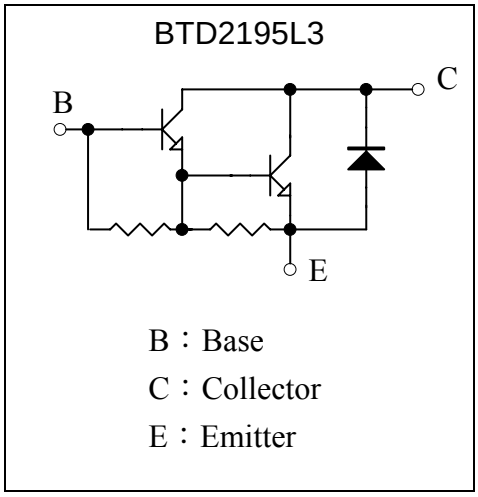
NPN Epitaxial Planar Transistor

BTD2195L3

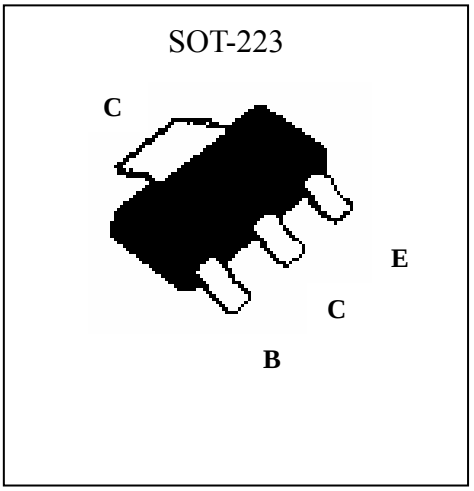
Description

The BTD2195L3 is a NPN Darlington transistor, designed for use in general purpose amplifier and low speed switching application. Pb-free package process is adopted.

Equivalent Circuit



Outline



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	130	V
Collector-Emitter Voltage	V_{CEO}	120	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	4	A
Collector Current (Pulse)	I_{CP}	6 (Note)	A
Power Dissipation @ T_C=25℃	Pd	5	W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	25	°C/W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C

Note : Single Pulse Pw≦350μs, Duty≦2%.

Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CEO}	120	-	-	V	I_C=1mA, I_B=0
BV_{CBO}	140	-	-	V	I_C=100μA, I_E=0
I_{CBO}	-	-	100	μA	V_{CB}=100V, I_E=0
I_{CEO}	-	-	100	μA	V_{CE}=100V, I_E=0
I_{EBO}	-	-	2	mA	V_{EB}=5V, I_C=0
*$V_{CE(sat)}$	-	-	2.5	V	I_C=2A, I_B=2mA
*$V_{BE(on)}$			2.3	V	V_{CE}=4V, I_C=2A
*$h_{FE}1$	1000	-	-	-	V_{CE}=4V, I_C=1A
*$h_{FE}2$	500	-	-	-	V_{CE}=4V, I_C=2A
Cob	-		200	pF	V_{CB}=10V, I_E=0A, f=1MHz

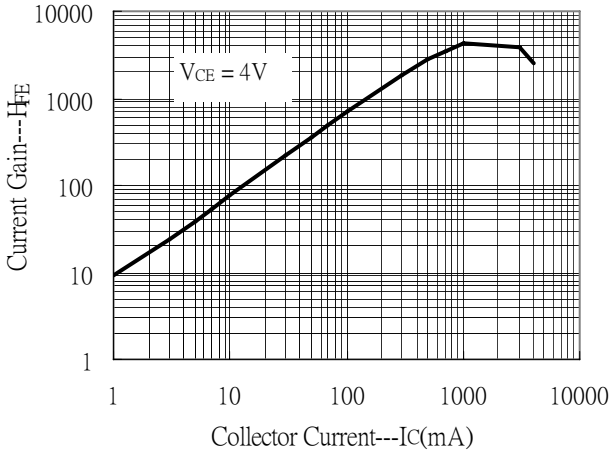
*Pulse Test : Pulse Width ≤380μs, Duty Cycle≤2%

Ordering Information

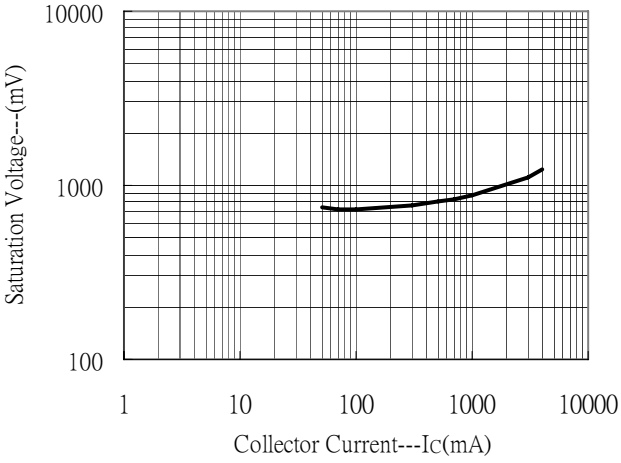
Device	Package	Shipping	Marking
BTD2195L3	SOT-223 (Pb-free)	2500 pcs / Tape & Reel	DP

Characteristic Curves

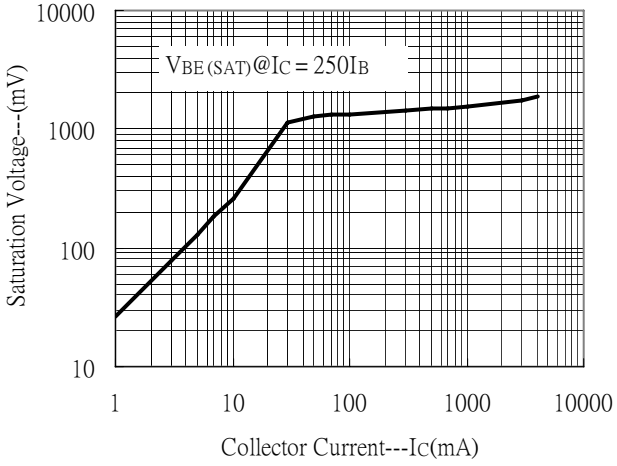
Current Gain vs Collector Current



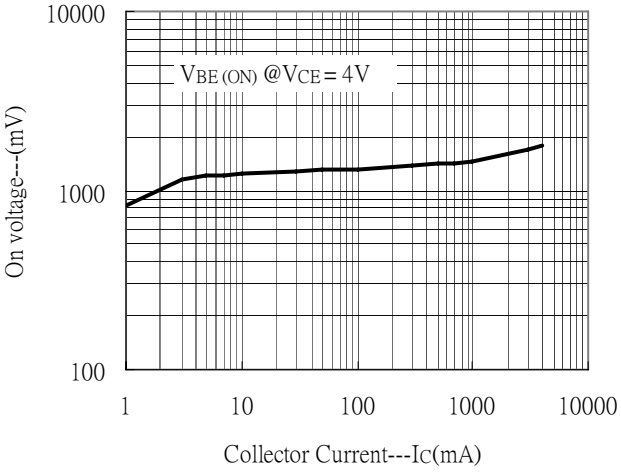
Saturation Voltage vs Collector Current



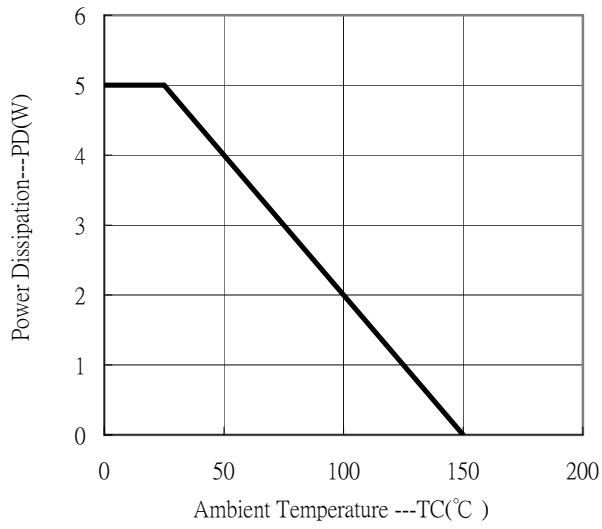
Saturation Voltage vs Collector Current



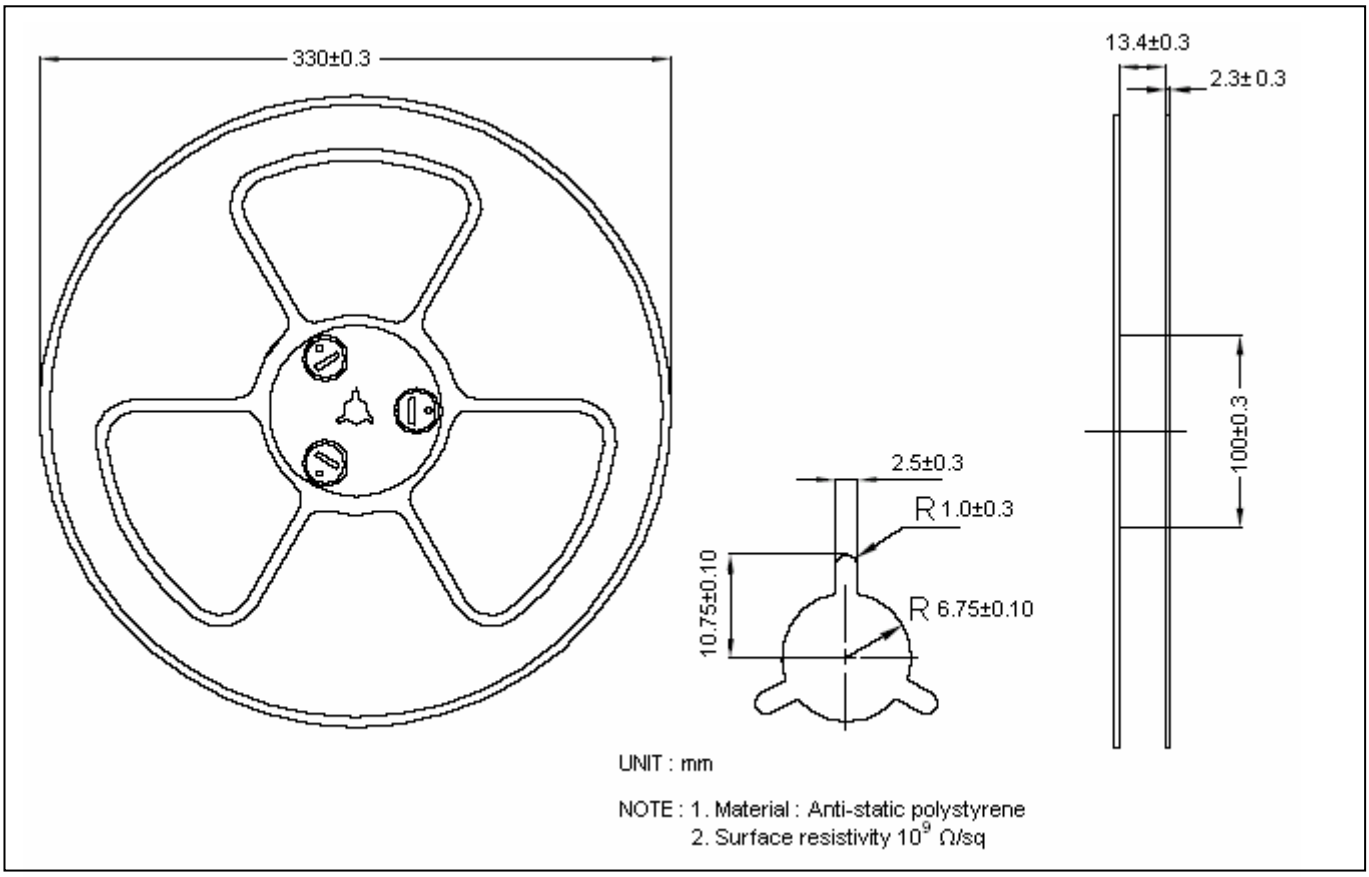
On voltage vs Collector Current



Power Derating Curve



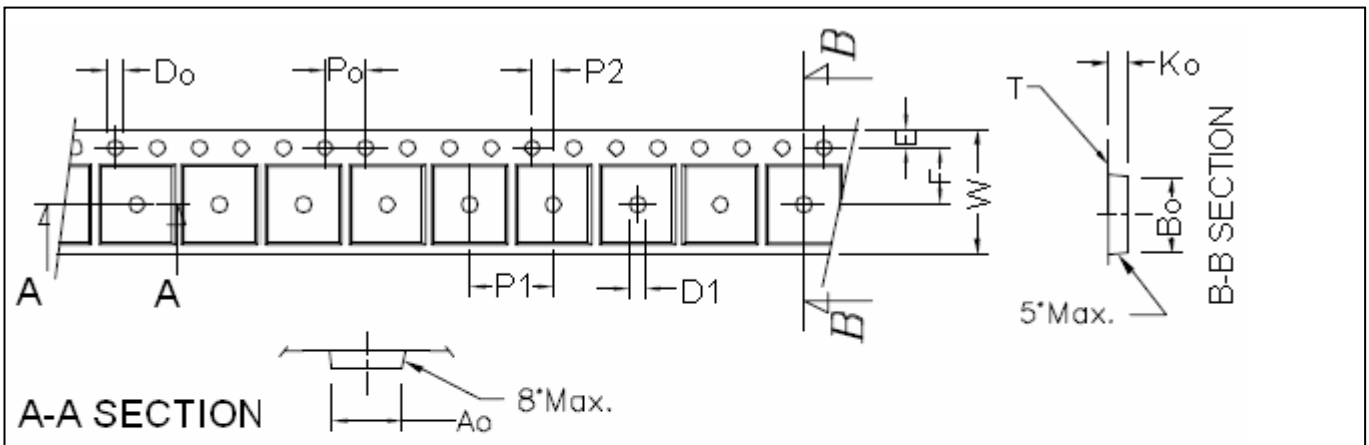
Reel Dimension



UNIT : mm

NOTE : 1. Material : Anti-static polystyrene
2. Surface resistivity 10^9 Ω/sq

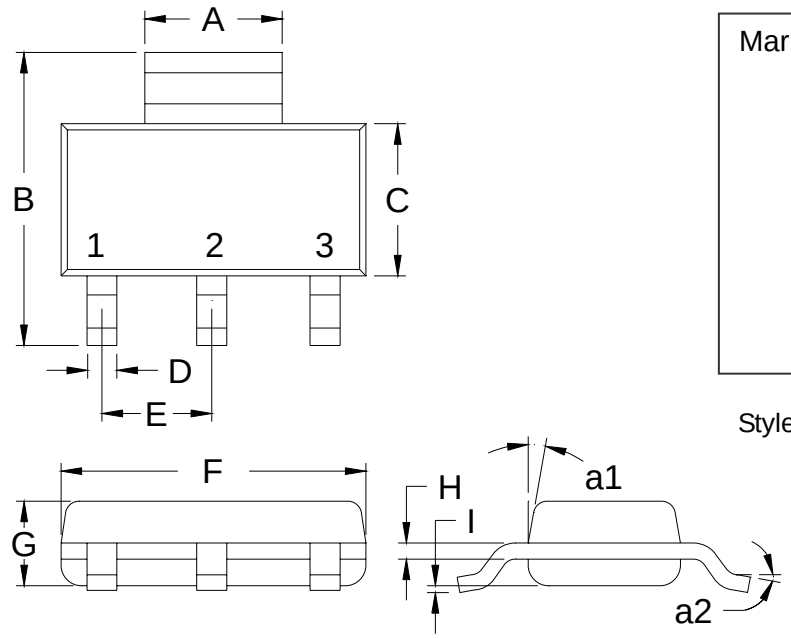
Carrier Tape Dimension



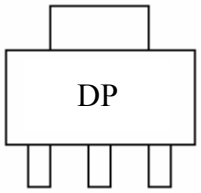
Symbol	Ao	Bo	Ko	Po	P1	P2	T
Spec	6.83±0.1	7.42±0.1	1.88±0.1	4.0±0.1	8.0±0.10	2.0±0.05	0.292±0.02
Symbol	E	F	Do	D1	W	10Po	
Spec	1.75±0.1	5.5±0.05	1.60±0.1	1.5±0.25	$12^{+0.3}_{-0.1}$	40.0±0.2	

Unit : mm

SOT-223 Dimension



Marking:



Style: Pin 1.Base 2.Collector 3.Emitter

3-Lead SOT-223 Plastic
Surface Mounted Package
CYStek Package Code: L3

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1142	0.1220	2.90	3.10	G	0.0551	0.0709	1.40	1.80
B	0.2638	0.2874	6.70	7.30	H	0.0098	0.0138	0.25	0.35
C	0.1299	0.1457	3.30	3.70	I	0.0008	0.0039	0.02	0.10
D	0.0236	0.0315	0.60	0.80	a1	*13°	-	*13°	-
E	*0.0906	-	*2.30	-	a2	0°	10°	0°	10°
F	0.2480	0.2638	6.30	6.70					

Notes: 1.Controlling dimension: millimeters.
2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material:

- Lead: 42 Alloy; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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