PNP Epitaxial Planar Transistor

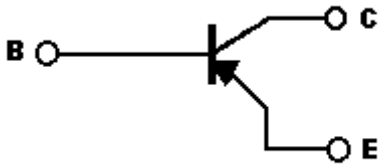
BTB1198N3

Features

- Low $V_{CE(SAT)}$, $V_{CE(SAT)}$= -0.16V (Typ.) @ I_C/I_B=-500mA/-50mA
- High breakdown voltage, BV_{CEO}=-80V
- Complementary to BTD1782N3
- Pb-free package

Symbol

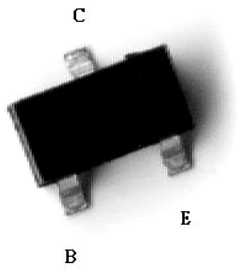
BTB1198N3



B：Base
C：Collector
E：Emitter

Outline

SOT-23



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	-80	V
Collector-Emitter Voltage	V_{CEO}	-80	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-0.5	A
Power Dissipation (T_A=25°C)	P_D	225 (Note)	mW
Power Dissipation (T_C=25°C)	P_D	560	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556 (Note)	°C/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	223	°C/W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C

Note : Free air condition

Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	-80	-	-	V	I_C=-50μA
BV_{CEO}	-80	-	-	V	I_C=-2mA
BV_{EBO}	-5	-	-	V	I_E=-50μA
I_{CBO}	-	-	-0.5	μA	V_{CB}=-50V
I_{EBO}	-	-	-0.5	μA	V_{EB}=-4V
*$V_{CE(sat)}$	-	-0.16	-0.5	V	I_C=-500mA, I_B=-50mA
*h_{FE}	120	-	390	-	V_{CE}=-3V, I_C=-0.1A
f_T	-	180	-	MHz	V_{CE}=-10V, I_C=-50mA, f=100MHz
Cob	-	11	-	pF	V_{CB}=-10V, f=1MHz

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

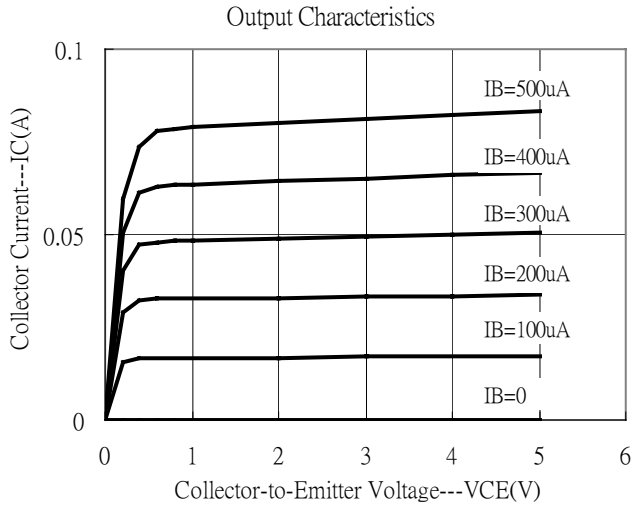
Classification Of h_{FE}

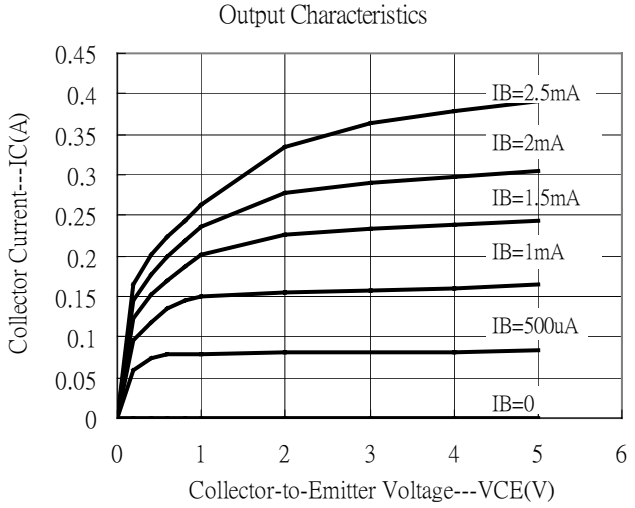
Rank	Q	R
Range	120~270	180~390

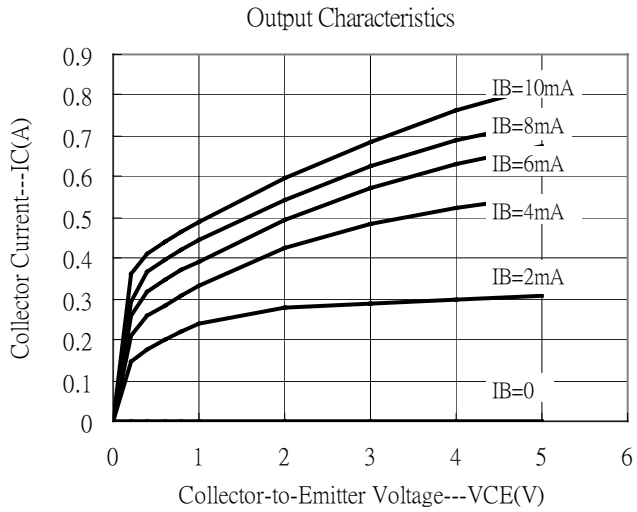
Ordering Information

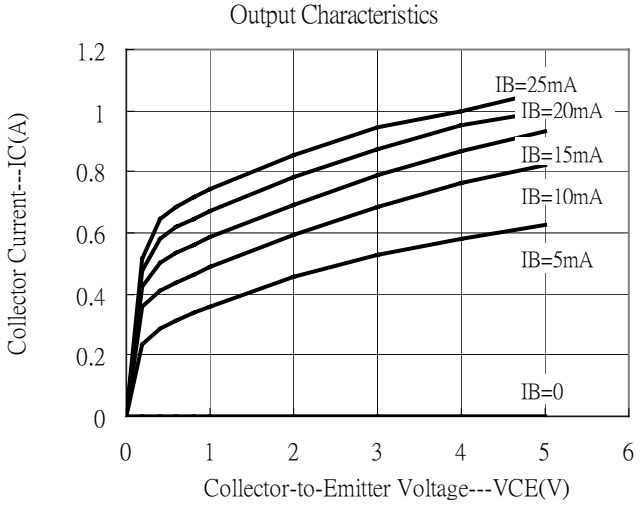
Device	Package	Shipping	Marking
BTB1198N3	SOT-23 (Pb-free)	3000 pcs / Tape & Reel	AK

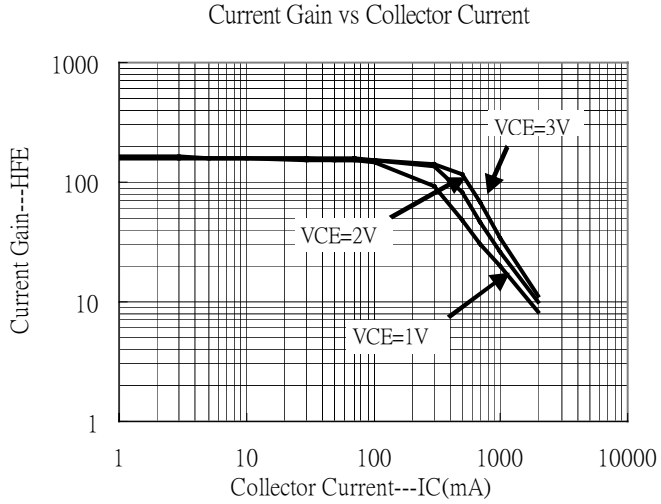
Characteristic Curves

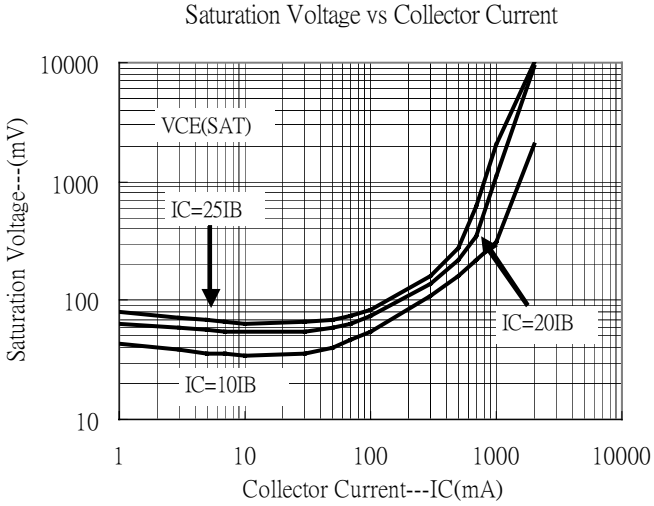




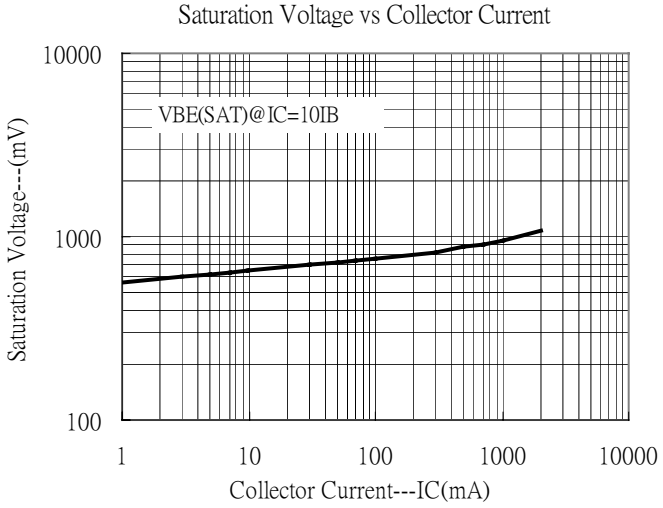


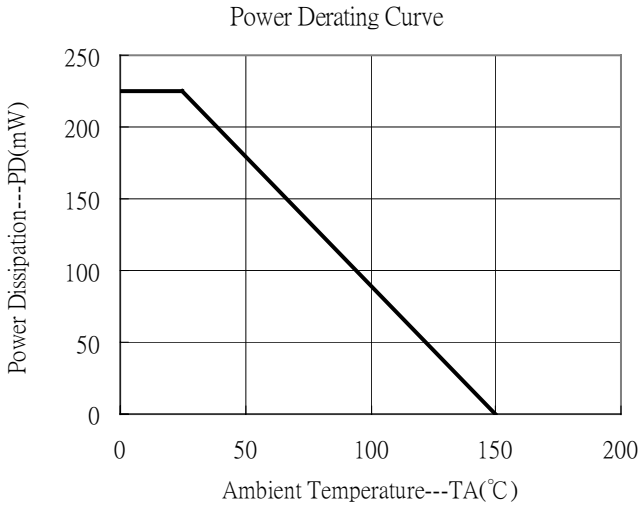




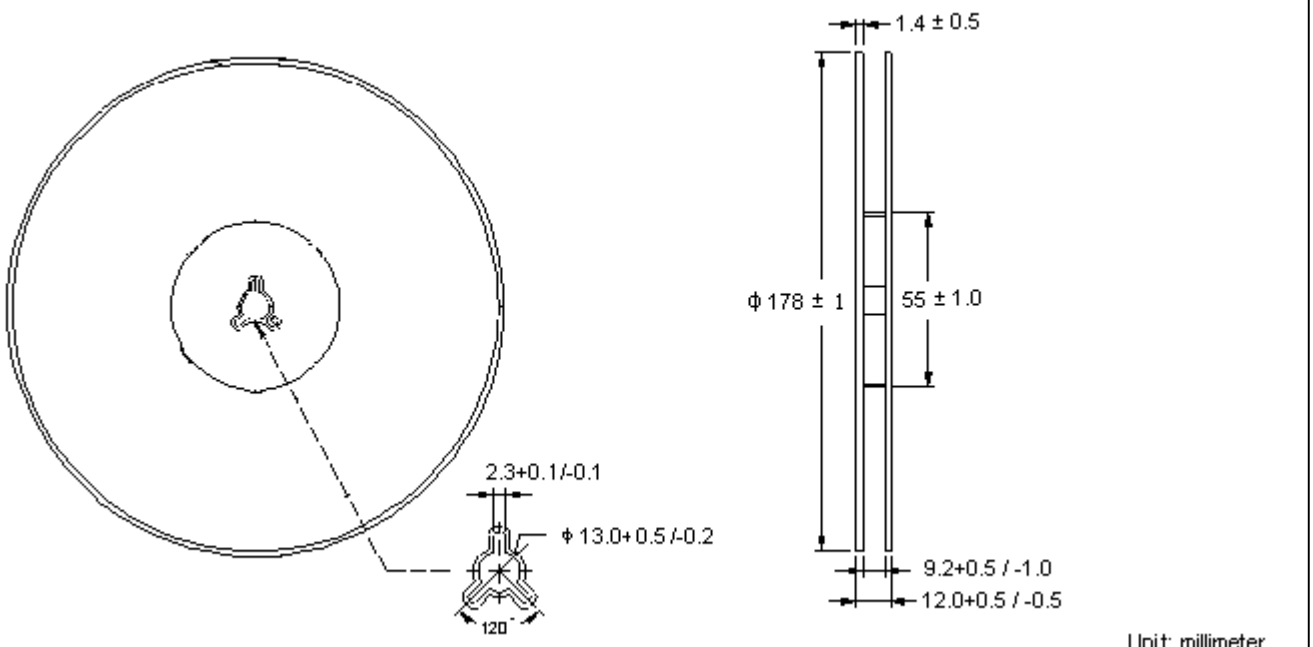


Characteristic Curves(Cont.)

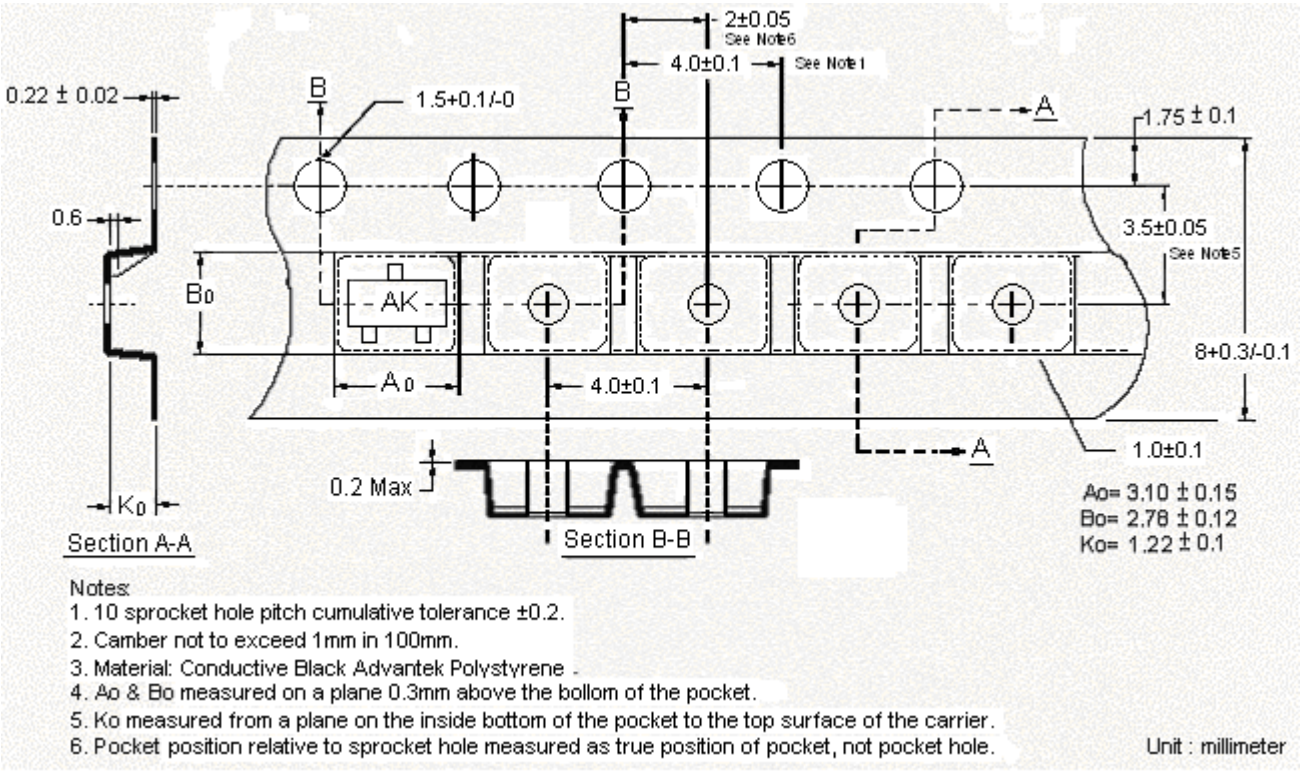




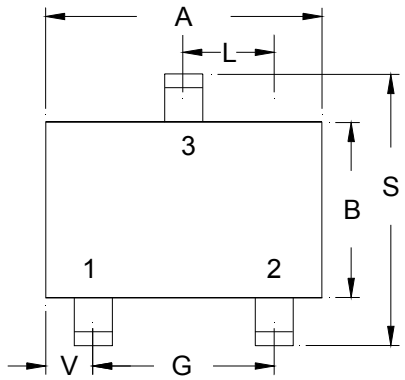
Reel Dimension

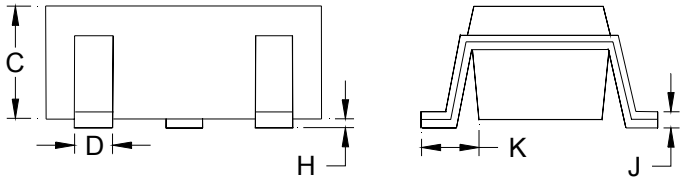


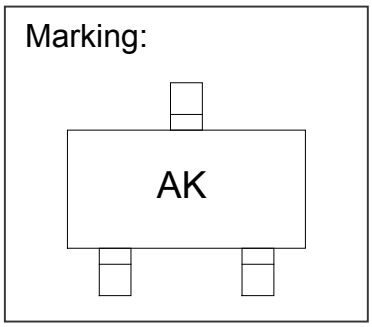
Carrier Tape Dimension



SOT-23 Dimension







3-Lead SOT-23 Plastic
Surface Mounted Package
CYStek Package Code: N3

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

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0034	0.0070	0.085	0.177
B	0.0472	0.0630	1.20	1.60	K	0.0128	0.0266	0.32	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1083	2.10	2.75
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0005	0.0040	0.013	0.10					

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