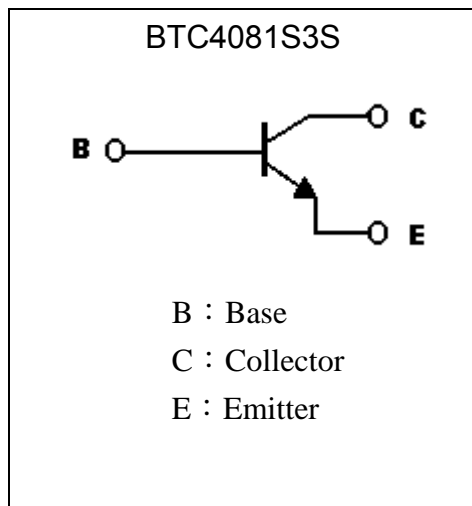
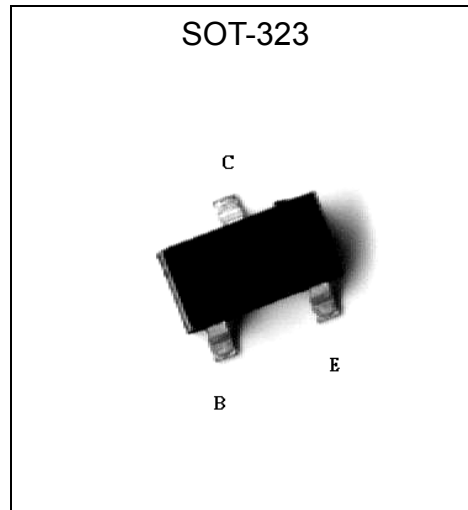


**General Purpose NPN Epitaxial Planar Transistor**

# BTC4081S3S

**Description**

- The BTC4081S3S is designed for using in driver stage of AF amplifier and general purpose amplification.
- Low Cob, Typ. Cob=2.0pF
- Complementary to BTA1576S3S
- Pb-free package

**Symbol**

**Outline**

**Absolute Maximum Ratings** (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V <sub>CB0</sub>	60	V
Collector-Emitter Voltage	V <sub>CEO</sub>	50	V
Emitter-Base Voltage	V <sub>EB0</sub>	7	V
Collector Current	I <sub>c</sub>	150	mA
Power Dissipation	P <sub>d</sub>	225	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55~+150	°C



**Characteristics (Ta=25°C)**

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
$BV_{CBO}$	60	-	-	V	$I_C=100\mu A$
$BV_{CEO}$	50	-	-	V	$I_C=1mA$
$BV_{EBO}$	7	-	-	V	$I_E=50\mu A$
$I_{CBO}$	-	-	0.1	$\mu A$	$V_{CB}=60V$
$I_{EBO}$	-	-	0.1	$\mu A$	$V_{EB}=7V$
$*V_{CE(sat)}$	-	0.2	0.4	V	$I_C=50mA, I_B=5mA$
$*h_{FE}$	180	-	560		$V_{CE}=6V, I_C=1mA$
$f_T$	80	180	-	MHz	$V_{CE}=12V, I_C=2mA, f=100MHz$
$C_{ob}$	-	2	3.5	pF	$V_{CB}=12V, f=1MHz$

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

**Classification Of  $h_{FE}$**

Rank	R	S
Range	180-390	270-560

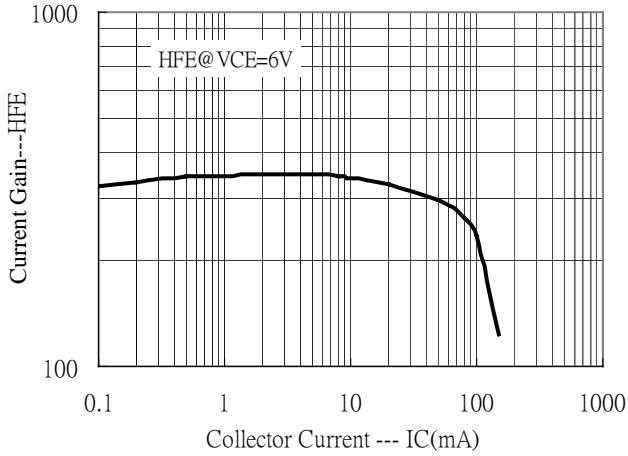
**Ordering Information**

Device	Package	Shipping	Marking
BTC4081S3S	SOT-323 (Pb-free)	3000 pcs / Tape & Reel	1F

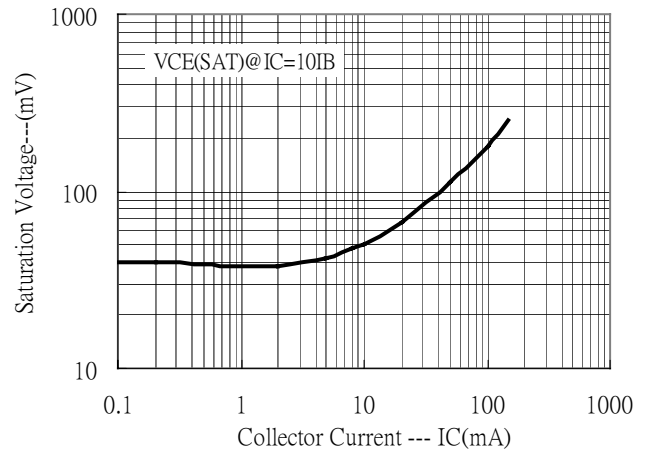


### Characteristic Curves

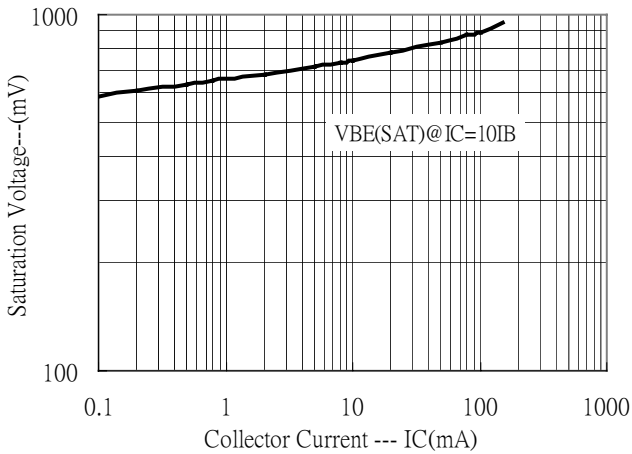
Current Gain vs Collector Current



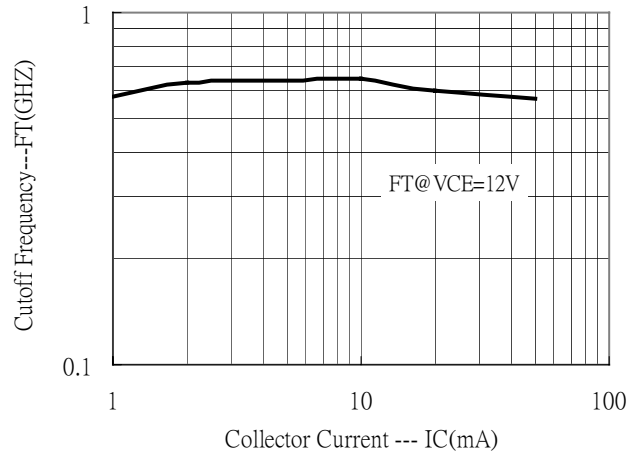
Saturation Voltage vs Collector Current



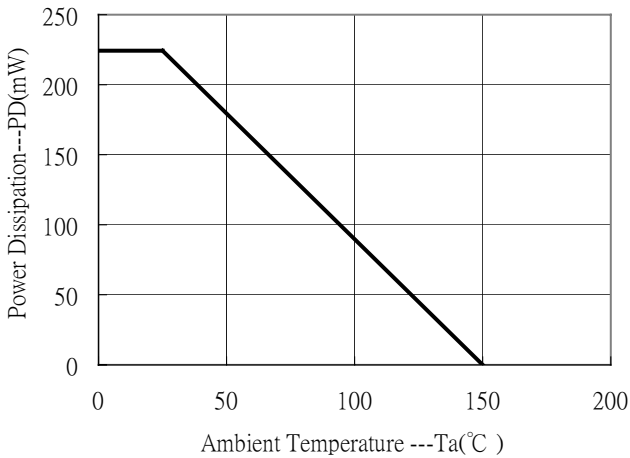
Saturation Voltage vs Collector Current



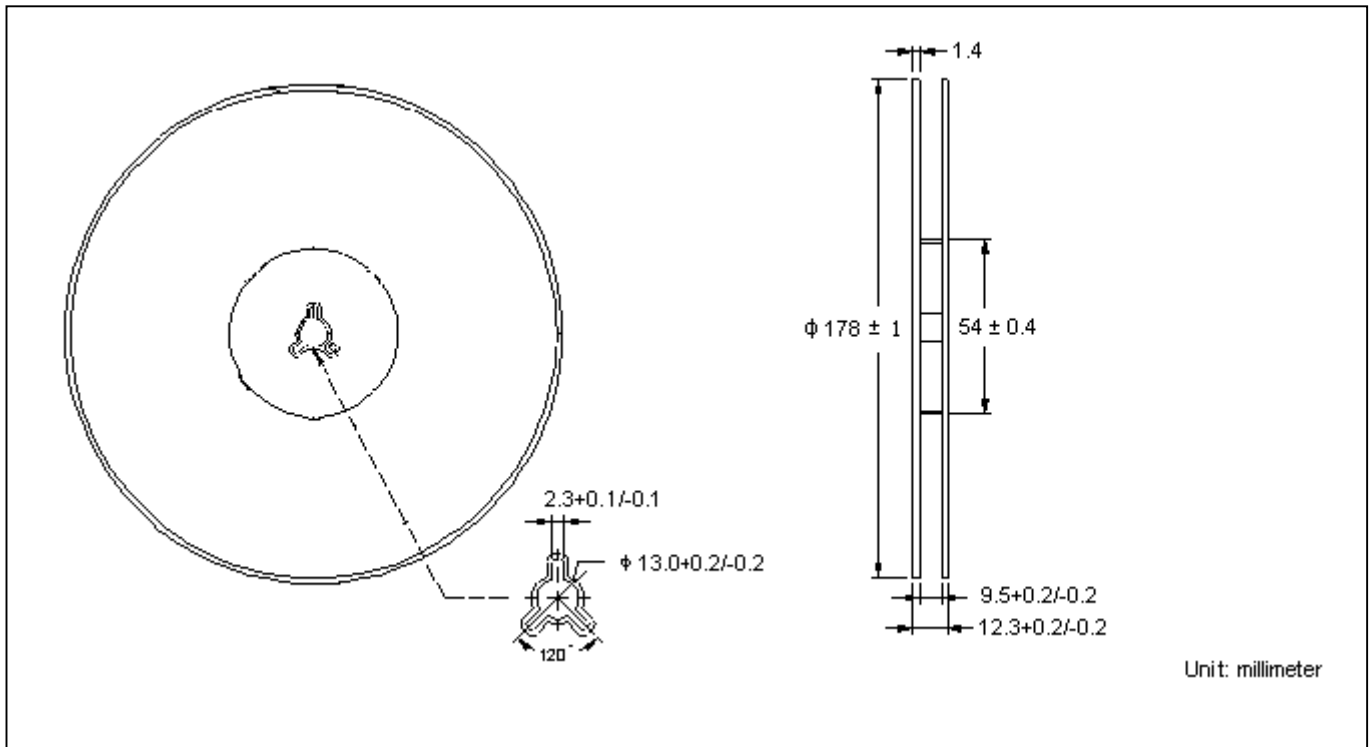
Cutoff Frequency vs Collector Current



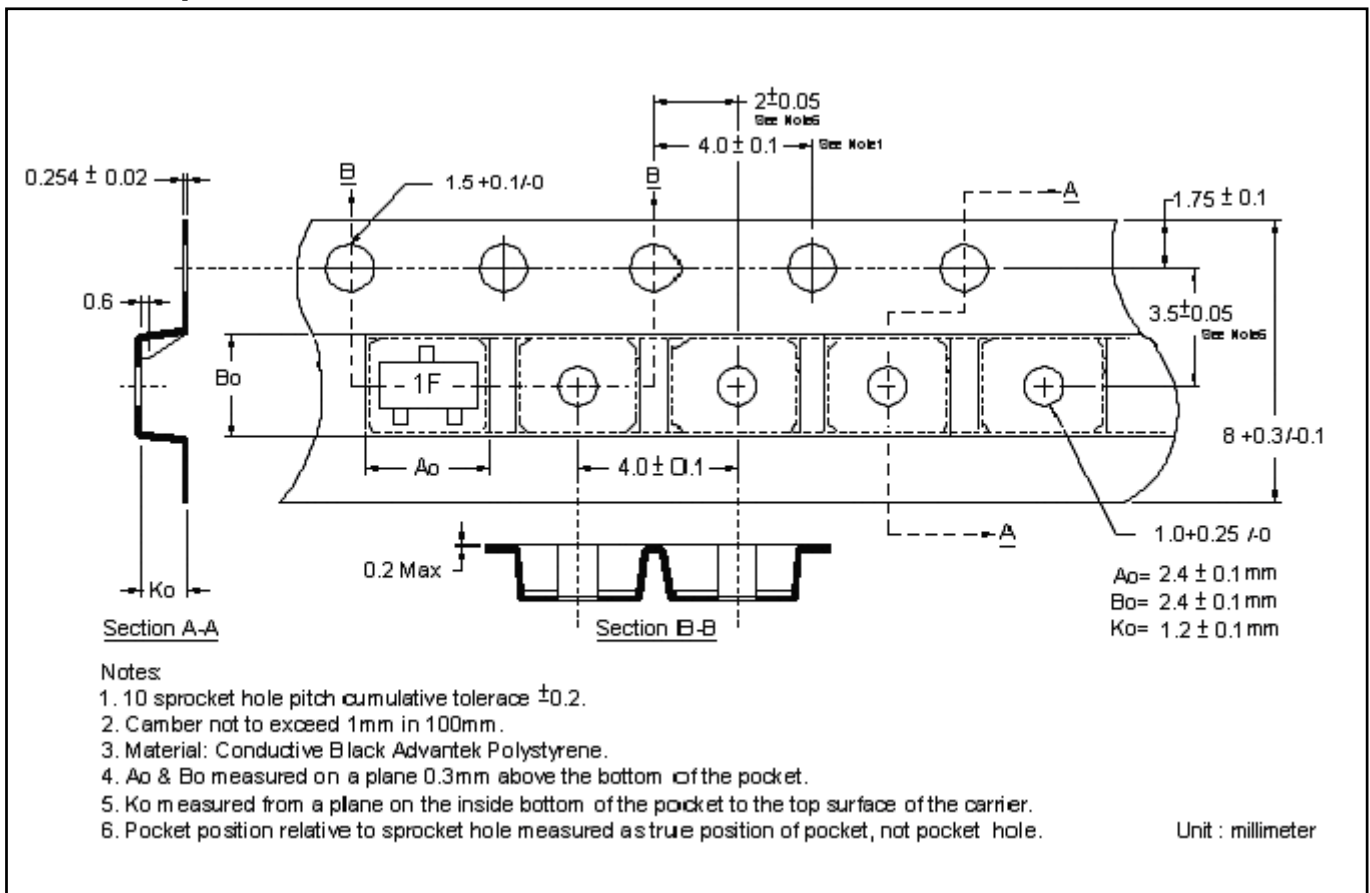
Power Derating Curve



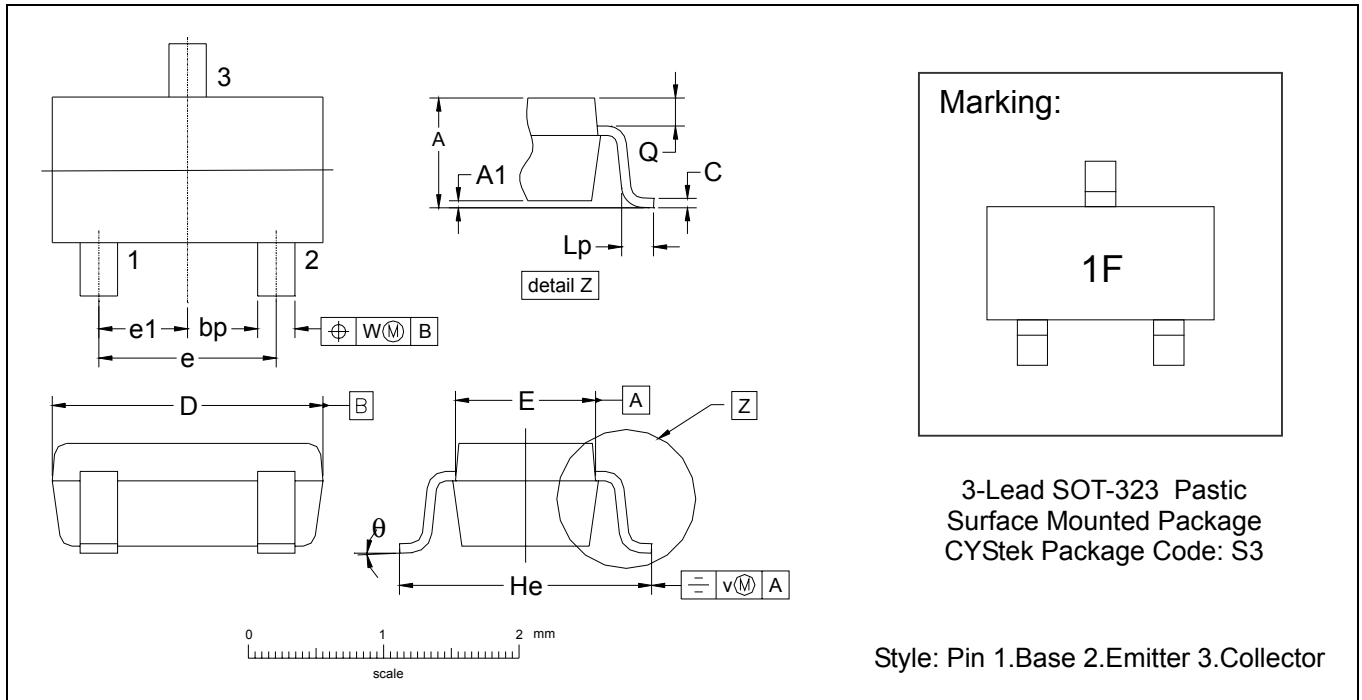
**Reel Dimension**



**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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