Low $V_{CE(sat)}$ PNP Epitaxial Planar Transistor

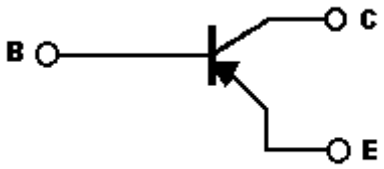
BTB772AM3

Features

- Low V_{CE}(sat), typically -0.3 V at I_C / I_B = -2A / -0.2A
- Excellent current gain characteristics
- Complementary to BTD882AM3

Symbol

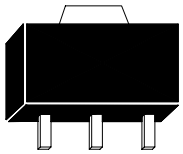
BTB772AM3



B：Base
C：Collector
E：Emitter

Outline

SOT-89



B C E

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current (DC)	I_C	-3	A
Collector Current (Pulse)	I_{CP}	-7 (Note 1)	A
Power Dissipation	Pd	600	mW
		1 (Note 2)	W
		2 (Note 3)	W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	208	°C/W
		125 (Note 2)	°C/W
		62.5 (Note 3)	°C/W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C

Note : 1. Single Pulse Pw≦350μs, Duty≦2%.
2. When mounted on a FR-4 PCB with area measuring 10×10×1 mm.
3. When Mounted on a ceramic board with area measuring 40×40×1mm.

Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	-50	-	-	V	I_C=-50μA, I_E=0
BV_{CEO}	-50	-	-	V	I_C=-1mA, I_B=0
BV_{EBO}	-6	-	-	V	I_E=-50μA, I_C=0
I_{CBO}	-	-	-1	μA	V_{CB}=-40V, I_E=0
I_{EBO}	-	-	-1	μA	V_{EB}=-5V, I_C=0
*$V_{CE(sat)}$	-	-0.3	-0.5	V	I_C=-2A, I_B=-0.2A
*$V_{BE(sat)}$	-	-1	-2	V	I_C=-2A, I_B=-0.2A
*$h_{FE}1$	52	-	-	-	V_{CE}=-2V, I_C=-20mA
*$h_{FE}2$	100	-	500	-	V_{CE}=-2V, I_C=-500mA
*$h_{FE}3$	100	-	-	-	V_{CE}=-2V, I_C=-1A
f_T	-	80	-	MHz	V_{CE}=-5V, I_C=-0.1A, f=100MHz
Cob	-	55	-	pF	V_{CB}=-10V, f=1MHz

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

Classification Of $h_{FE}2$

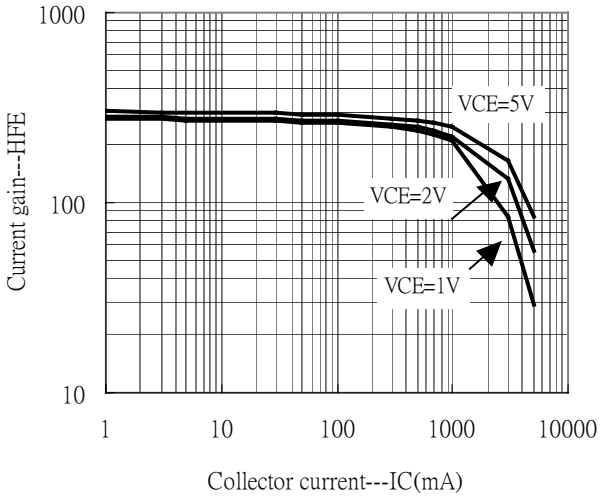
Rank	Q	P	E
Range	100~200	160~320	250~500

Ordering Information

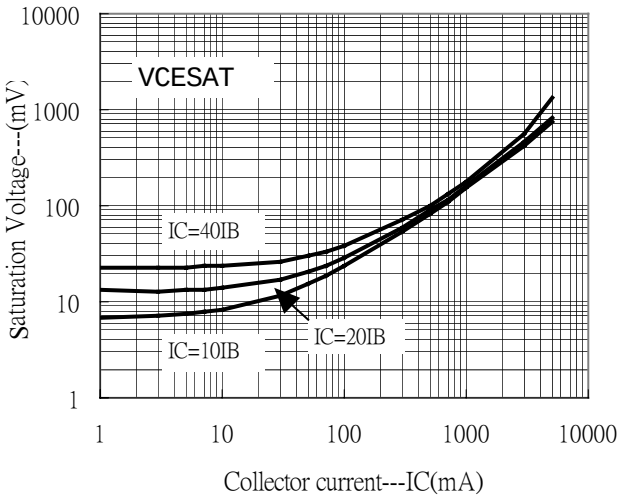
Device	Package	Shipping	Marking
BTB772AM3	SOT-89	1000 pcs / Tape & Reel	AE

Characteristic Curves

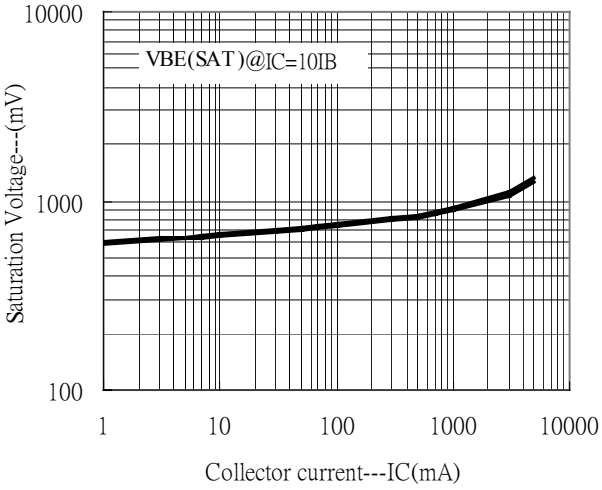
Current gain vs Collector current



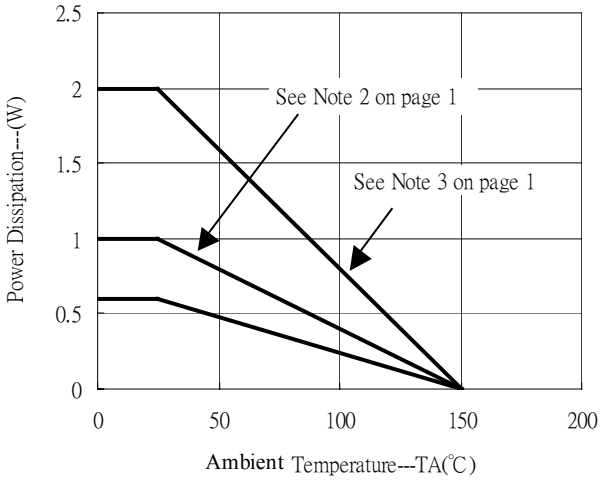
Saturation Voltage vs Collector current



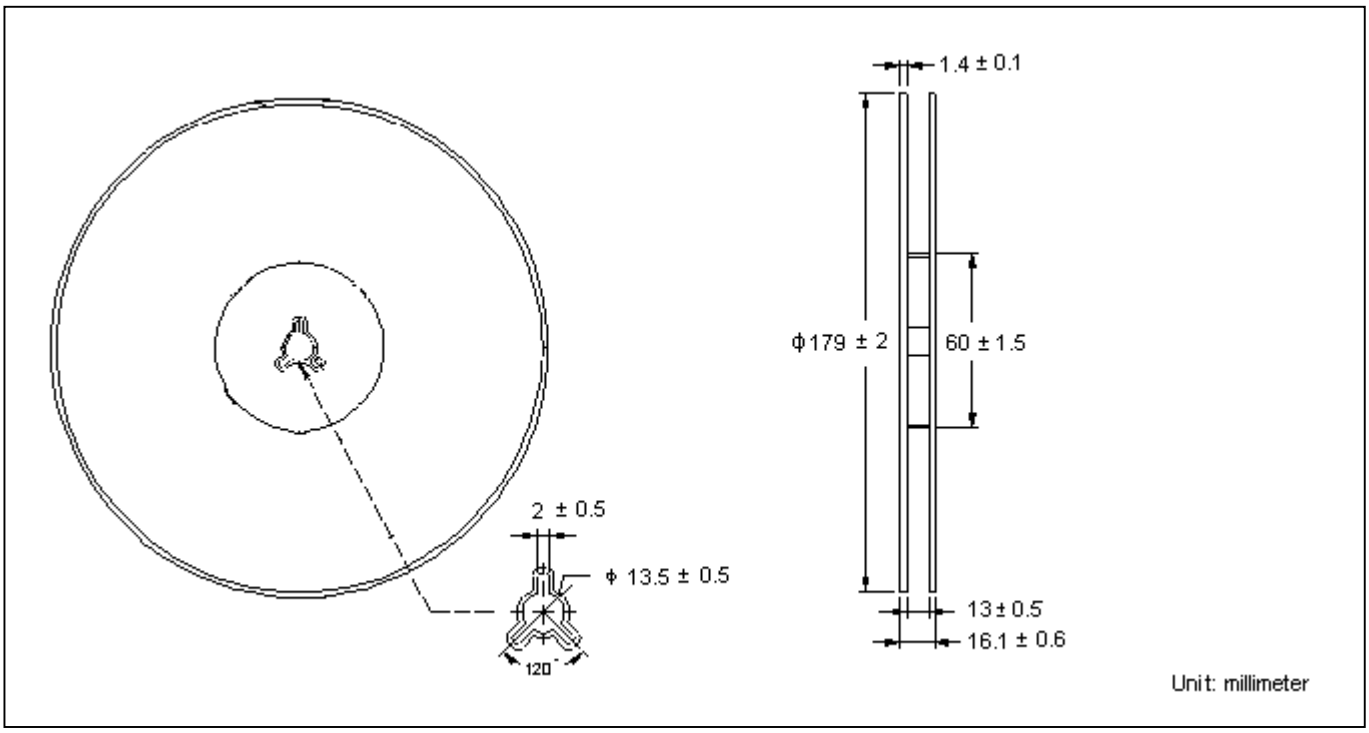
Saturation Voltage vs Collector current



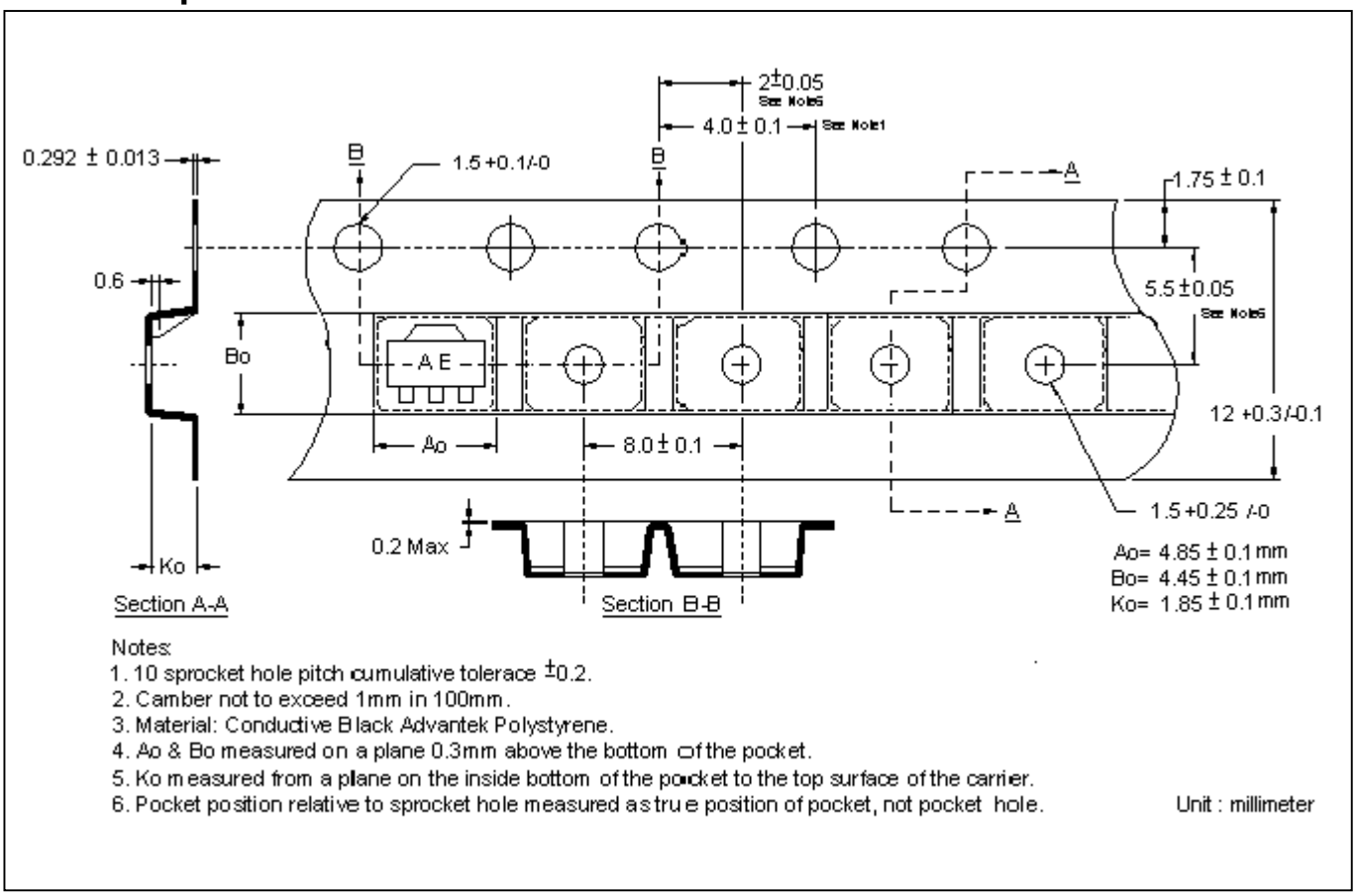
Power derating curves



Reel Dimension



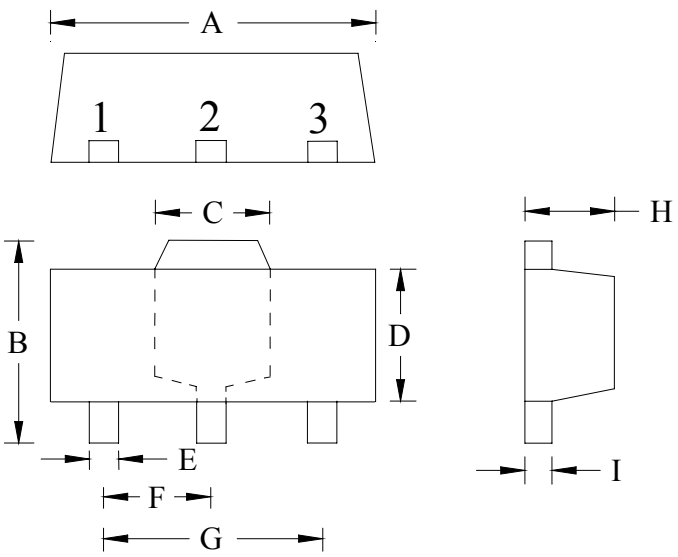
Carrier Tape Dimension

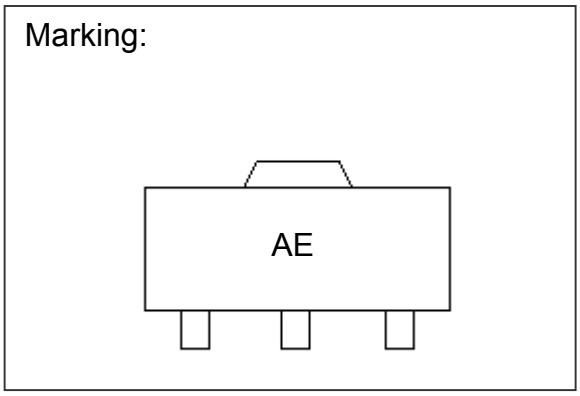


Notes:
1. 10 sprocket hole pitch cumulative tolerace ±0.2.
2. Camber not to exceed 1mm in 100mm.
3. Material: Conductive Black Advantek Polystyrene.
4. Ao & Bo measured on a plane 0.3mm above the bottom of the pocket.
5. Ko measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
6. Pocket position relative to sprocket hole measured as true position of pocket, not pocket hole.

Unit : millimeter

SOT-89 Dimension





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

3-Lead SOT-89 Plastic
Surface Mounted Package
CYStek Package Code: M3

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1732	0.1811	4.40	4.60	F	0.0583	0.0598	1.48	1.527
B	0.1594	0.1673	4.05	4.25	G	0.1165	0.1197	2.96	3.04
C	0.0591	0.0663	1.50	1.70	H	0.0551	0.0630	1.40	1.60
D	0.0945	0.1024	2.40	2.60	I	0.0138	0.0161	0.35	0.41
E	0.01417	0.0201	0.36	0.51					

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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