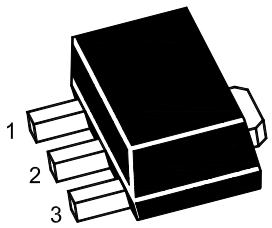
2SC2873SQ
NPN Transistor

Features

- Low Saturation Voltage
- High Speed Switching Time
- As Complementary Type of the PNP Transistor 2SA1213SQ is Recommended.

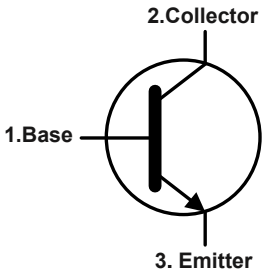
SOT-89



1.Base 2.Collector 3. Emitter

Marking Code :
2SC2873SQ-O : MX
2SC2873SQ-Y : MY

Equivalent Circuit



Absolute Maximum Ratings

Ratings at 25℃ ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	50	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	2	A
Maximum Power Dissipation	P_D	0.5	W
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{STG}	-55 to +150	℃

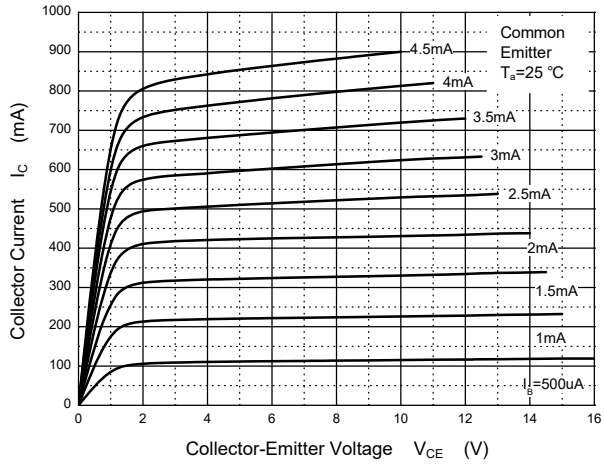
Thermal Characteristics

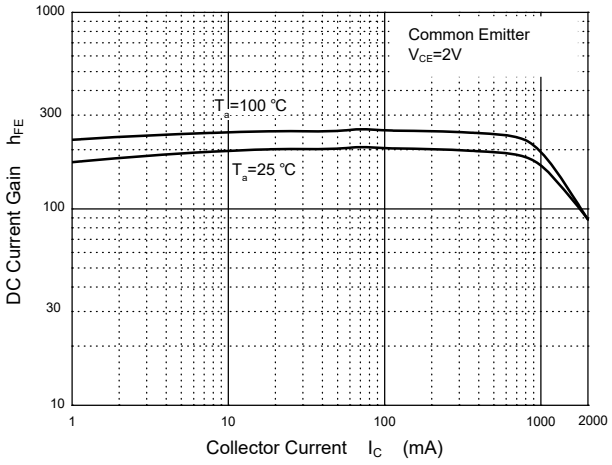
Parameter	Symbol	Value	Unit
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	250	℃/W

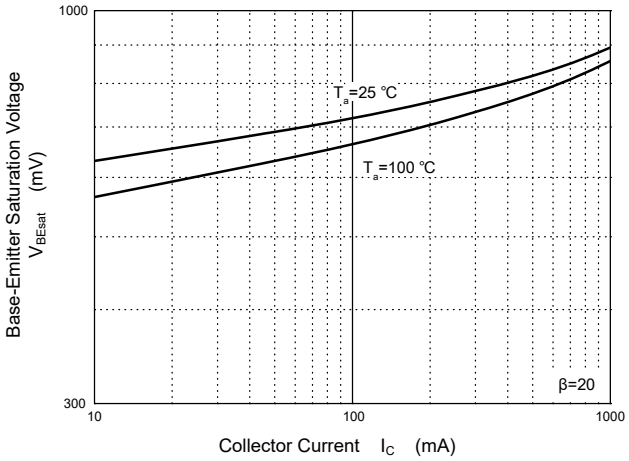
Electrical Characteristics (T_A=25℃)

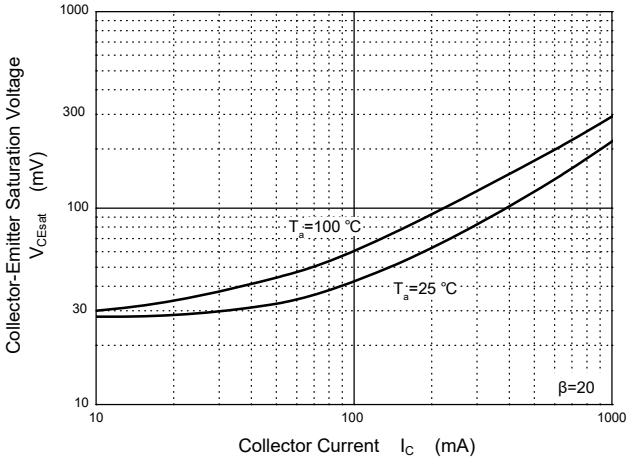
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 2 V, I_C = 500 mA Current Gain Group O Y at V_{CE} = 2 V, I_C = 2 A	H_{FE}	70 120 20	-- -- --	140 240 --	--
Collector Base Cutoff Current at V_{CB} = 50 V	I_{CBO}	--	--	100	nA
Emitter Base Cutoff Current at V_{EB} = 5 V	I_{EBO}	--	--	100	nA
Collector Base Breakdown Voltage at I_C = 100 μA	$V_{(BR)CBO}$	50	--	--	V
Collector Emitter Breakdown Voltage at I_C = 1 mA	$V_{(BR)CEO}$	50	--	--	V
Emitter Base Breakdown Voltage at I_E = 100 μA	$V_{(BR)EBO}$	5	--	--	V
Collector Emitter Saturation Voltage at I_C = 1 A, I_B = 50 mA	$V_{CE(sat)}$	--	--	0.5	V
Base Emitter Saturation Voltage at I_C = 1 A, I_B = 50 mA	$V_{BE(sat)}$	--	--	1.2	V
Transition Frequency at V_{CE} = 2 V, I_C = 500 mA	F_T	--	120	--	MHz
Output Capacitance at V_{CB} =10 V,I_E = 0, f = 1MHz	C_{ob}	--	30	--	pF

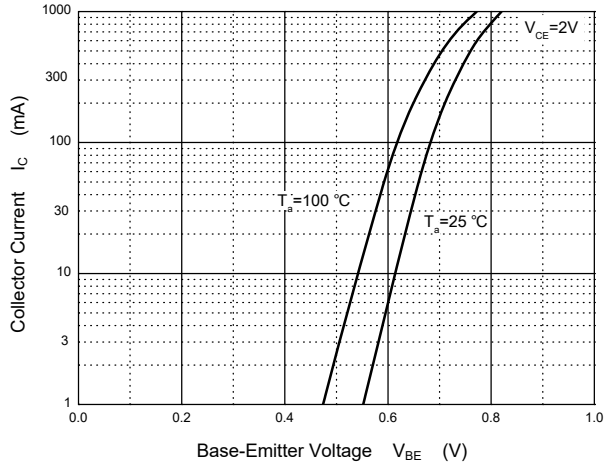
Typical Characteristic Curves

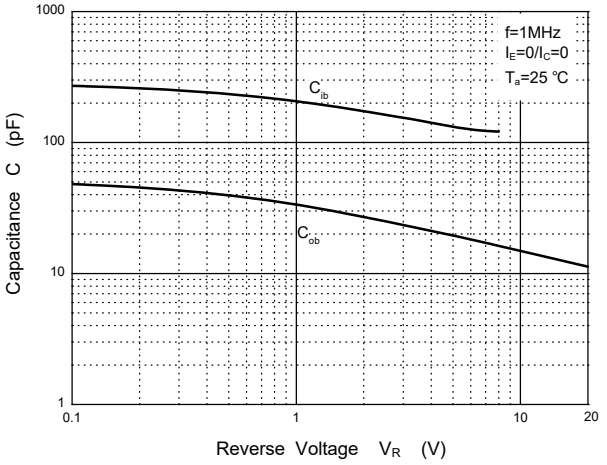






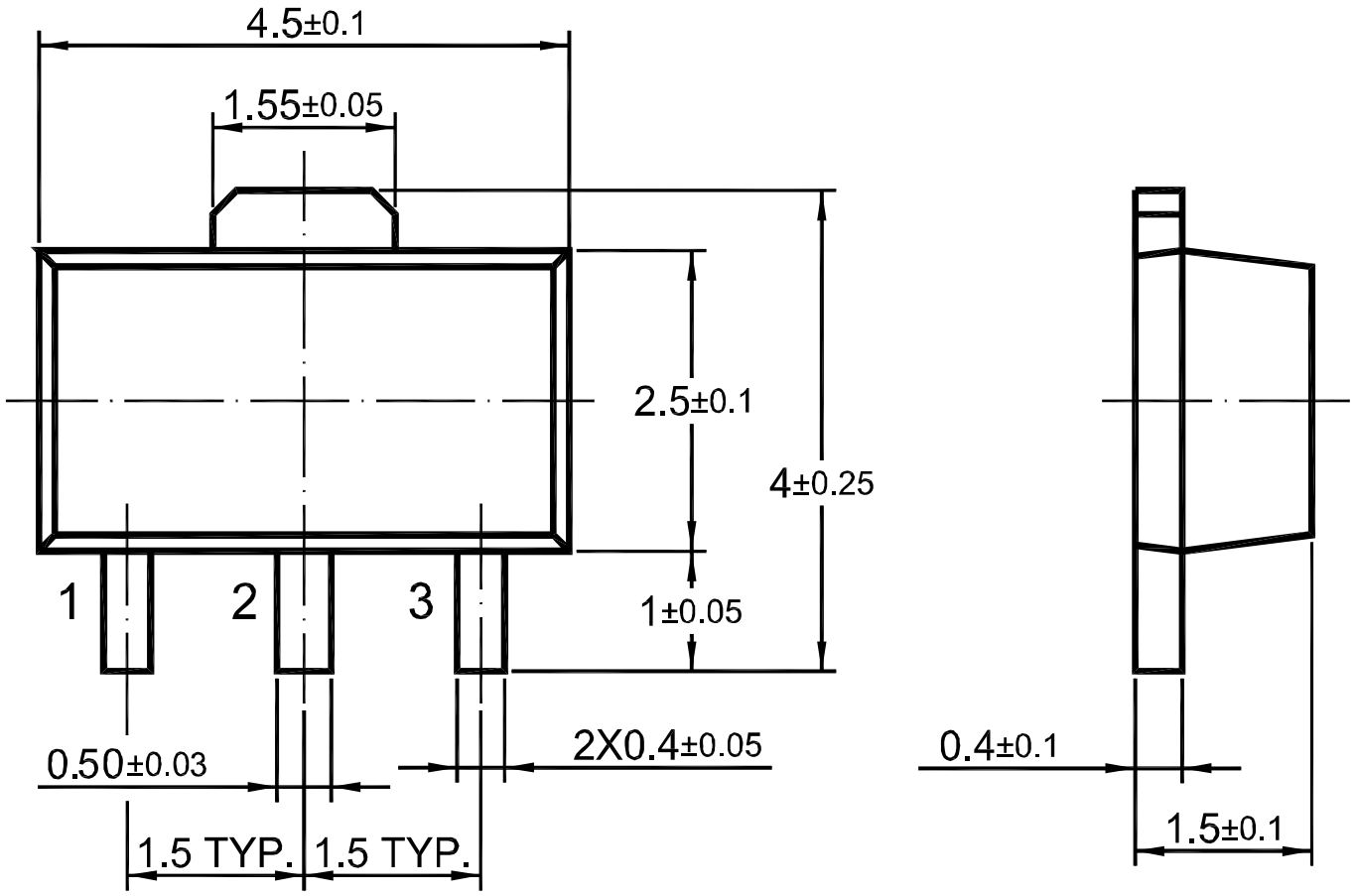






Package Outline

SOT-89
Dimensions in mm

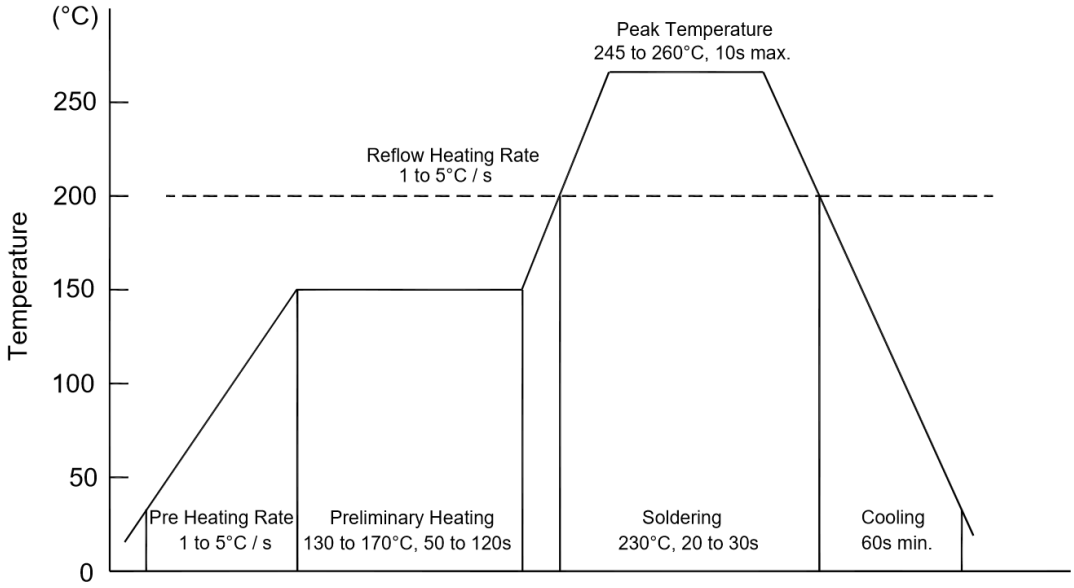


Ordering Information

Device	Package	Shipping
2SC2873SQ	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 ^{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

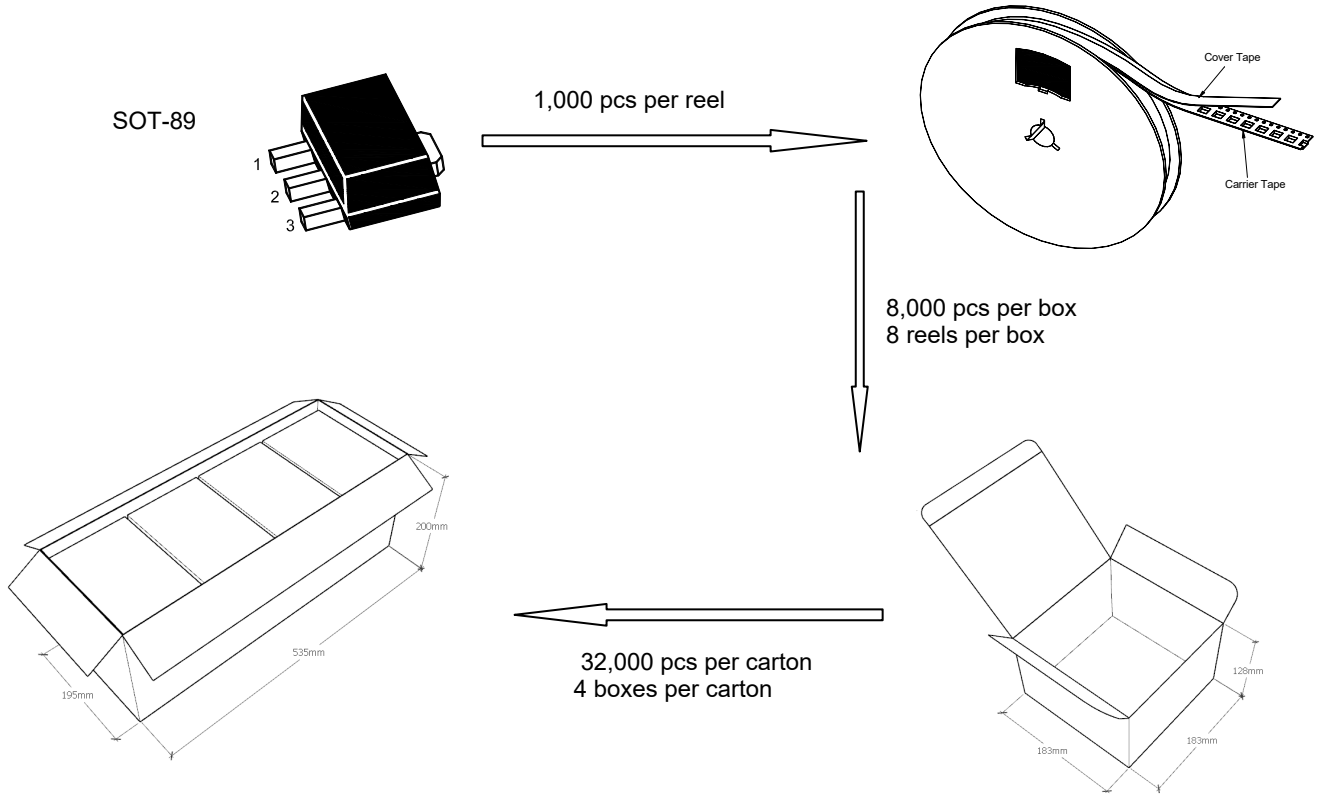
- Temperature: 370 ^{O}C
- Time: 3s max.
- Times: one time

◆ Storage conditions

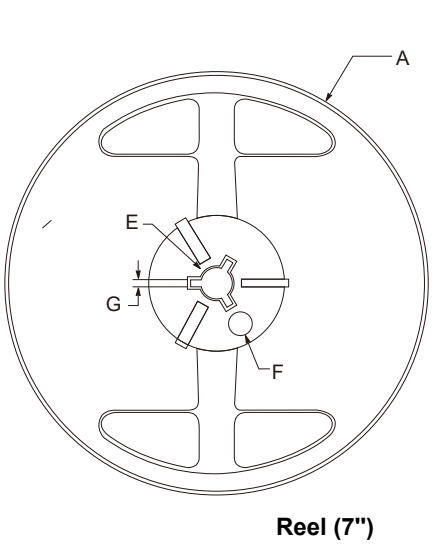
- **Temperature**
  5 to 40 ^{O}C
- **Humidity**
  30 to 80% RH
- **Recommended period**
  One year after manufacturing

Package Specifications

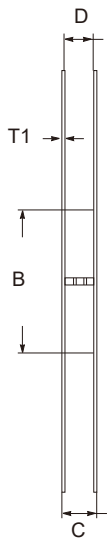
- The method of packaging (1,000PCS/Reel&7inches)



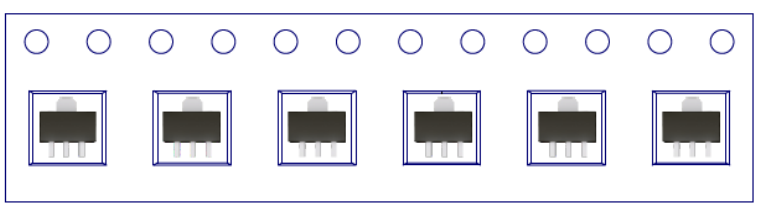
◆ **Embossed tape and reel data**



Reel (7")

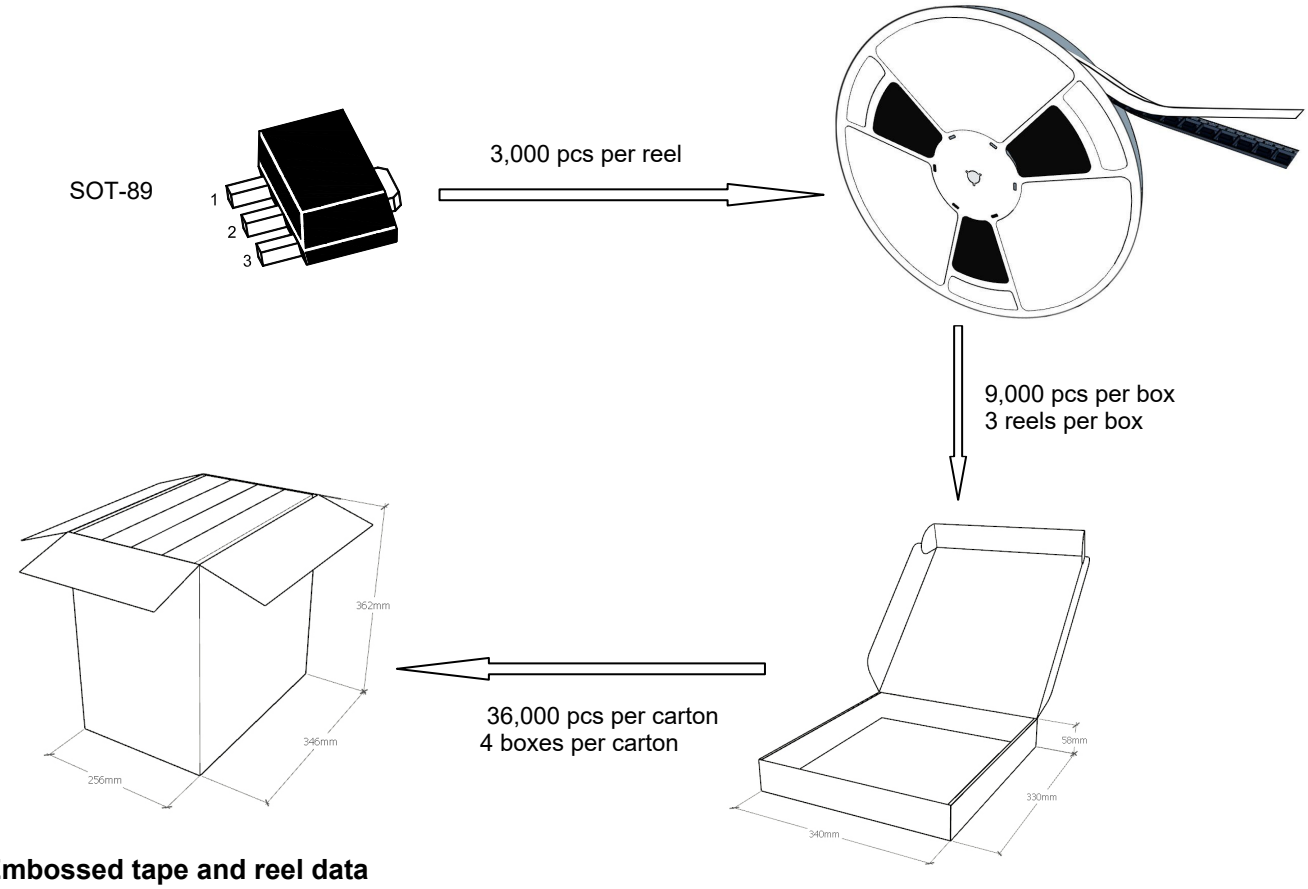


symbol	Value(unit:mm)
A	Φ179±1
B	60.5±0.2
C	15.3±0.3
D	12.5~13.7
E	Φ13.5±0.2
F	Φ10.0±0.2
G	2.7±0.2
T1	1.0±0.2

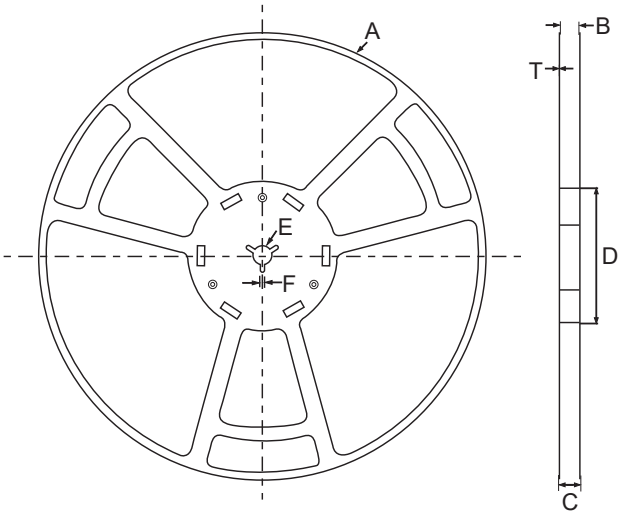


Package Specifications

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



◆ **Embossed tape and reel data**



Reel (13")

symbol	Value(unit:mm)
A	Φ330±1
B	12.7±0.5
C	16.5±0.3
D	Φ99.5±0.5
E	Φ13.6±0.3
F	2.8±0.3
T1	1.9±0.2