

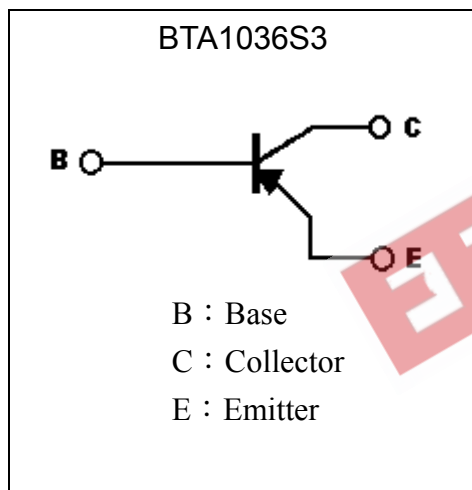
General Purpose PNP Epitaxial Planar Transistor

# BTA1036S3

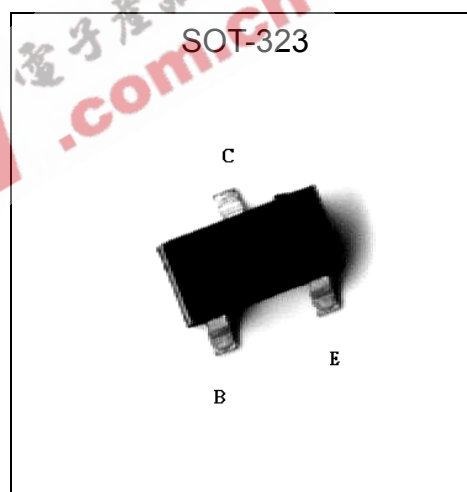
## Description

- The BTA1036S3 is designed for general purpose amplifier applications. It is housed in the SOT-323/SC-70 package which is designed for low power surface mount applications.
- Low  $V_{CE(sat)}$
- High switching speed.
- Complementary to BTC2411S3
- Pb-free package

## Symbol



## Outline



## Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	$V_{CB0}$	-60	V
Collector-Emitter Voltage	$V_{CE0}$	-60	V
Emitter-Base Voltage	$V_{EB0}$	-5	V
Collector Current	$I_C$	-600	mA
Power Dissipation @ $T_A=25^\circ\text{C}$	$P_d$	150 (Note 1)	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55~+150	°C

Note 1: When mounted on a FR-5 board with area measuring 1.0x0.75x0.062 in.

**Characteristics (Ta=25°C)**

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
$BV_{CBO}$	-60	-	-	V	$I_C=-10\mu A$
$*BV_{CEO}$	-60	-	-	V	$I_C=-10mA$
$BV_{EBO}$	-5	-	-	V	$I_E=-10\mu A$
$IC_{BO}$	-	-	-10	nA	$V_{CB}=-50V$
$IC_{EX}$	-	-	-50	nA	$V_{CE}=-30V, V_{BE(OFF)}=-0.5V$
$*V_{CE(sat)}$	-	-0.2	-0.4	V	$I_C=-150mA, I_B=-15mA$
$*V_{CE(sat)}$	-	-0.5	-1.6	V	$I_C=-500mA, I_B=-50mA$
$*V_{BE(sat)}$	-	-	-1.3	V	$I_C=-150mA, I_B=-15mA$
$*V_{BE(sat)}$	-	-	-2.6	V	$I_C=-500mA, I_B=-50mA$
$*h_{FE}$	75	-	-	-	$V_{CE}=-10V, I_C=-100\mu A$
$*h_{FE}$	100	-	-	-	$V_{CE}=-10V, I_C=-1mA$
$*h_{FE}$	100	-	-	-	$V_{CE}=-10V, I_C=-10mA$
$*h_{FE}$	100	-	300	-	$V_{CE}=-10V, I_C=-150mA$
$*h_{FE}$	50	-	-	-	$V_{CE}=-10V, I_C=-500mA$
$f_T$	200	-	-	MHz	$V_{CE}=-20V, I_C=-50mA, f=100MHz$
Cob	-	-	8	pF	$V_{CB}=-10V, I_E=0A, f=1MHz$

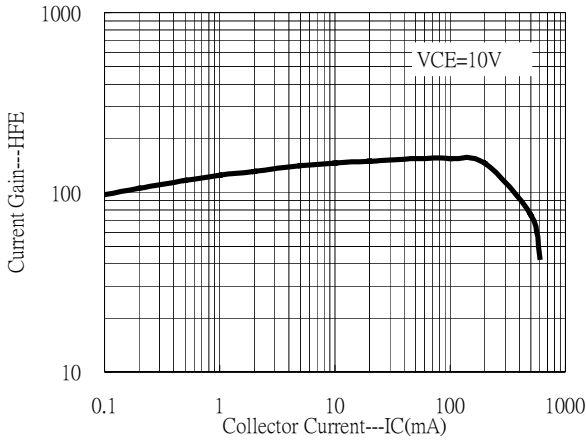
\*Pulse Test: Pulse Width  $\leq 380\mu s$ , Duty Cycle  $\leq 2\%$ **Ordering Information**

Device	Package	Shipping	Marking
BTA1036S3	SOT-323 (Pb-free)	3000 pcs / Tape & Reel	20

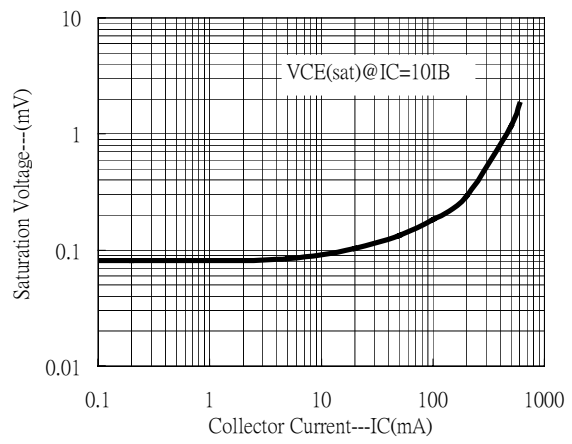


### Characteristic Curves

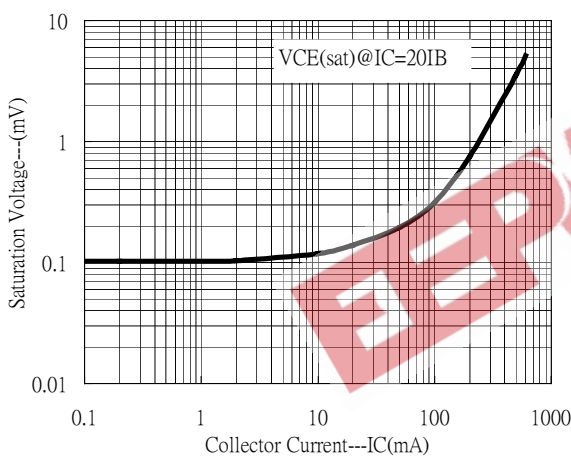
Current Gain vs Collector Current



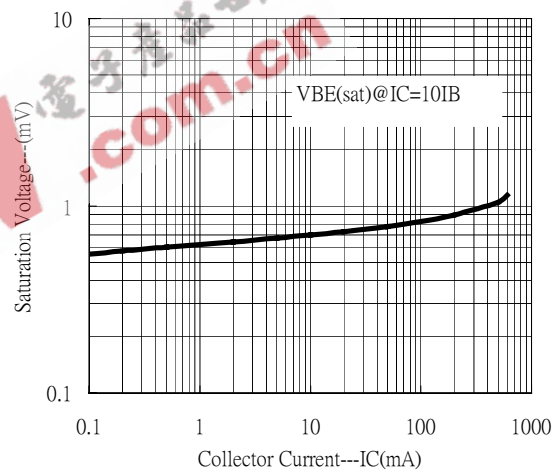
Saturation Voltage vs Collector Current



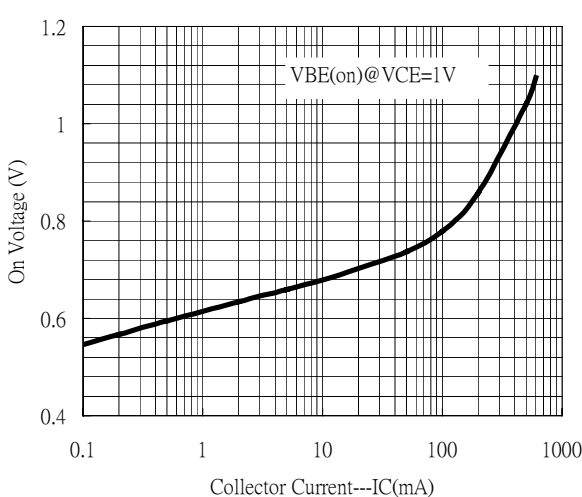
Saturation Voltage vs Collector Current



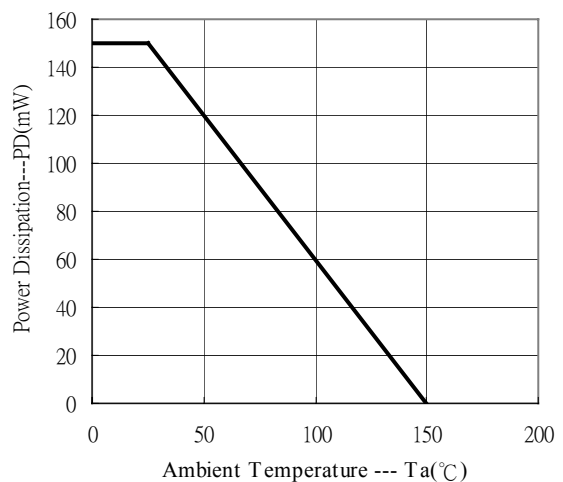
Saturation Voltage vs Collector Current



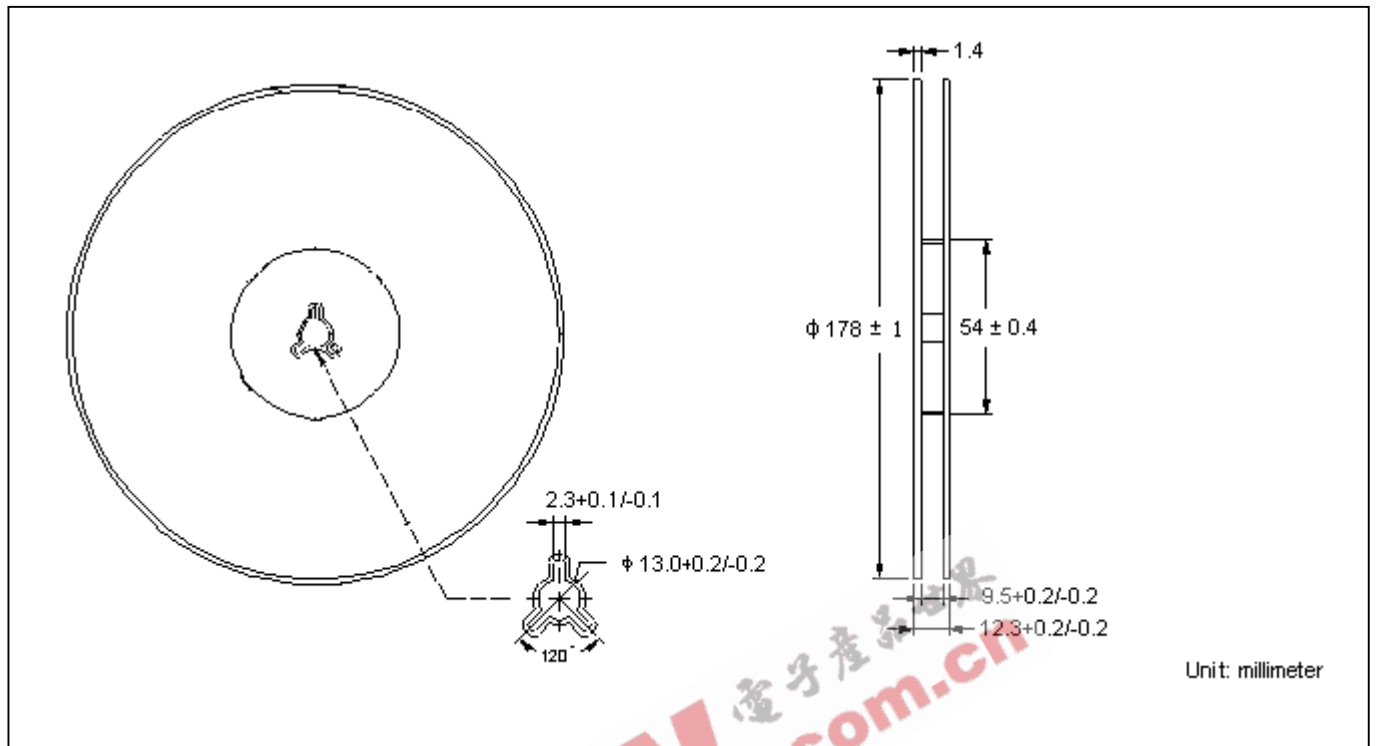
On Voltage vs Collector Current



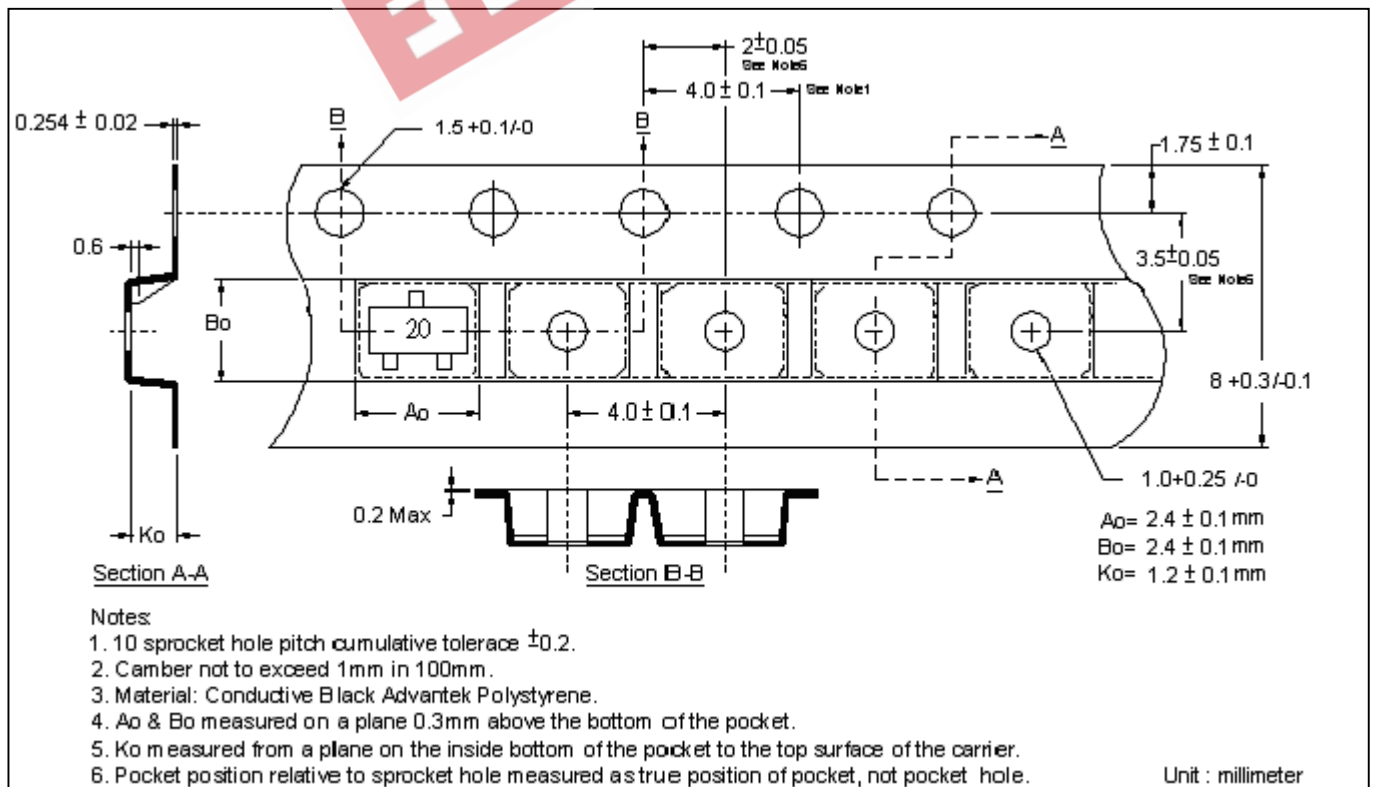
Power Derating Curve



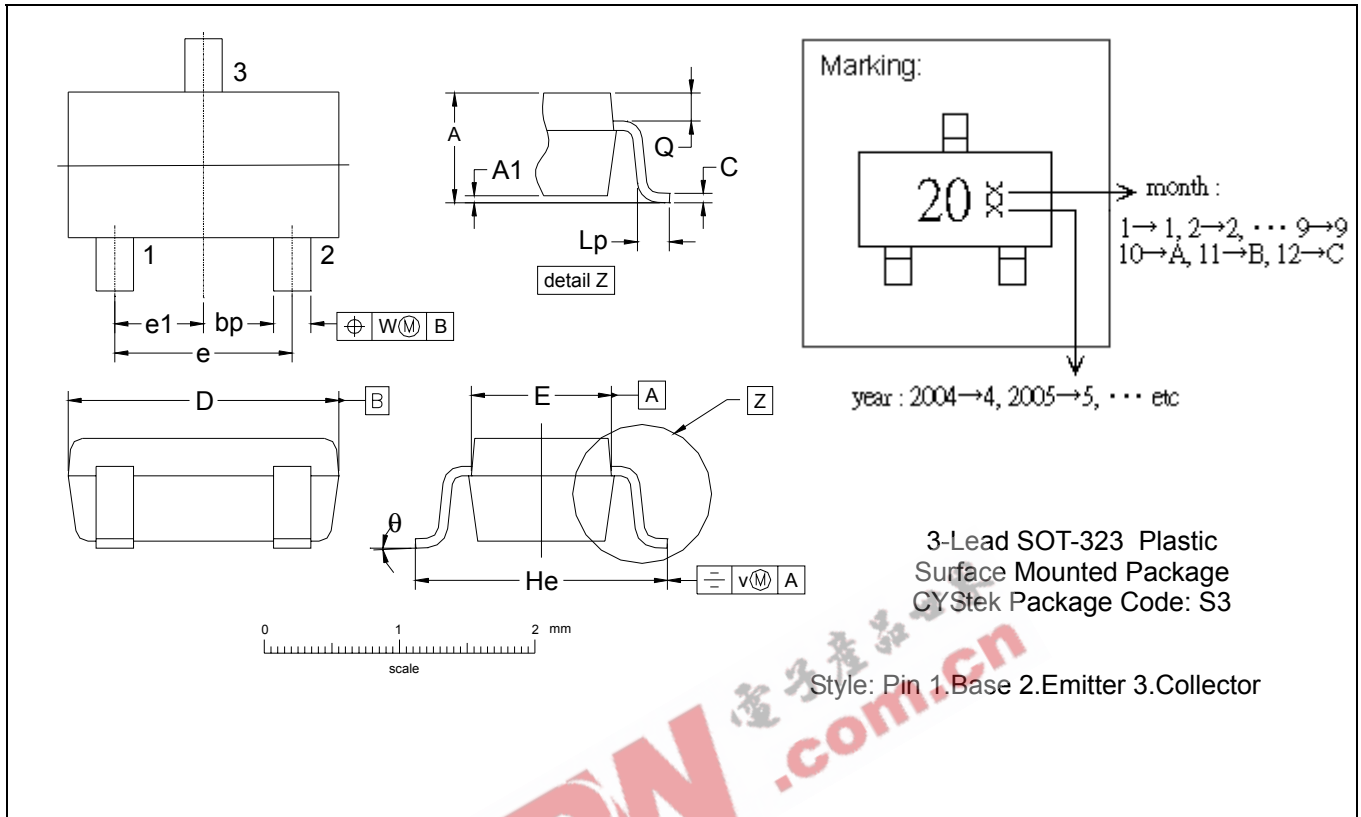
**Reel Dimension**



**Carrier Tape Dimension**



**SOT-323 Dimension**



\*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.0315	0.0433	0.80	1.10	e1	0.0256	-	0.65	-
A1	0.0000	0.0039	0.00	0.10	He	0.0787	0.0886	2.00	2.25
bp	0.0118	0.0157	0.30	0.40	Lp	0.0059	0.0177	0.15	0.45
C	0.0039	0.0098	0.10	0.25	Q	0.0051	0.0091	0.13	0.23
D	0.0709	0.0866	1.80	2.20	v	0.0079	-	0.2	-
E	0.0453	0.0531	1.15	1.35	w	0.0079	-	0.2	-
e	0.0512	-	1.3	-	θ	-	-	10°	0°

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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