm)
A	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