

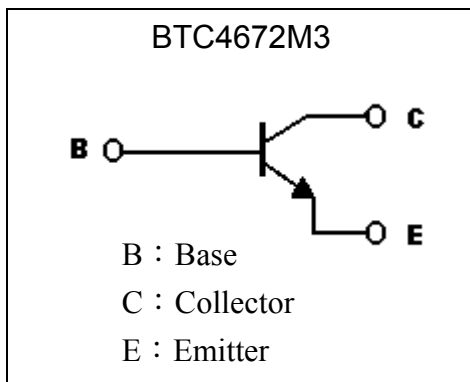
Silicon NPN Epitaxial Planar Transistor

BTC4672M3

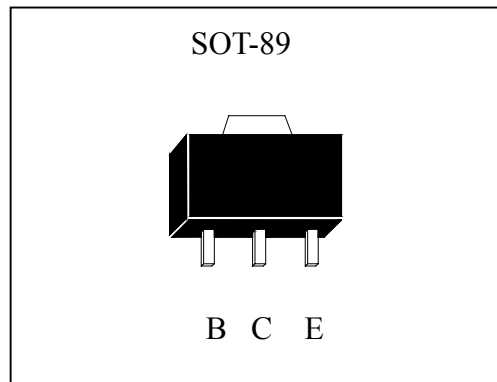
Features

- Low saturation voltage, typically $V_{CE(sat)}=0.1V$ at $I_C/I_B=1A/50mA$
- Excellent DC current gain characteristics
- Complementary to BTA1797M3
- Pb-free package

Symbol



Outline



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	60	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}	6	A
Power Dissipation	P_D	0.6	W
		1 (Note 1)	
		2 (Note 2)	
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

Note : 1. When mounted on FR-4 PCB with area measuring 10×10×1 mm

2 . When mounted on ceramic with area measuring 40×40×1 mm

**Thermal Characteristics**

Parameter	Symbol	Value	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	208	°C/W
		125 (Note 1)	
		62.5 (Note 2)	
Thermal Resistance, Junction to Case	$R_{\theta JC}$	105	°C/W
		60	
		39.3	

Note : 1. When mounted on FR-4 PCB with area measuring 10×10×1 mm

2. When mounted on ceramic with area measuring 40×40×1 mm

Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	60	-	-	V	$I_C=50\mu A$, $I_E=0$
BV_{CEO}	50	-	-	V	$I_C=1mA$, $I_B=0$
BV_{EBO}	6	-	-	V	$I_E=50\mu A$, $I_C=0$
I_{CBO}	-	-	0.1	μA	$V_{CB}=60V$, $I_E=0$
I_{EBO}	-	-	0.1	μA	$V_{EB}=5V$, $I_C=0$
$*V_{CE(sat)}$	-	0.1	0.35	V	$I_C=1A$, $I_B=50mA$
$*V_{BE(sat)}$	-	-	1.2	V	$I_C=1A$, $I_B=100mA$
h_{FE1}	250	-	500	-	$V_{CE}=2V$, $I_C=500mA$
h_{FE2}	80	-	-	-	$V_{CE}=2V$, $I_C=1.5A$
f_T	-	210	-	MHz	$V_{CE}=2V$, $I_C=500mA$, $f=100MHz$
Cob	-	25	-	pF	$V_{CB}=10V$, $I_E=0$, $f=1MHz$

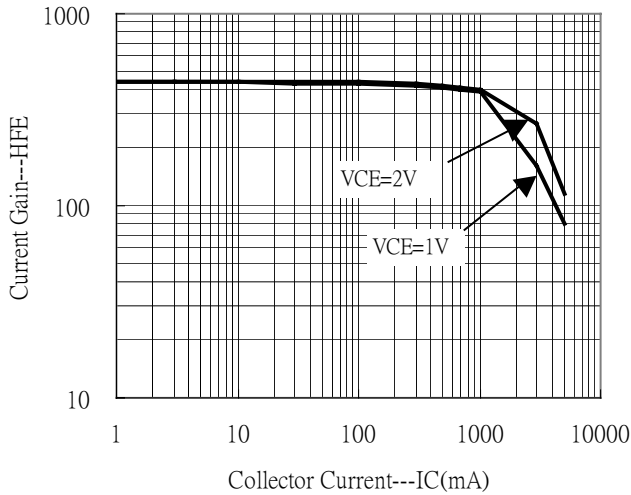
*Pulse Test: Pulse Width ≤380μs, Duty Cycle≤2%

Ordering Information

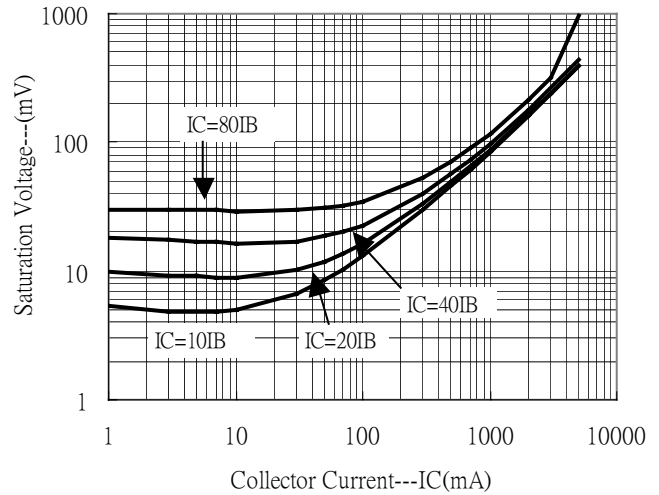
Device	Package	Shipping	Marking
BTC4672M3	SOT-89 (Pb-free)	1000 pcs / Tape & Reel	DK

Characteristic Curves

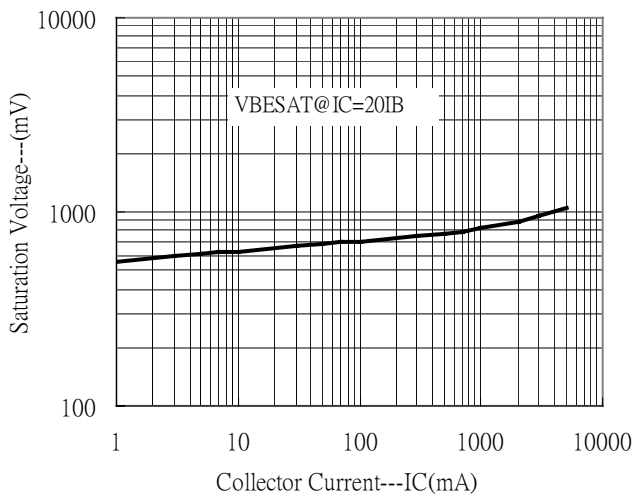
Current Gain vs Collector Current



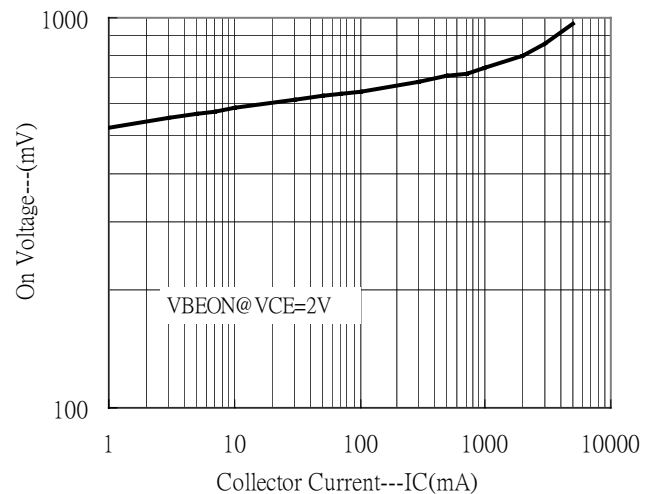
Saturation Voltage vs Collector Current



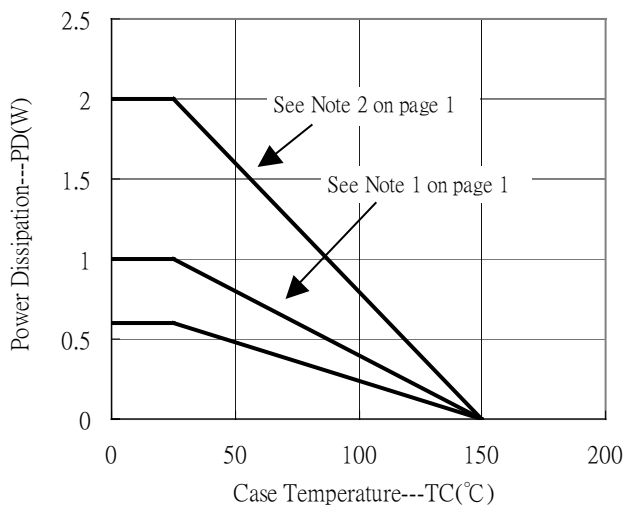
Saturation Voltage vs Collector Current



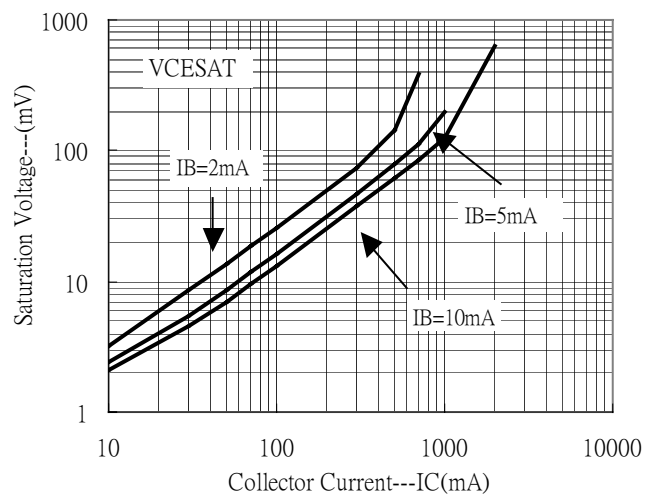
On Voltage vs Collector Current



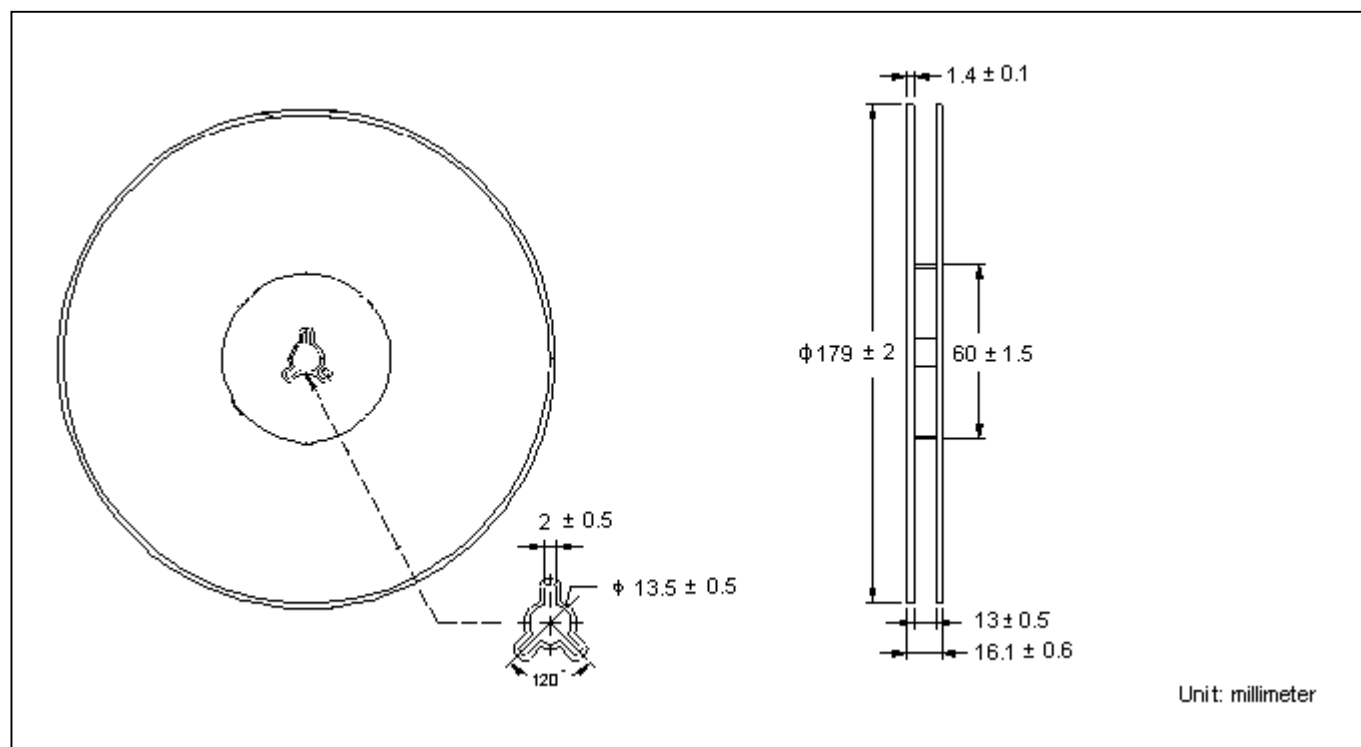
Power Derating Curve



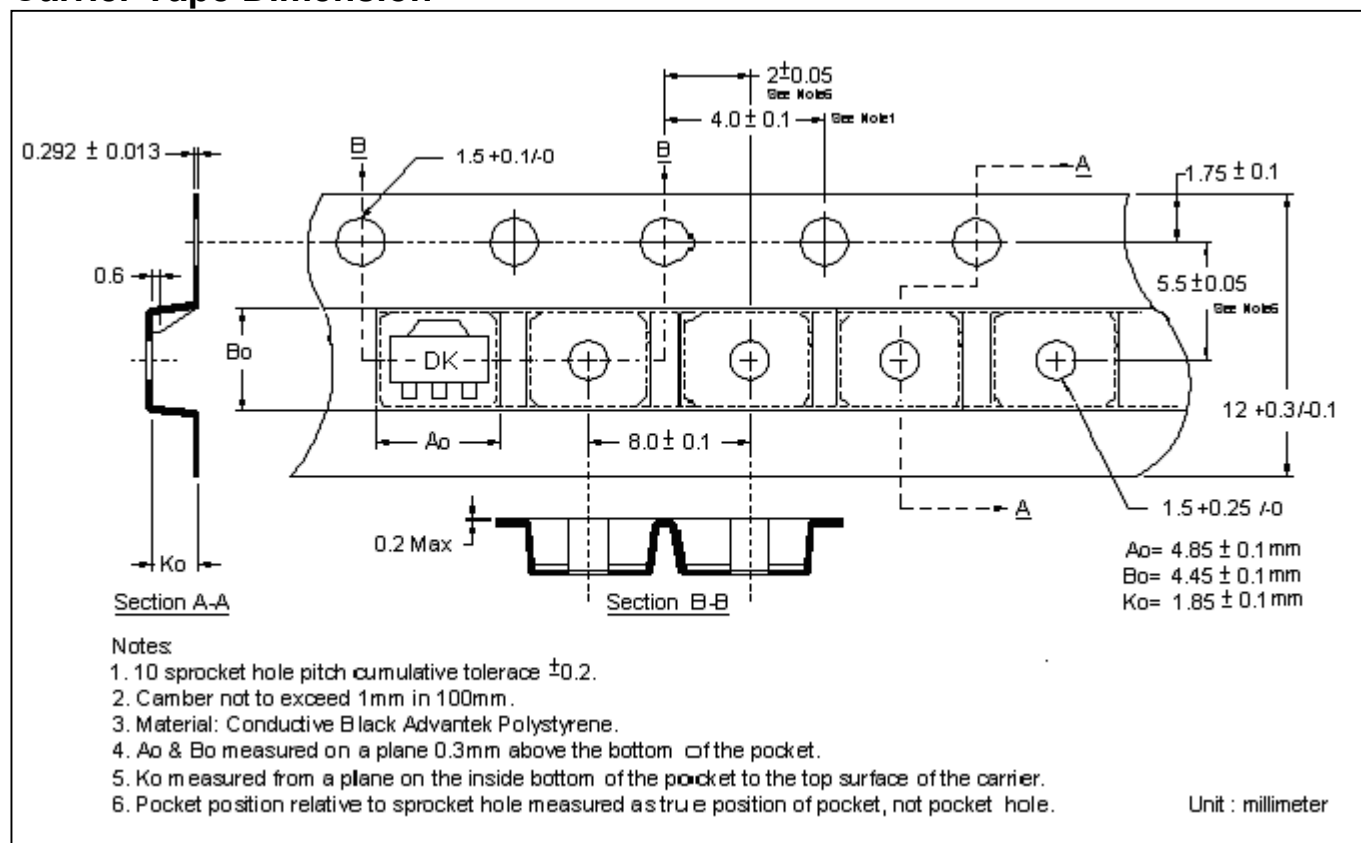
Saturation Voltage vs Collector Current



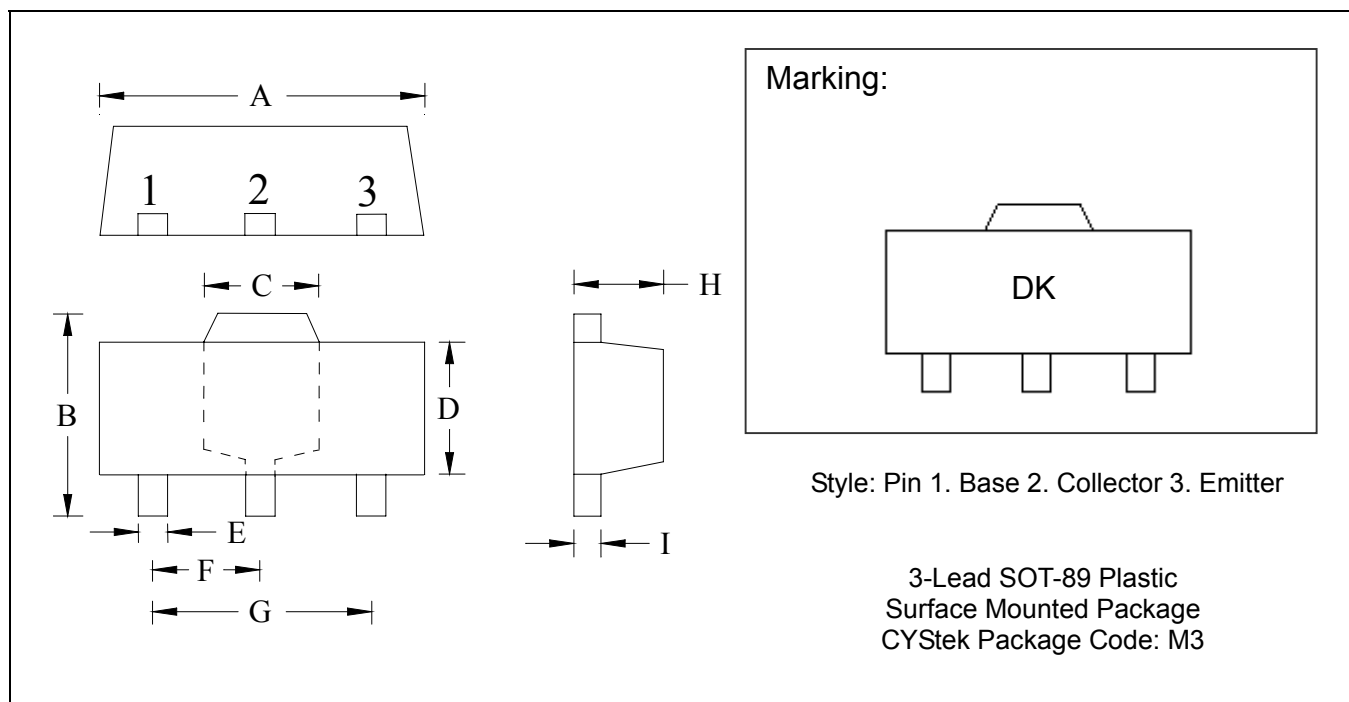
Reel Dimension



Carrier Tape Dimension



SOT-89 Dimension



*: 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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