

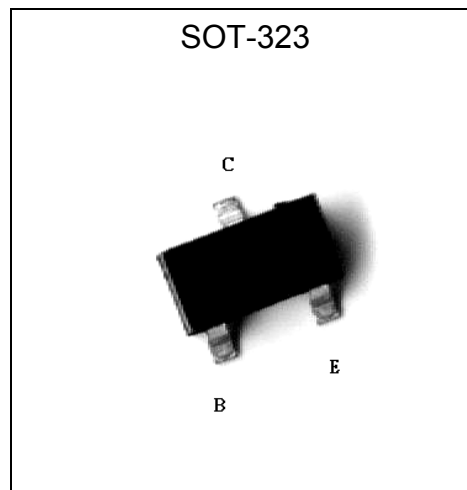
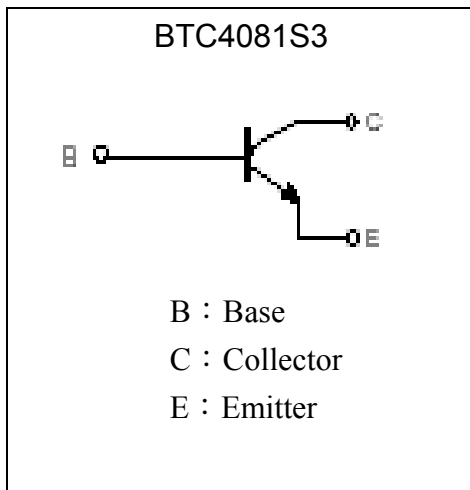
General Purpose NPN Epitaxial Planar Transistor

BTC4081S3

Description

- The BTC4081S3 is designed for using in driver stage of AF amplifier and general purpose amplification.
- Low Cob. Typ. Cob=2.0pF
- Complementary to BTA1576S3 .

Equivalent Circuit



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	VCBO	60	V
Collector-Emitter Voltage	VCEO	50	V
Emitter-Base Voltage	VEBO	7	V
Collector Current	IC	150	mA
Power Dissipation	Pd	225	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C



Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	60	-	-	V	IC=100uA
BVCEO	50	-	-	V	IC=1mA
BVEBO	7	-	-	V	IE=50uA
ICBO	-	-	0.1	uA	VCB=60V
IEBO	-	-	0.1	uA	VEB=7V
*VCE(sat)	-	0.2	0.4	V	IC=50mA, IB=5mA
*hFE	120	-	820		VCE=6V, IC=1mA
fT	80	180	-	MHz	VCE=12V, IC=2mA, f=100MHz
Cob	-	2	3.5	pF	VCB=12V, f=1MHz

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

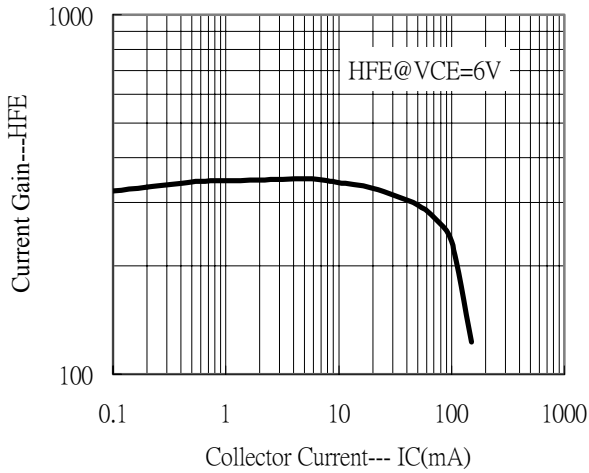
Classification Of hFE

Rank	Q	R	S	T
Range	120-270	180-390	270-560	410-820

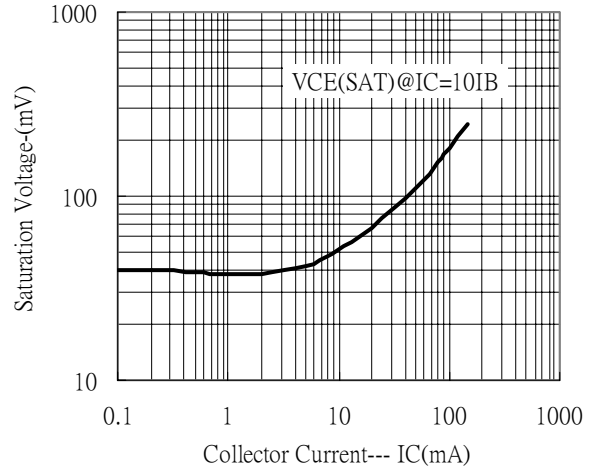


Characteristic Curves

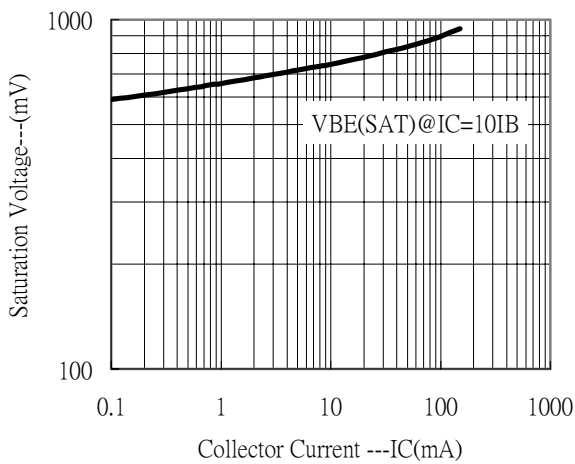
Current Gain vs Collector Current



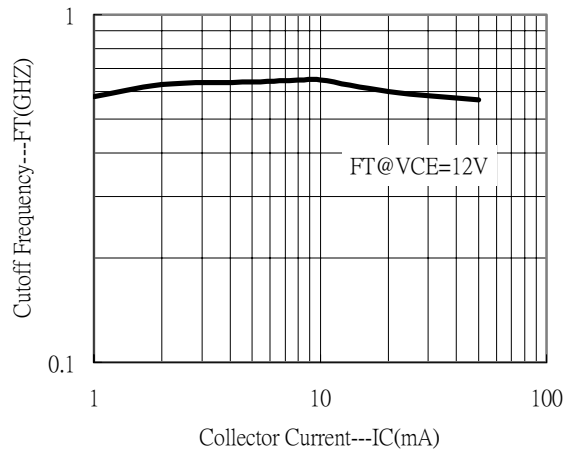
Saturation Voltage vs Collector Current



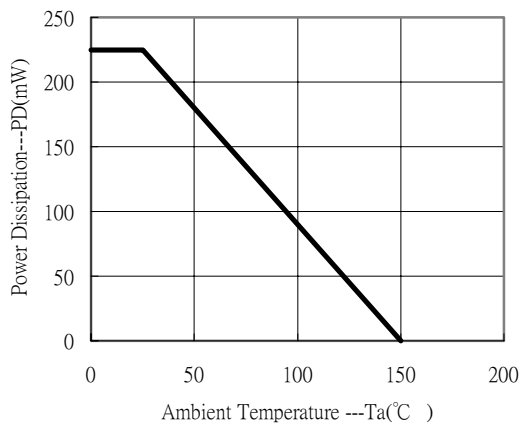
Saturation Voltage vs Collector Current



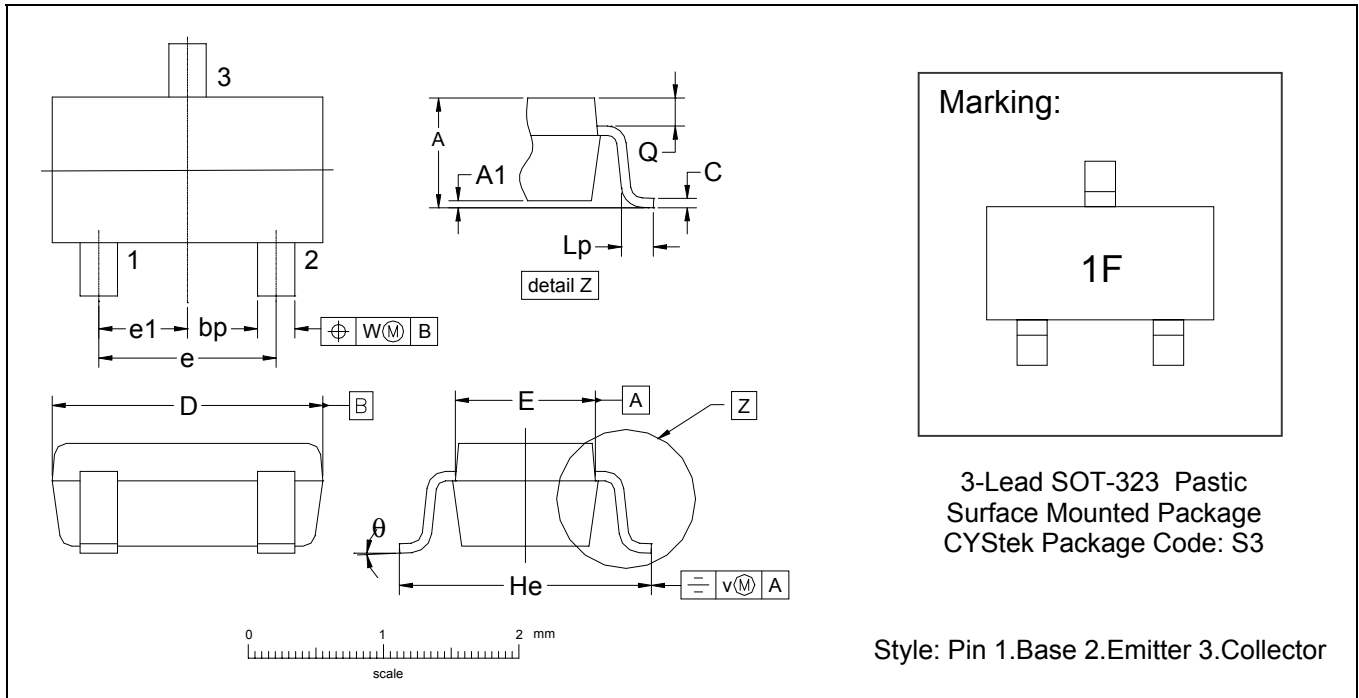
Cutoff Frequency vs Collector Current



PD - Ta



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

Important Notice:

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of CYStek.
- CYStek reserves the right to make changes to its products without notice.
- CYStek **semiconductor products are not warranted to be suitable for use in Life-Support Applications, or systems.**
- CYStek assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.