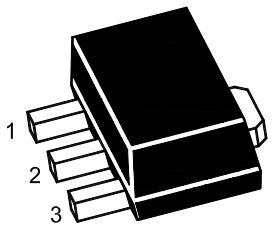
MPSA92SQ
PNP Transistor

Features

- Ideal for switching and amplifier applications
- Ideally suited for automated assembly processes

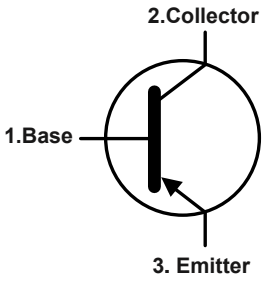
SOT-89



1.Base 2.Collector 3. Emitter

Marking Code : MPSA92

Equivalent Circuit



Absolute Maximum Ratings

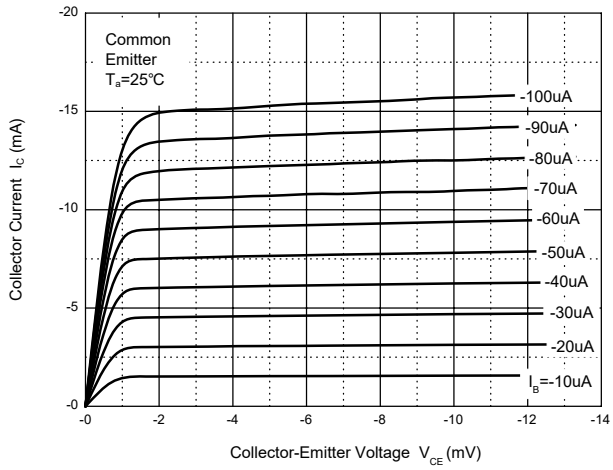
Ratings at 25℃ ambient temperature unless otherwise specified.

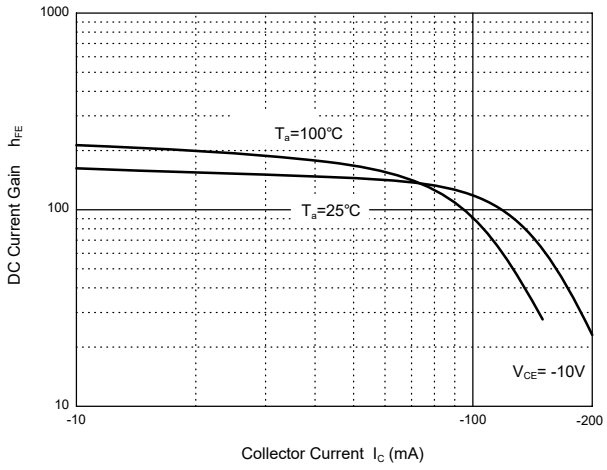
Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	300	V
Collector Emitter Voltage	$-V_{CEO}$	300	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	500	mA
Maximum Power Dissipation	P_D	500	mW
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{STG}	-55 to +150	℃

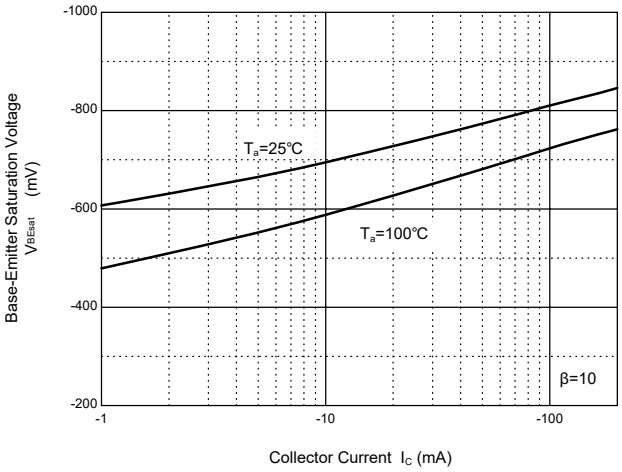
Electrical Characteristics (T_A=25℃)

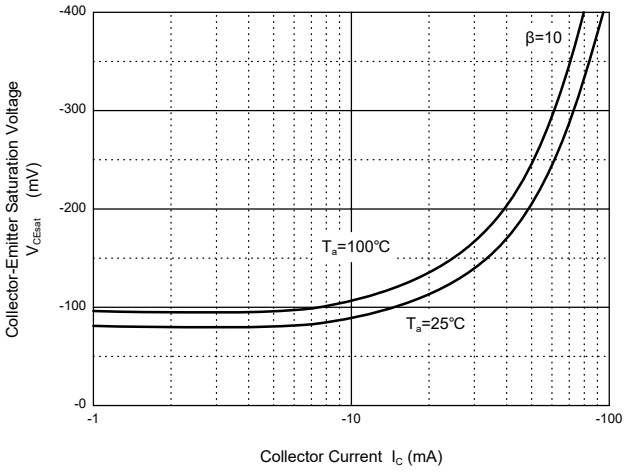
Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at V_{CE} = -10 V, I_C = -1 mA at V_{CE} = -10 V, I_C = -10 mA at V_{CE} = -10 V, I_C = -30 mA	H_{FE}	 25 40 25	 -- -- --	--
Collector Base Cutoff Current at V_{CB} = -200V	$-I_{CBO}$	--	0.25	μA
Emitter Base Cutoff Current at V_{EB} = -3 V	$-I_{EBO}$	--	0.1	μA
Collector Base Breakdown Voltage at I_C = -100 μA	$-V_{(BR)CBO}$	300	--	V
Collector Emitter Breakdown Voltage at I_C = -1 mA	$-V_{(BR)CEO}$	300	--	V
Emitter Base Breakdown Voltage at I_E = -100 μA	$-V_{(BR)EBO}$	5	--	V
Collector Emitter Saturation Voltage at I_C = -20 mA, I_B = -2 mA	$-V_{CE(sat)}$	--	0.5	V
Base Emitter Saturation Voltage at I_C = -20 mA, I_B = -2 mA	$-V_{BE(sat)}$	--	0.9	V
Transition Frequency at V_{CE} = -20 V, I_C = -10 mA, f = 100 MHz	F_T	50	--	MHz
Output Capacitance at V_{CB} = -20 V, f = 1 MHz	C_{ob}	--	6	pF

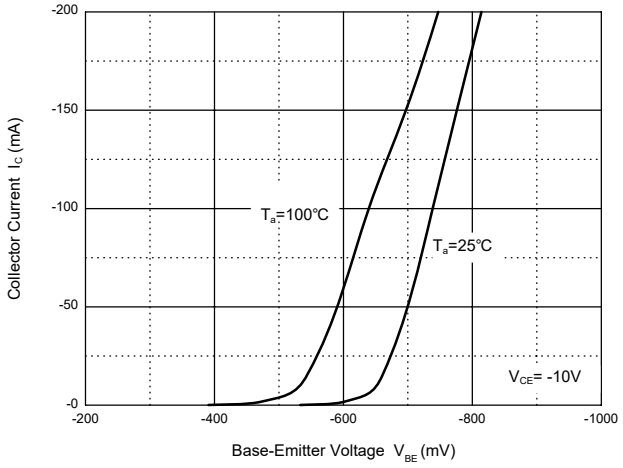
Typical Characteristic Curves

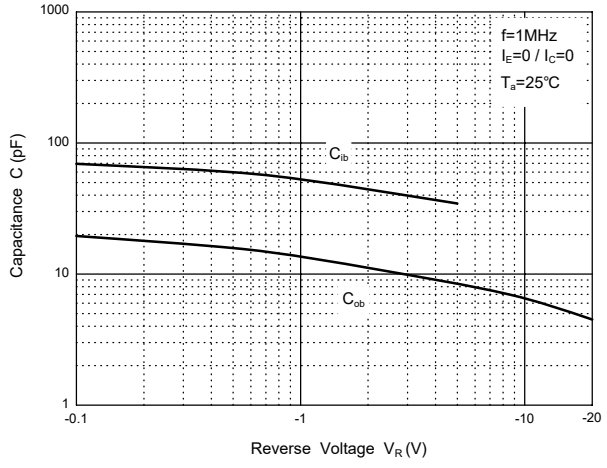






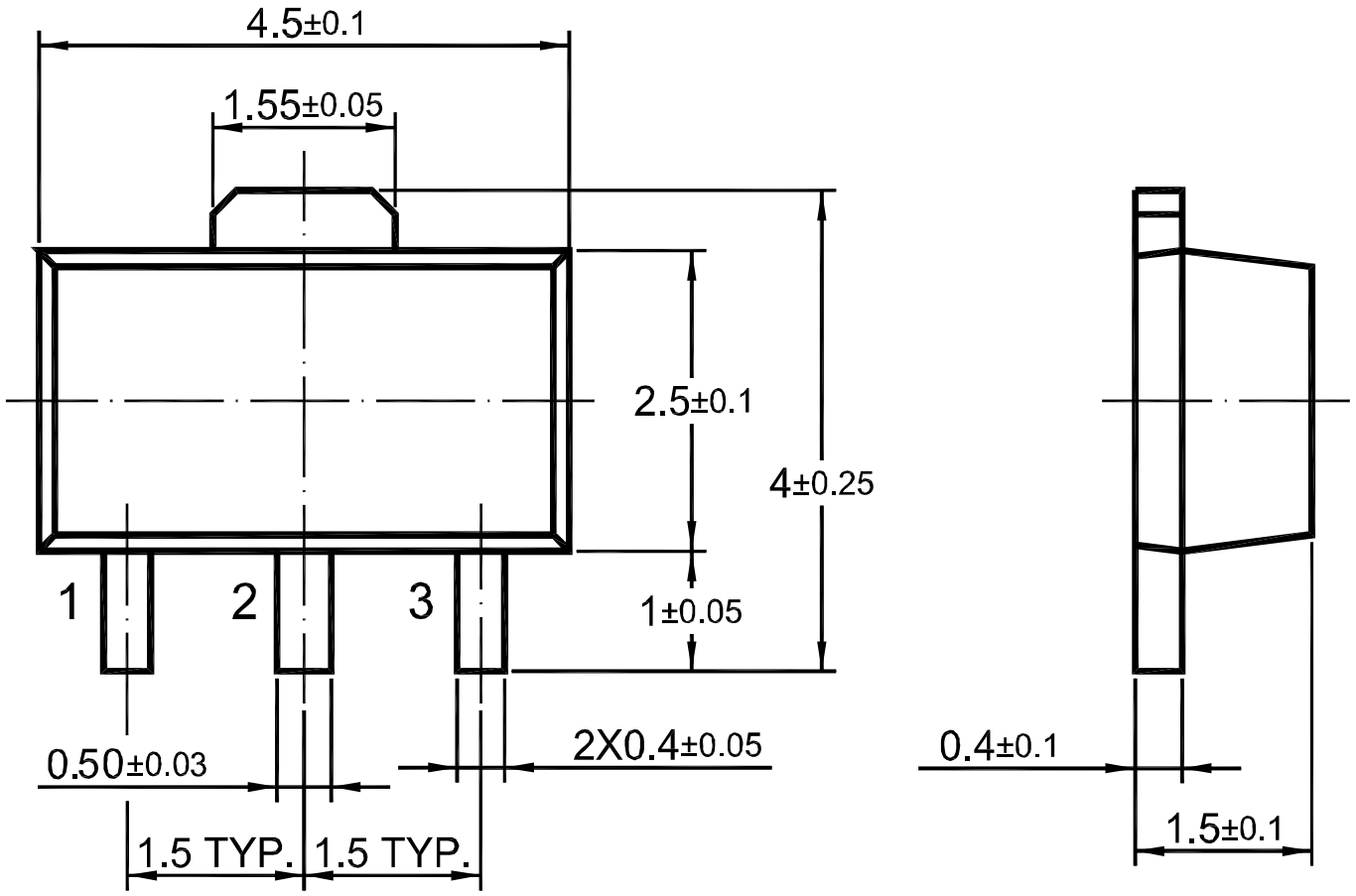






Package Outline

SOT-89
Dimensions in mm

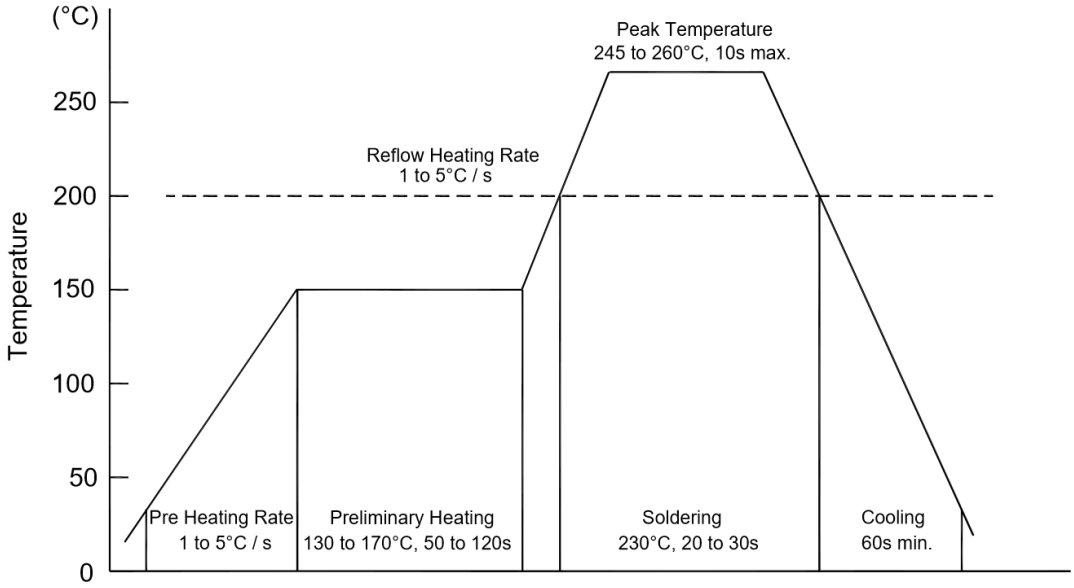


Ordering Information

Device	Package	Shipping
MPSA92SQ	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

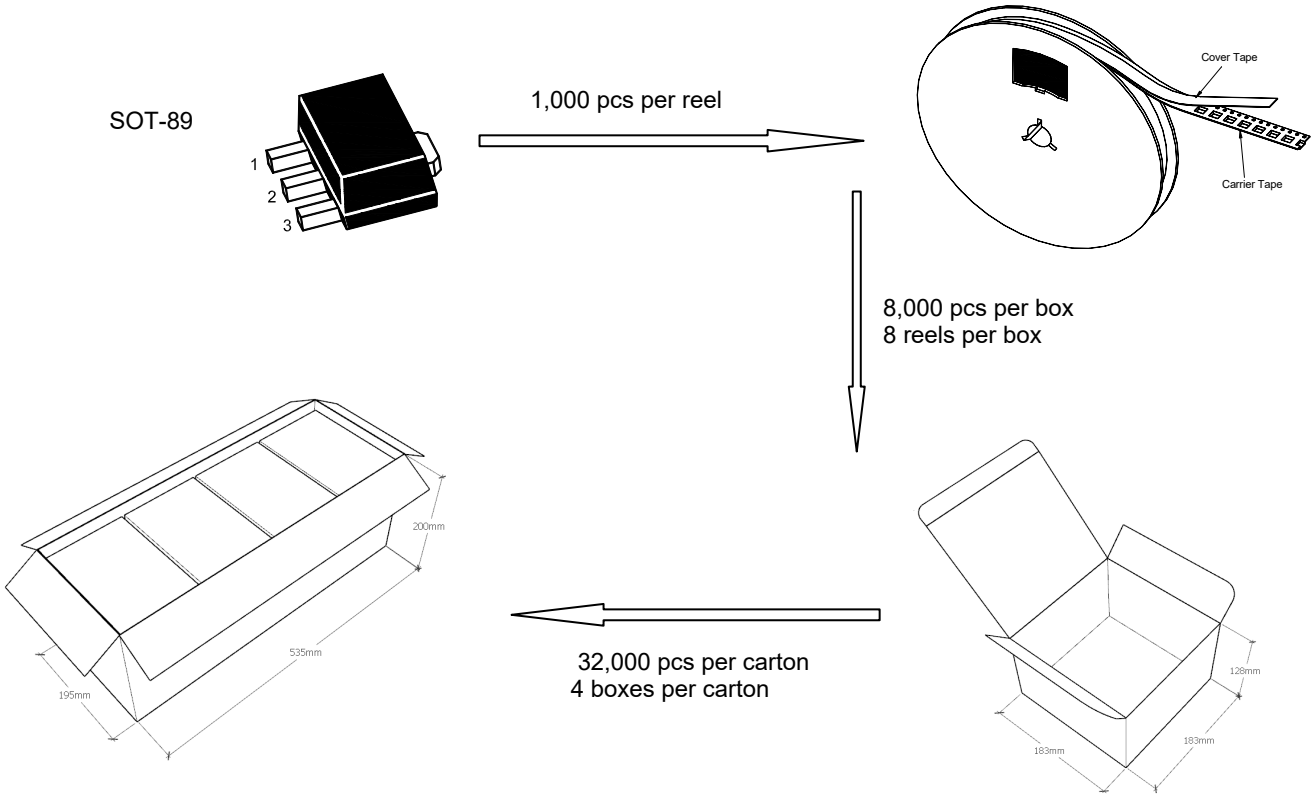
- Temperature: 370 ^{O}C
- Time: 3s max.
- Times: one time

◆ Storage conditions

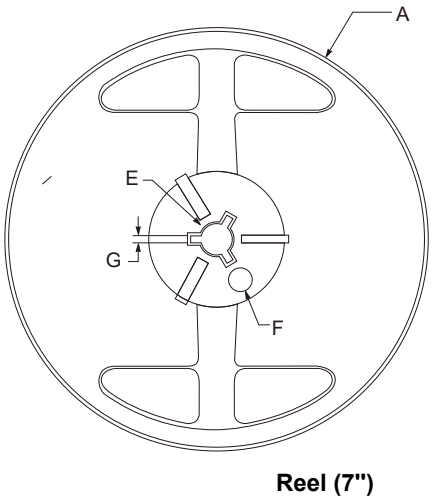
- **Temperature**
  5 to 40 ^{O}C
- **Humidity**
  30 to 80% RH
- **Recommended period**
  One year after manufacturing

Package Specifications

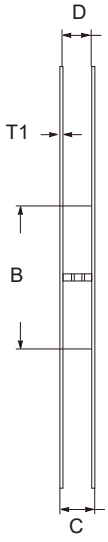
- The method of packaging (1,000PCS/Reel&7inches)



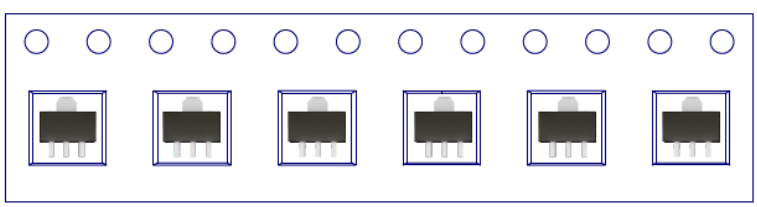
◆ **Embossed tape and reel data**



Reel (7")

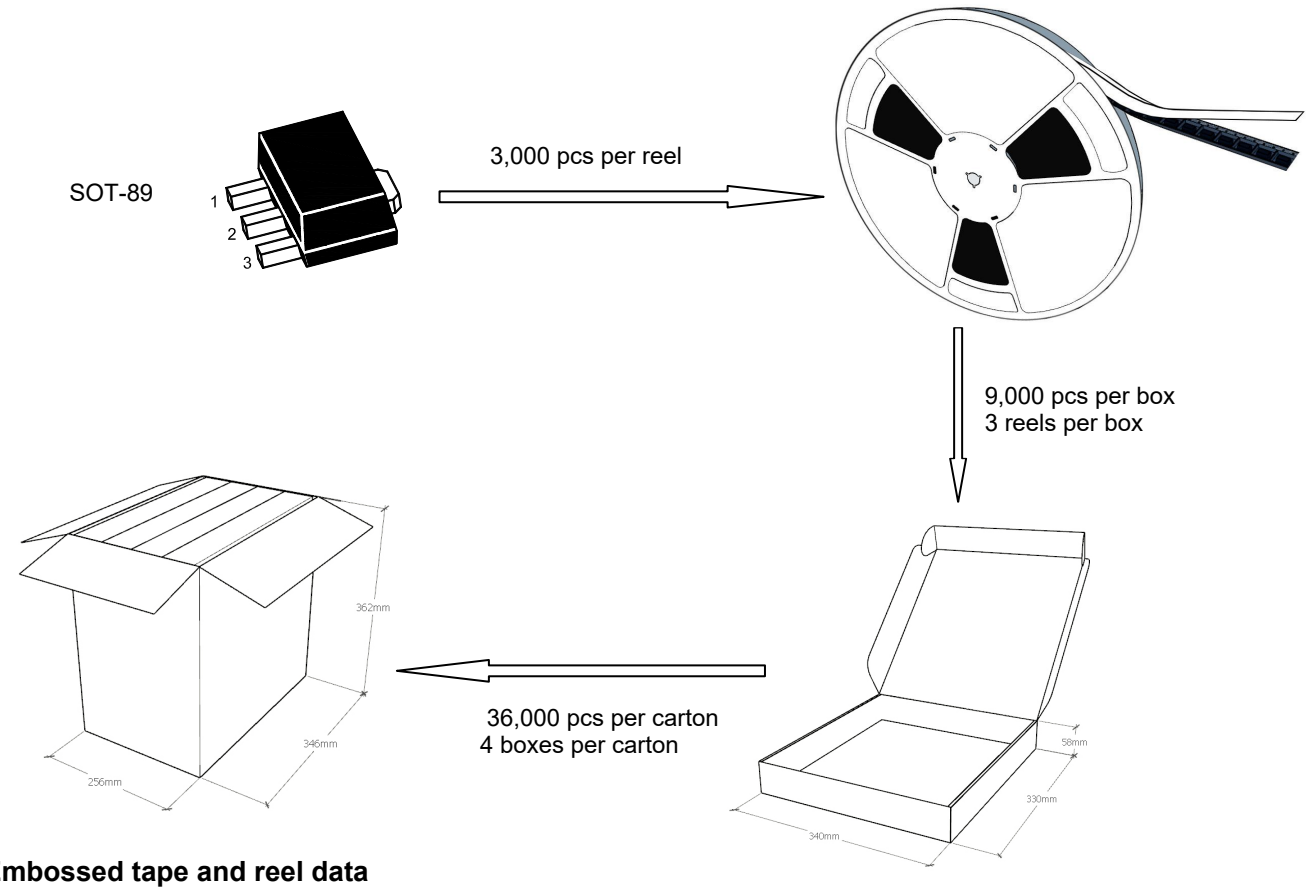


symbol	Value(unit:mm)
A	Φ179±1
B	60.5±0.2
C	15.3±0.3
D	12.5~13.7
E	Φ13.5±0.2
F	Φ10.0±0.2
G	2.7±0.2
T1	1.0±0.2



Package Specifications

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



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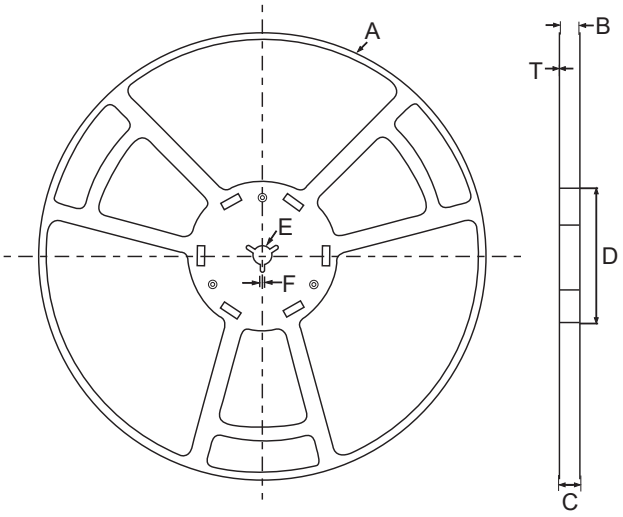

Reel (13")

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