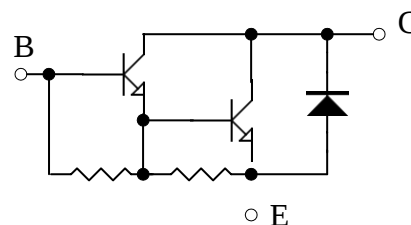
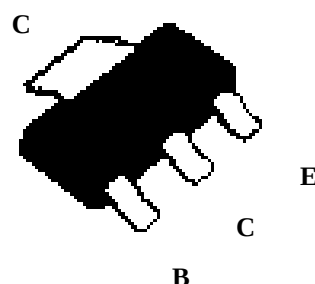


NPN Epitaxial Planar Transistor

Description :

The KLDTD2195 is a NPN Darlington transistor, designed for use in general purpose amplifier and low speed switching application. Pb-free package process is adopted.

SOT-223



B : Base
 C : Collector
 E : Emitter

Ordering Information

Device	Package	Shipping
KLDTD2195	SOT-223 (Pb-free lead plating package)	2500 pcs / tape & reel

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°C	P _d	5	W
Thermal Resistance, Junction to Case	R _{θJC}	25	°C/W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55~+150	°C

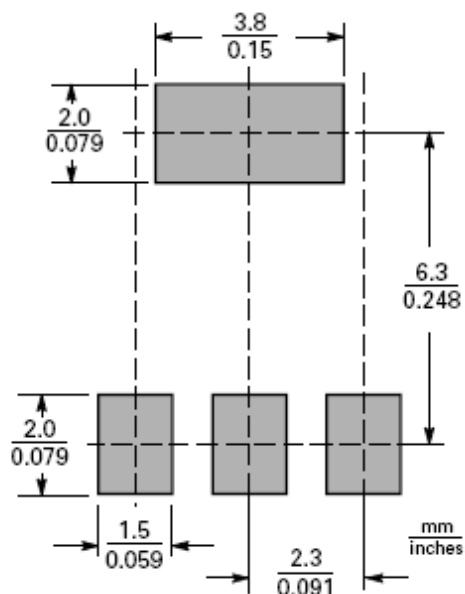
Note : Single Pulse P_w ≤ 350μs, Duty ≤ 2%.

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 _{FE1}	1000	-	-	-	V _{CE} =4V, I _C =1A
*h _{FE2}	500	-	-	-	V _{CE} =4V, I _C =2A
C _{ob}	-	-	200	pF	V _{CB} =10V, I _E =0A, f=1MHz

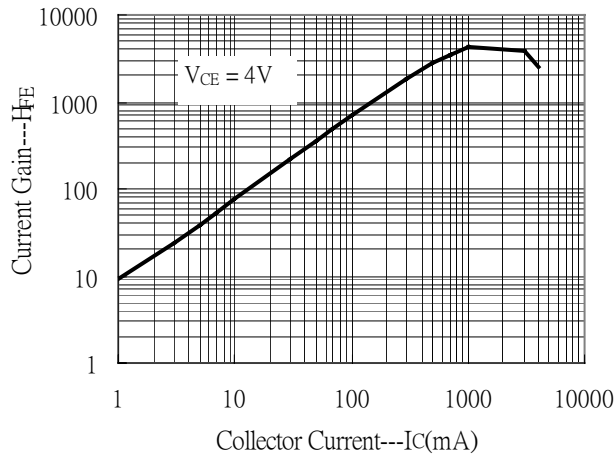
*Pulse Test : Pulse Width ≤ 380μs, Duty Cycle ≤ 2%

Recommended soldering footprint

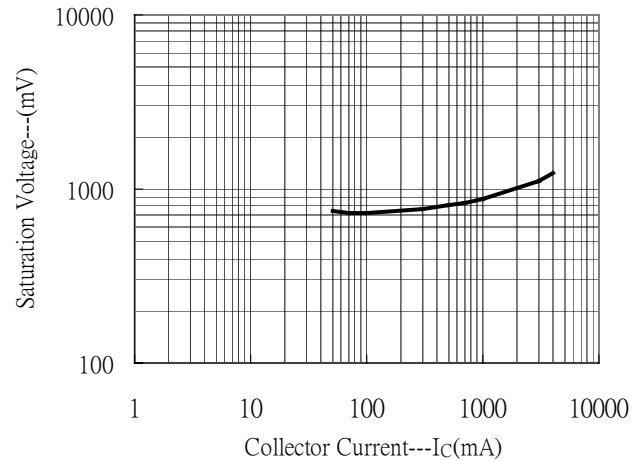


Characteristic Curves

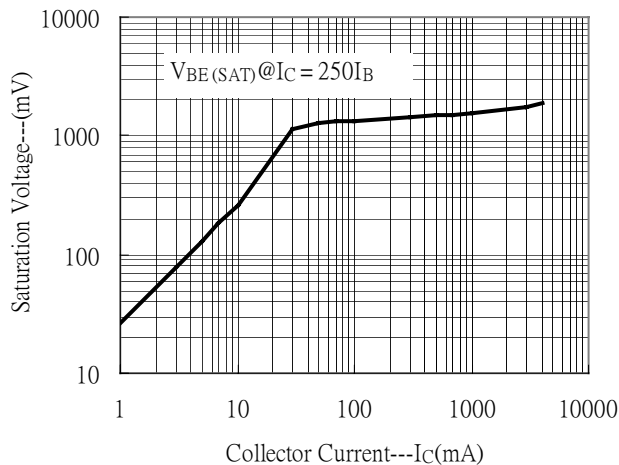
Current Gain vs Collector Current



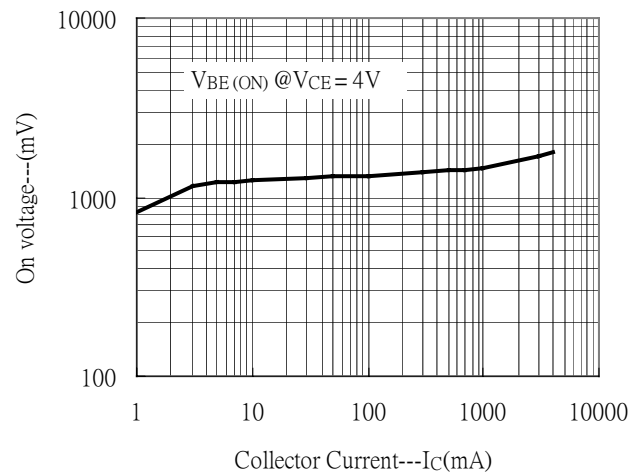
Saturation Voltage vs Collector Current



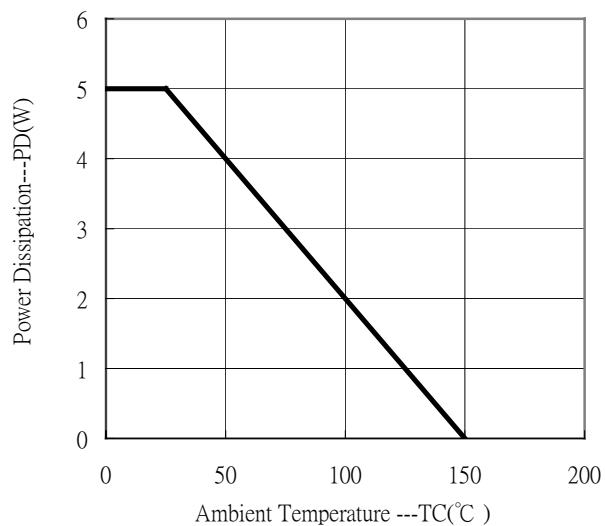
Saturation Voltage vs Collector Current



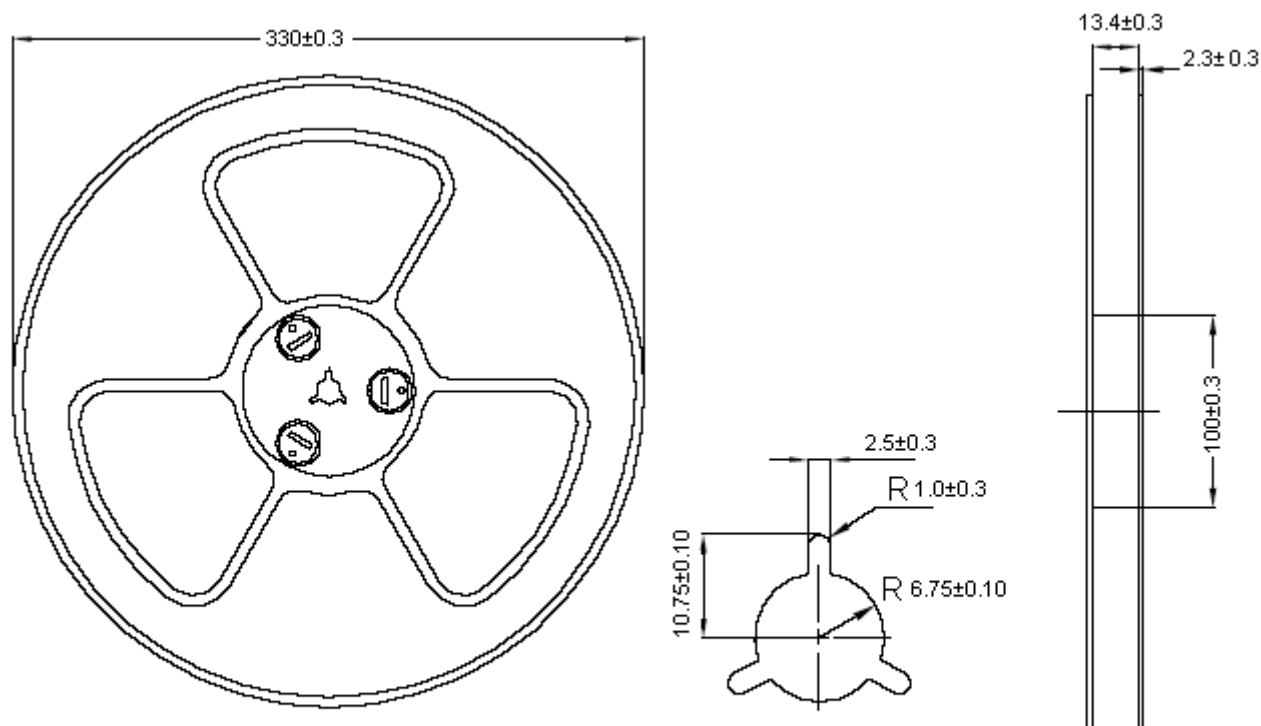
On voltage vs Collector Current



Power Derating Curve



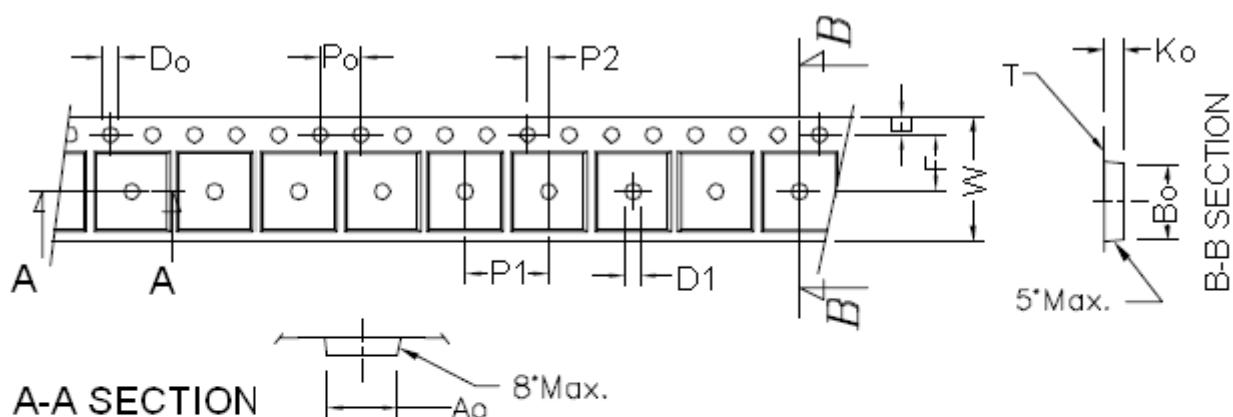
Reel Dimension



UNIT : mm

NOTE : 1. Material : Anti-static polystyrene
 2. Surface resistivity $10^9 \Omega/\text{sq}$

Carrier Tape Dimension

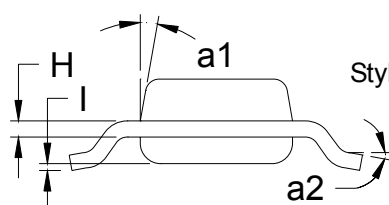
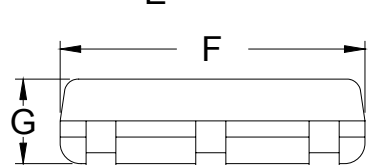
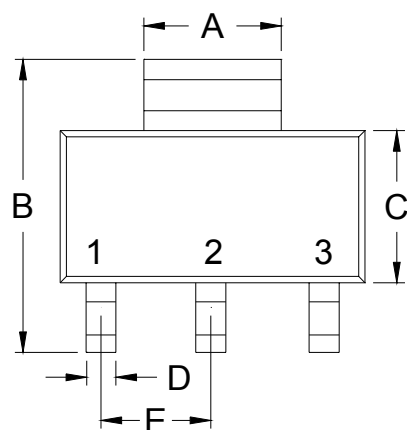


A-A SECTION

Symbol	A_0	B_0	K_0	P_0	P_1	P_2	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	D_0	D_1	W	$10P_0$	
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

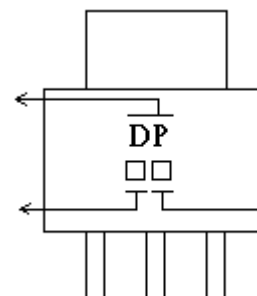


Marking:

Device Code

Year Code:

5→2005, 6→2006,
7→2007,...,etc



Month Code:

1→Jan, 2→Feb, 3→Mar,
4→Apr, 5→May, 6→Jun,
7→Jul, 8→Aug, 9→Sep,
A→Oct, B→Nov, C→Dec

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

3-Lead SOT-223 Plastic
Surface Mounted Package

*: 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 ⁰	-	*13 ⁰	-
E	*0.0906	-	*2.30	-	a2	0 ⁰	10 ⁰	0 ⁰	10 ⁰
F	0.2480	0.2638	6.30	6.70					