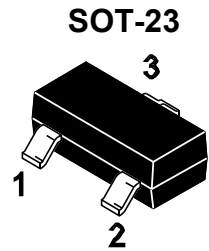
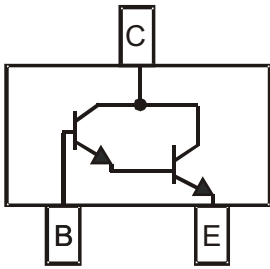


# BCV27 BCV47 NPN Darlington Transistor

## Features

- High Collector Current
- High Current Gain

## Equivalent Circuit



1.Base 2.Emitter 3.Collector

### Marking Code:

BCV27 : FF

BCV47 : FH

## Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

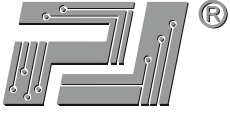
Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	BCV27 40	V
		BCV47 80	
Collector Emitter Voltage	$V_{CEO}$	BCV27 30	V
		BCV47 60	
Emitter Base Voltage	$V_{EBO}$	10	V
Collector Current	$I_C$	500	mA
Peak Collector Current	$I_{CM}$	800	mA
Base Current	$I_B$	100	mA
Maximum Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-65 to +150	°C



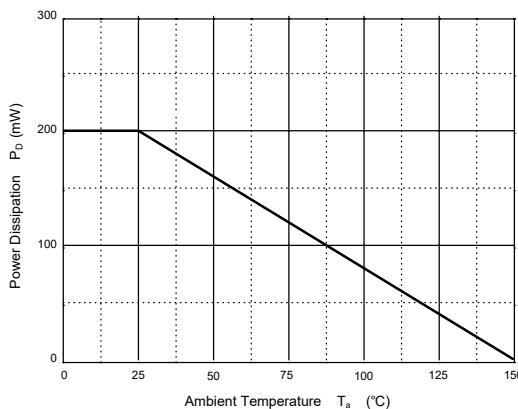
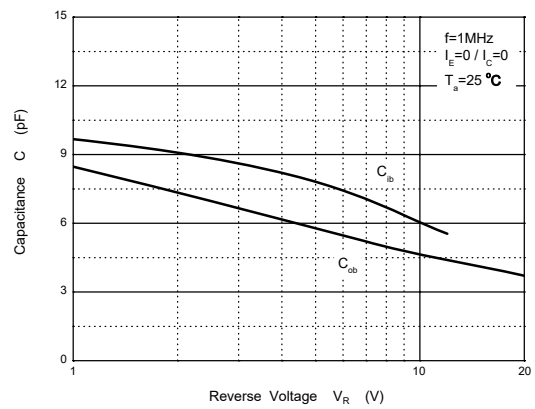
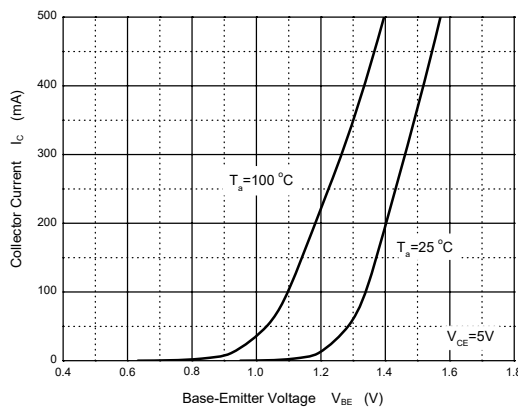
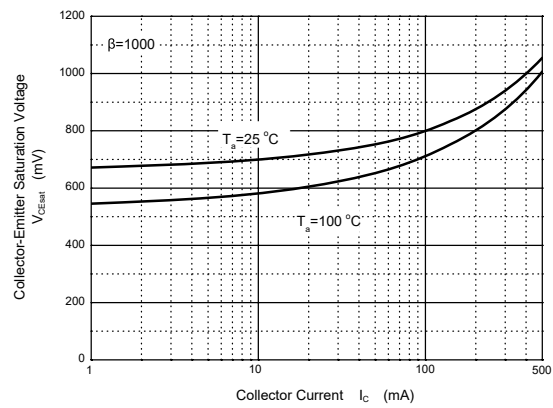
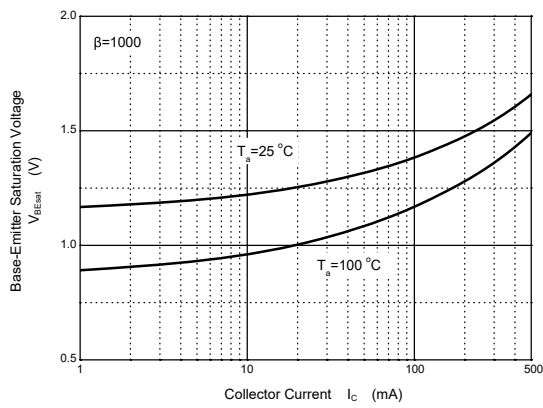
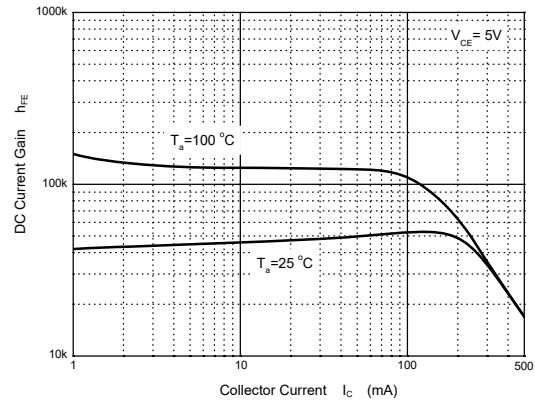
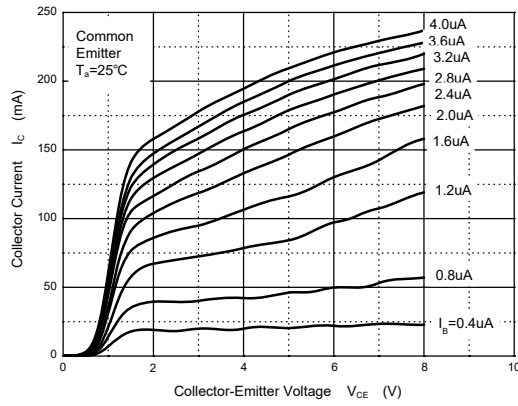
**Electrical Characteristics**

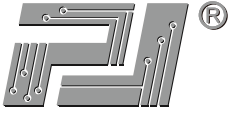
Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain					
at $V_{CE} = 5\text{ V}$ , $I_C = 1\text{ mA}$	BCV27	4000	--	--	
	BCV47	2000	--	--	
at $V_{CE} = 5\text{ V}$ , $I_C = 10\text{ mA}$	BCV27	10000	--	--	--
	BCV47	4000	--	--	
at $V_{CE} = 5\text{ V}$ , $I_C = 100\text{ mA}$	BCV27	20000	--	--	
	BCV47	10000	--	--	
Collector Base Cutoff Current					
at $V_{CB} = 30\text{ V}$	BCV27	--	--	100	nA
at $V_{CB} = 60\text{ V}$	BCV47	--	--	100	
Emitter Base Cutoff Current					
at $V_{EB} = 10\text{ V}$		--	--	100	nA
Collector Base Breakdown Voltage					
at $I_C = 100\text{ }\mu\text{A}$	BCV27	40	--	--	V
	BCV47	80	--	--	
Collector Emitter Breakdown Voltage					
at $I_C = 10\text{ mA}$	BCV27	30	--	--	V
	BCV47	60	--	--	
Emitter Base Breakdown Voltage					
at $I_E = 10\text{ }\mu\text{A}$		10	--	--	V
Collector Emitter Saturation Voltage					
at $I_C = 100\text{ mA}$ , $I_B = 0.1\text{ mA}$		--	--	1	V
Base Emitter Saturation Voltage					
at $I_C = 100\text{ mA}$ , $I_B = 0.1\text{ mA}$		--	--	1.5	V
Base Emitter On Voltage					
at $V_{CE} = 5\text{ V}$ , $I_C = 10\text{ mA}$		--	--	1.4	V
Transition Frequency					
at $V_{CE} = 5\text{ V}$ , $I_C = 30\text{ mA}$ , $f = 100\text{ MHz}$	$F_T$	--	220	--	MHz



**Typical Characteristic Curves**





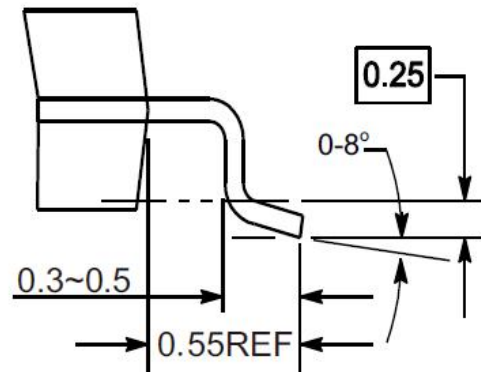
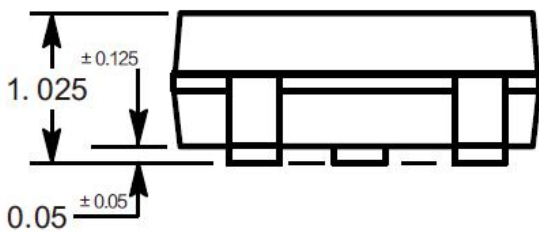
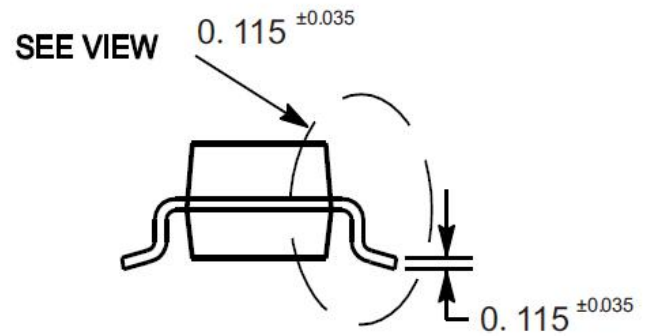
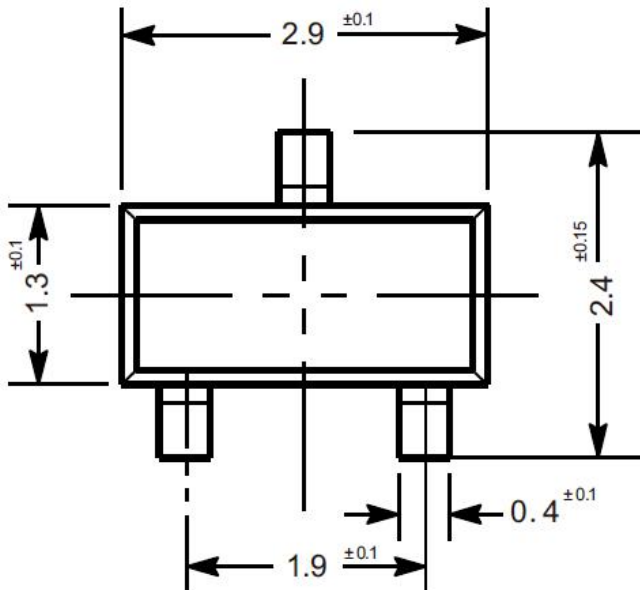
**BCV27**  
**BCV47**

**NPN Darlington Transistor**

### Package Outline

SOT-23

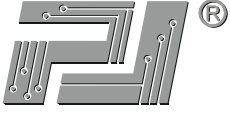
Dimensions in mm



**VIEW C**

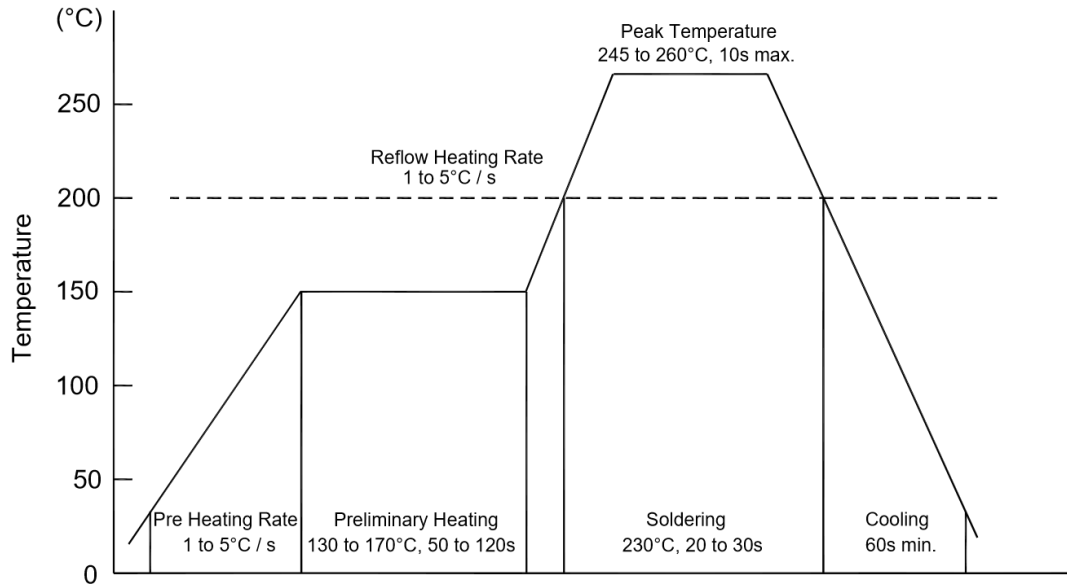
### Ordering Information

Device	Package	Shipping
BCV27,BCV47	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:

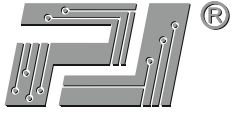
- Time length of peak temperature (longer)
- Time length of soldering (longer)
- Thickness of solder paste (thicker)

### ◆ Conditions of hand soldering

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

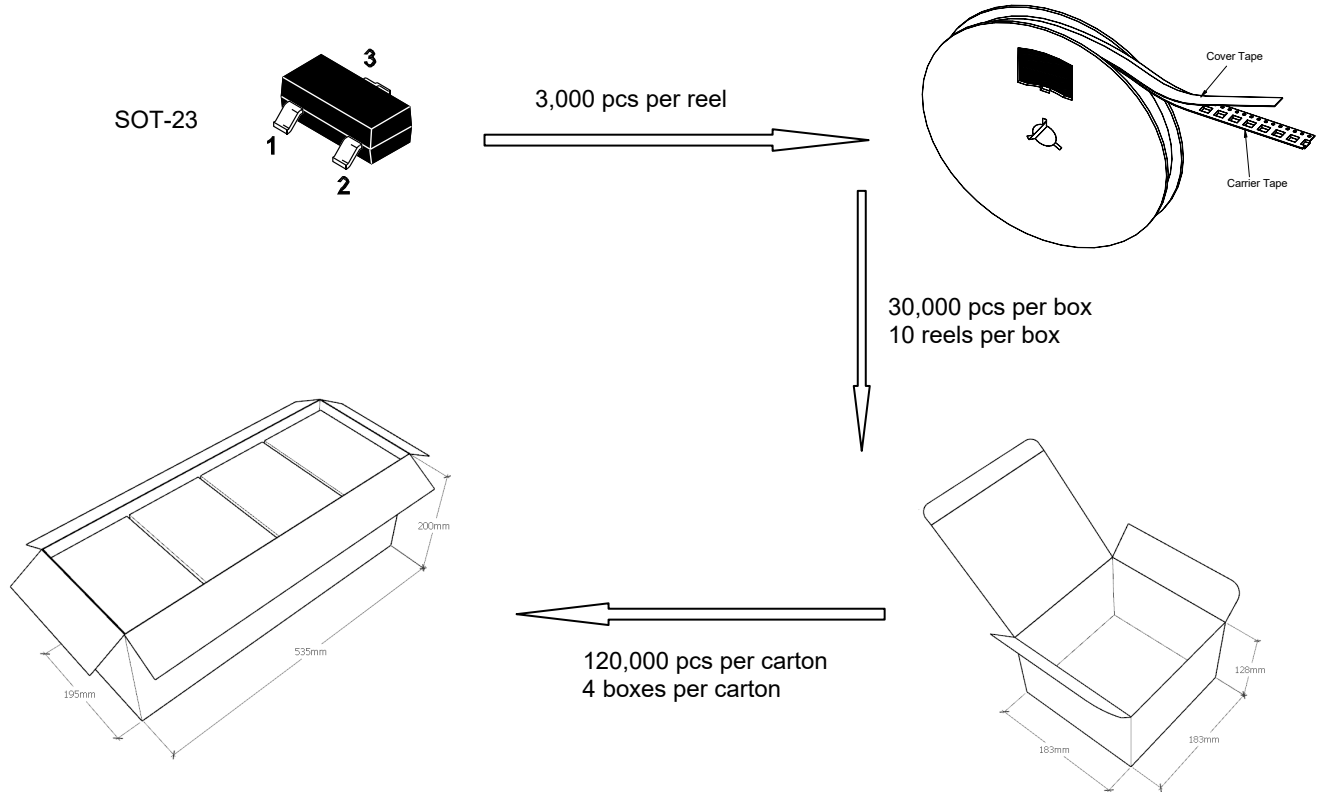
### ◆ Storage conditions

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

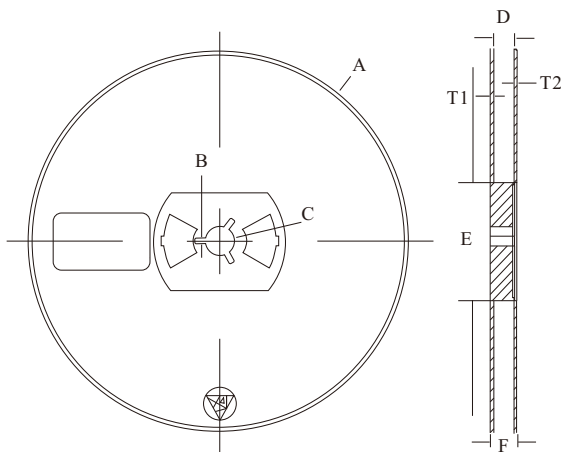


**Package Specifications**

- The method of packaging



◆ **Embossed tape and reel data**



Symbol	Value (unit: mm)
A	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")**

