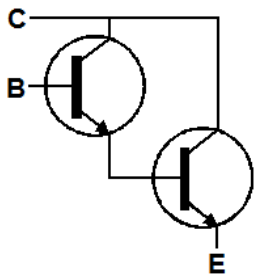


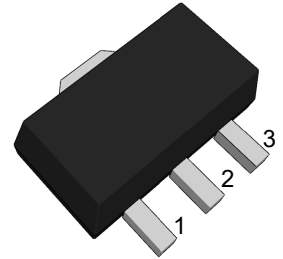
Features

- High Collector Current
- High Current Gain
- RoHS and Reach Compliant
- Halogen and Antimony Free
- Moisture Sensitivity Level 1

Equivalent Circuit

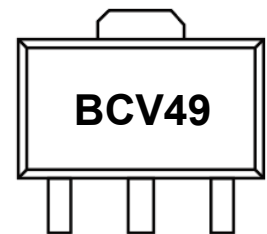


SOT-89



1.Base 2.Collector 3.Emitter

Marking Code



Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	80	V
Collector Emitter Voltage	V_{CEO}	60	V
Emitter Base Voltage	V_{EBO}	10	V
Collector Current	I_C	0.5	A
Maximum Power Dissipation	P_D	1.1	W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C



BCV49

NPN Darlington Transistor

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

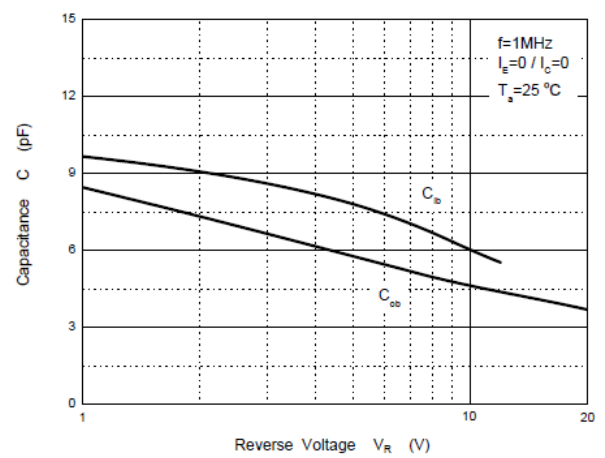
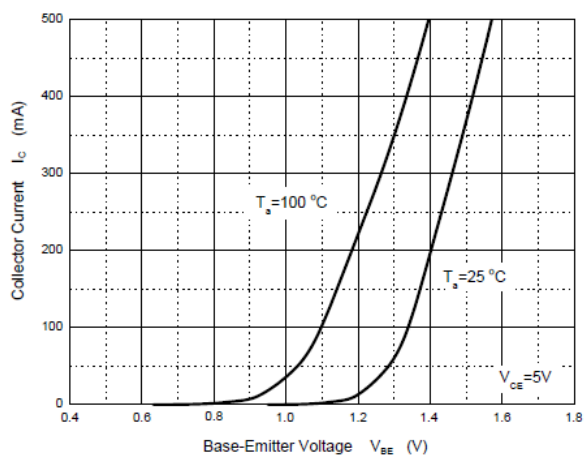
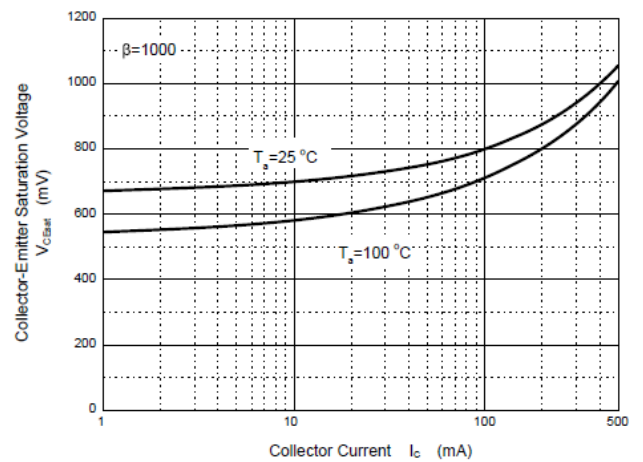
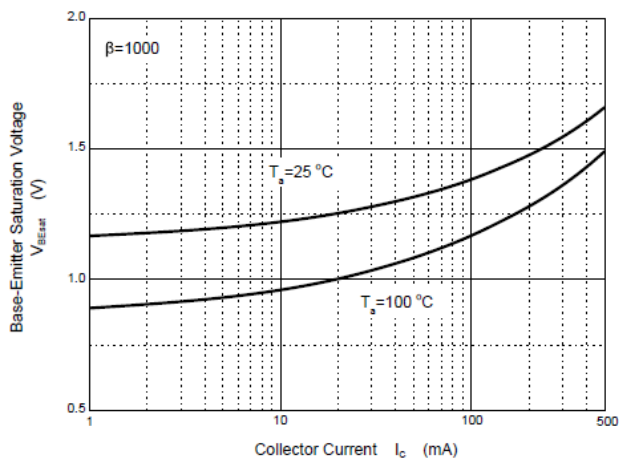
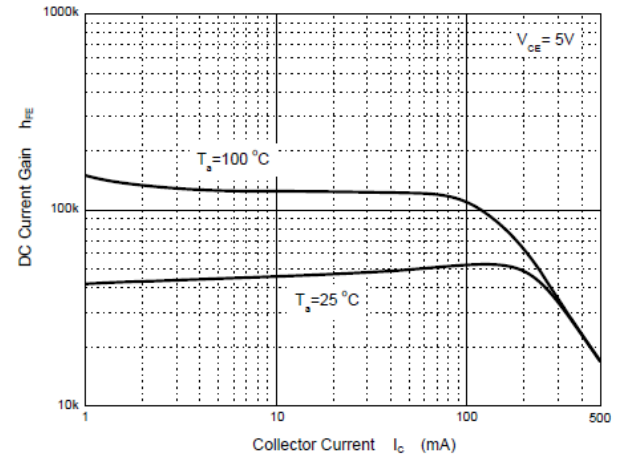
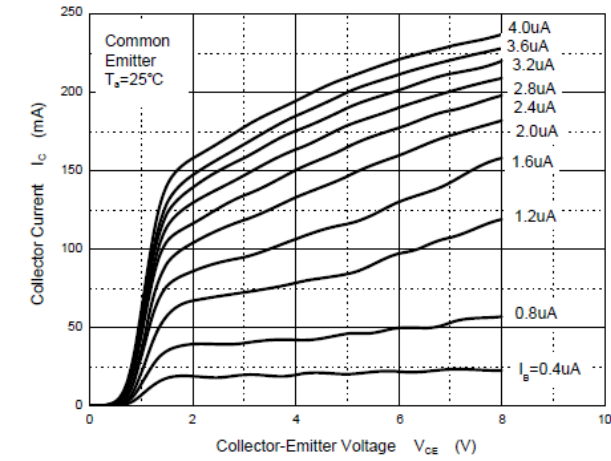
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 5\text{ V}$, $I_C = 1\text{ mA}$ at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$ at $V_{CE} = 5\text{ V}$, $I_C = 100\text{ mA}$	H_{FE}	2000 4000 10000	-- -- --	-- -- --	--
Collector Base Cutoff Current at $V_{CB} = 60\text{ V}$	I_{CBO}	--	--	100	nA
Emitter Base Cutoff Current at $V_{EB} = 10\text{ V}$	I_{EBO}	--	--	100	nA
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	80	--	--	V
Collector Emitter Breakdown Voltage at $I_C = 10\text{ mA}$	$V_{(BR)CEO}$	60	--	--	V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	10	--	--	V
Collector Emitter Saturation Voltage at $I_C = 100\text{ mA}$, $I_B = 0.1\text{ mA}$	$V_{CE(sat)}$	--	--	1	V
Base Emitter Saturation Voltage at $I_C = 100\text{ mA}$, $I_B = 0.1\text{ mA}$	$V_{BE(sat)}$	--	--	1.5	V
Base Emitter On Voltage at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$	$V_{BE(on)}$	--	--	1.4	V
Transition Frequency at $V_{CE} = 5\text{ V}$, $I_C = 30\text{ mA}$, $f = 100\text{ MHz}$	f_T	--	220	--	MHz



BCV49

NPN Darlington Transistor

Typical Characteristic Curves





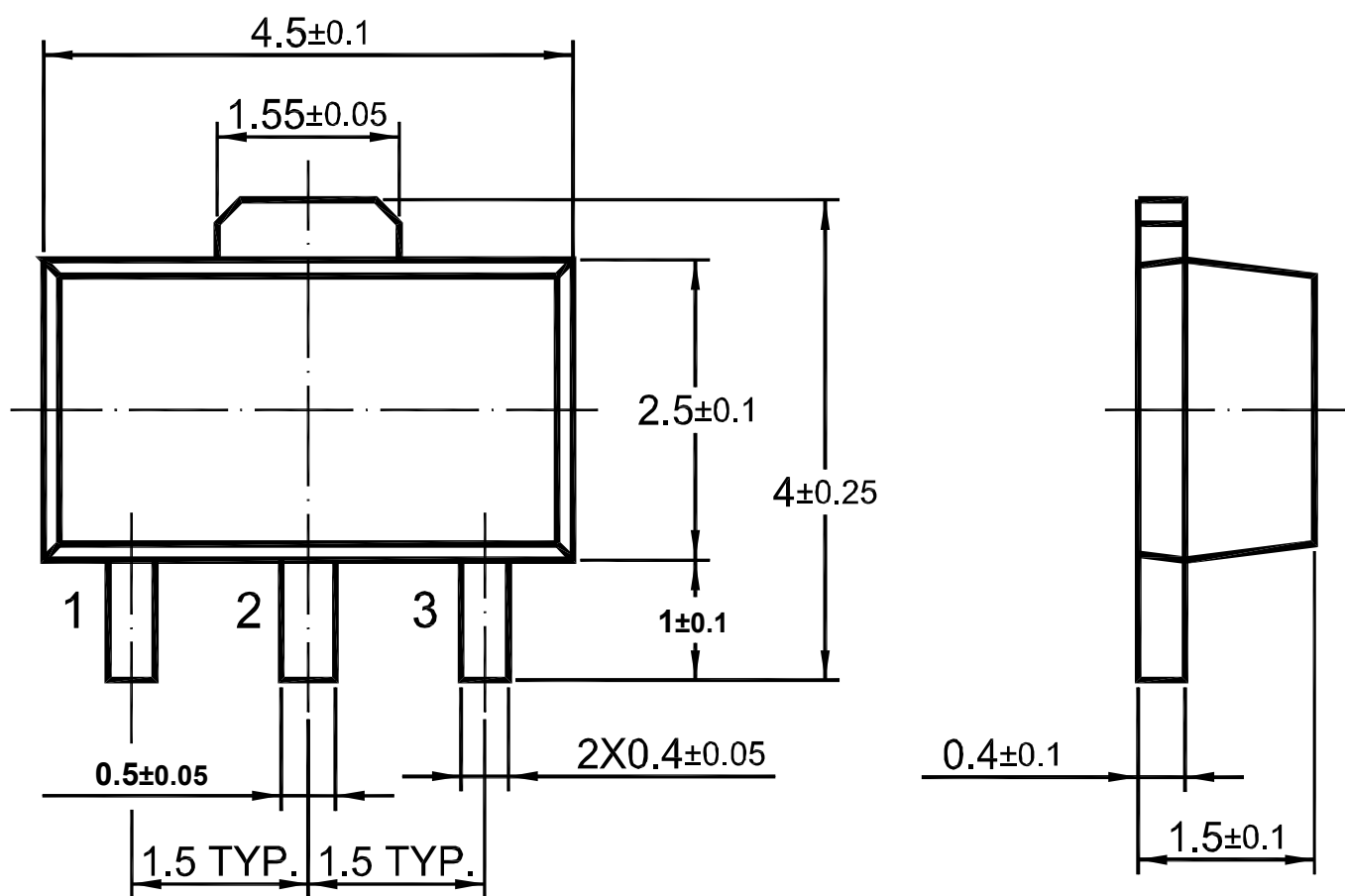
BCV49

NPN Darlington Transistor

Package Outline

SOT-89

Dimensions in mm



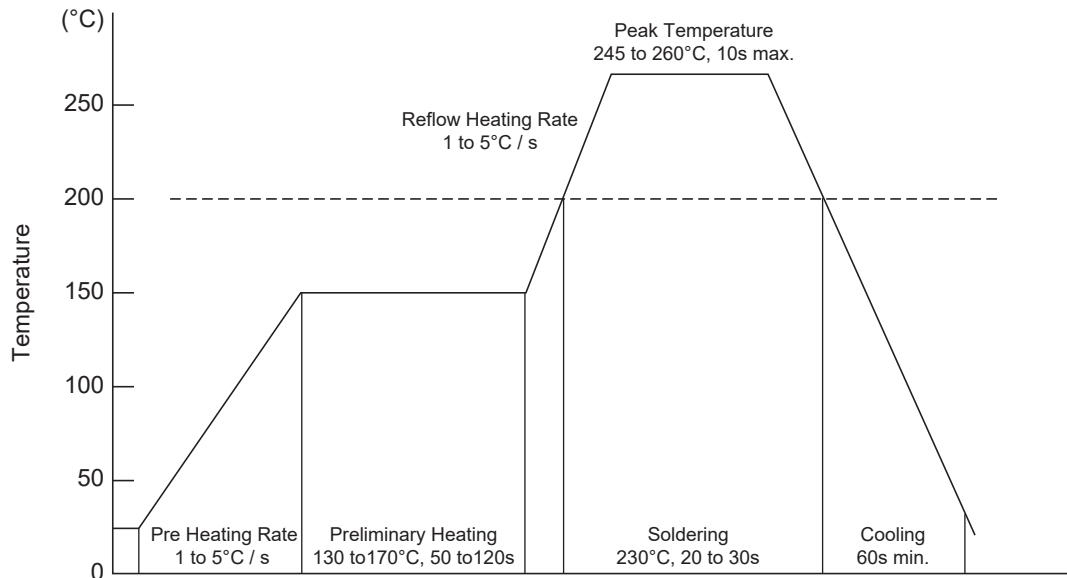
Ordering Information

Device	Package	Shipping
BCV49	SOT-89	1,000PCS/Reel&7inches
		3,000PCS/Reel&13inches



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

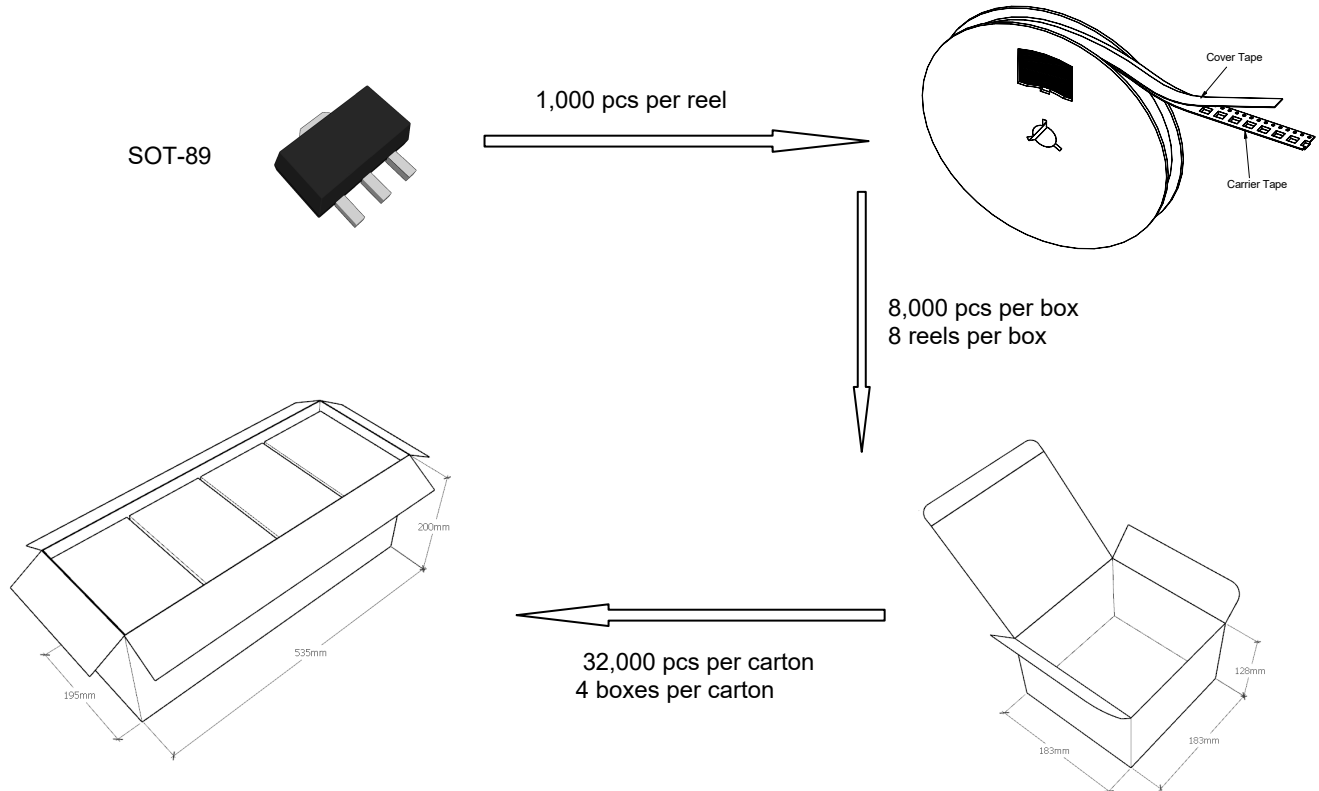
- Temperature: 300°C
- Time: 3s max.
- Times: one time

◆ Storage conditions

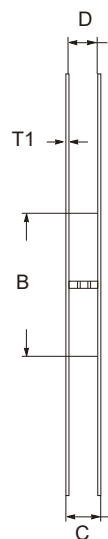
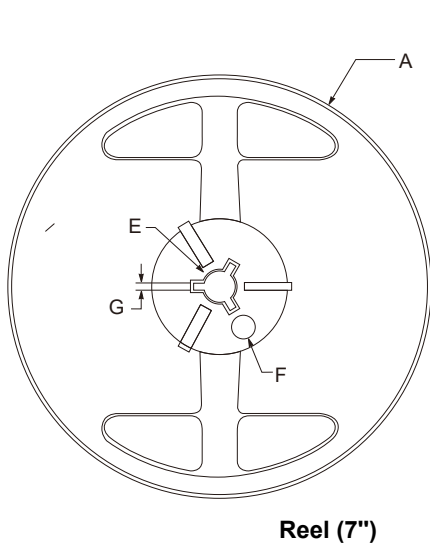
- **Temperature**
5 to 40°C
- **Humidity**
30 to 80% RH
- **Recommended period**
One year after manufacturing

Package Specifications

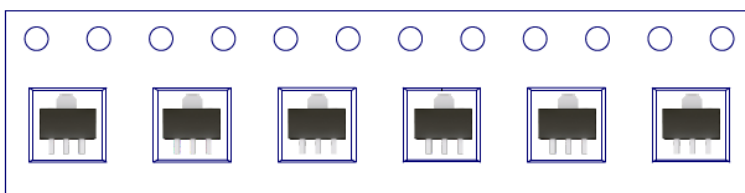
- The method of packaging (1,000PCS/Reel&7inches)



◆ Embossed tape and reel data

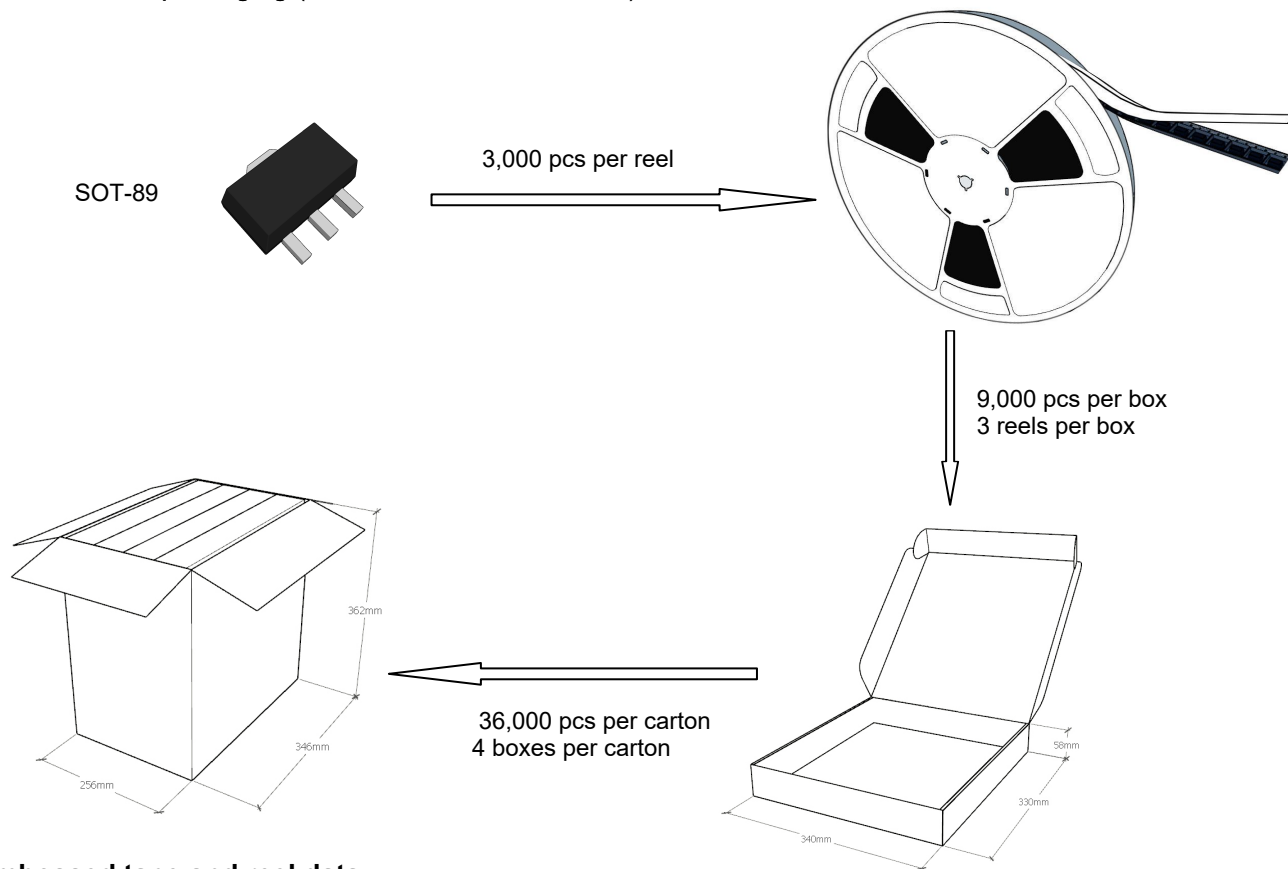


symbol	Value(unit:mm)
A	$\Phi 179 \pm 1$
B	60.5 ± 0.2
C	15.3 ± 0.3
D	$12.5 \sim 13.7$
E	$\Phi 13.5 \pm 0.2$
F	$\Phi 10.0 \pm 0.2$
G	2.7 ± 0.2
T1	1.0 ± 0.2

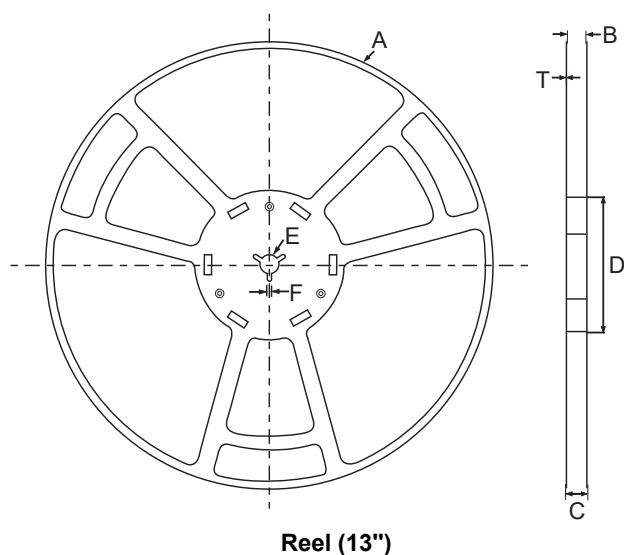


Package Specifications

- The method of packaging (3,000PCS/Reel&13inches)



◆ Embossed tape and reel data



symbol	Value(unit:mm)
A	$\Phi 330 \pm 1$
B	12.7 ± 0.5
C	16.5 ± 0.3
D	$\Phi 99.5 \pm 0.5$
E	$\Phi 13.6 \pm 0.3$
F	2.8 ± 0.3
T1	1.9 ± 0.2

