

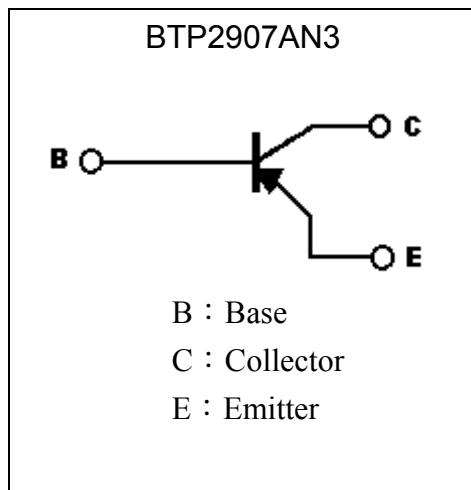
**General Purpose PNP Epitaxial Planar Transistor**

# BTP2907AN3

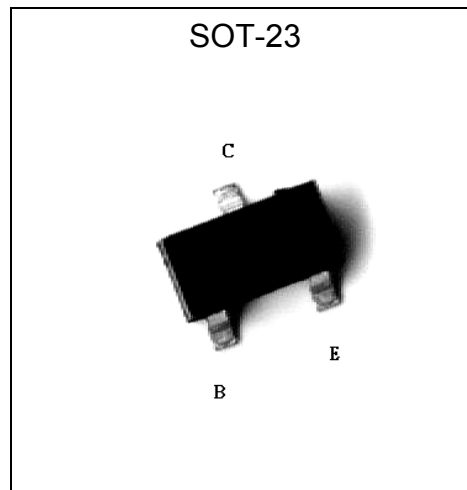
## Description

- The BTP2907AN3 is designed for general purpose amplifier applications. It is housed in the SOT-23/SC-59 package which is designed for low power surface mount applications.
- Low  $V_{CE(sat)}$
- High switching speed.
- Complementary to BTN2222AN3

## Equivalent Circuit



## Outline



## Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	$V_{CBO}$	-60	V
Collector-Emitter Voltage	$V_{CEO}$	-60	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-600	mA
Power Dissipation @TA=25°C	$P_d$	225 (Note 1)	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556 (Note 1)	°C/W
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 1.0× 0.75× 0.062 in.

**Characteristics (Ta=25°C)**

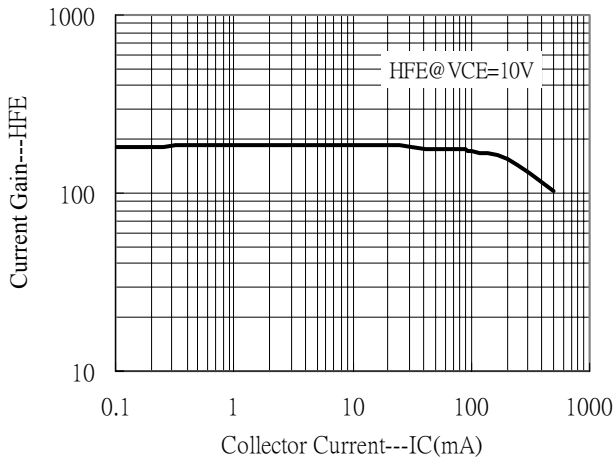
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	-60	-	-	V	IC=-10μA
*BVCEO	-60	-	-	V	IC=-10mA
BVEBO	-5	-	-	V	IE=-10μA
ICBO	-	-	-10	nA	VCB=-50V
ICEX	-	-	-50	nA	VCE=-30V, VBE(OFF)=0.5V
*VCE(sat)	-	-0.2	-0.4	V	IC=-150mA, IB=-15mA
*VCE(sat)	-	-0.5	-1.6	V	IC=-500mA, IB=-50mA
*VBE(sat)	-	-	-1.3	V	IC=-150mA, IB=-15mA
*VBE(sat)	-	-	-2.6	V	IC=-500mA, IB=-50mA
*hFE	75	-	-	-	VCE=-10V, IC=-100μA
*hFE	100	-	-	-	VCE=-10V, IC=-1mA
*hFE	100	-	-	-	VCE=-10V, IC=-10mA
*hFE	100	-	300	-	VCE=-10V, IC=-150mA
*hFE	50	-	-	-	VCE=-10V, IC=-500mA
fT	200	-	-	MHz	VCE=-20V, IC=-50mA, f=100MHz
Cob	-	-	8	pF	VCB=-10V, IE=0A, f=1MHz

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

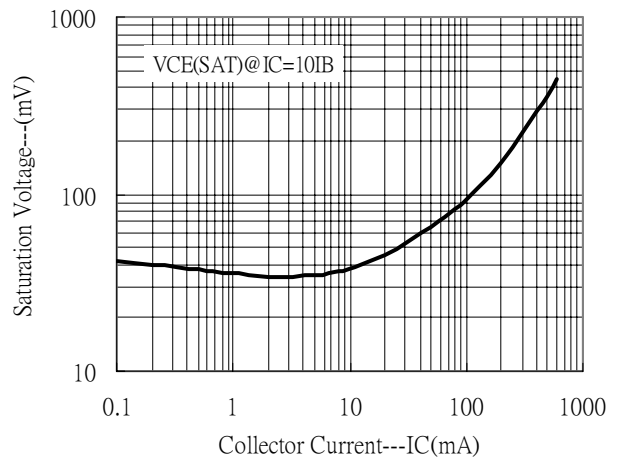


### Characteristic Curves

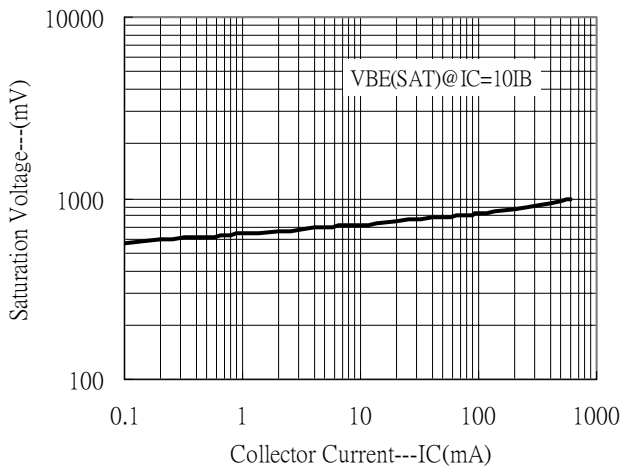
Current Gain vs Collector Current



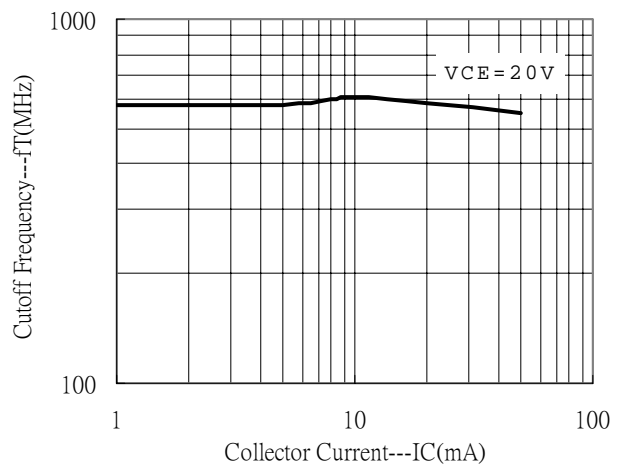
Saturation Voltage vs Collector Current



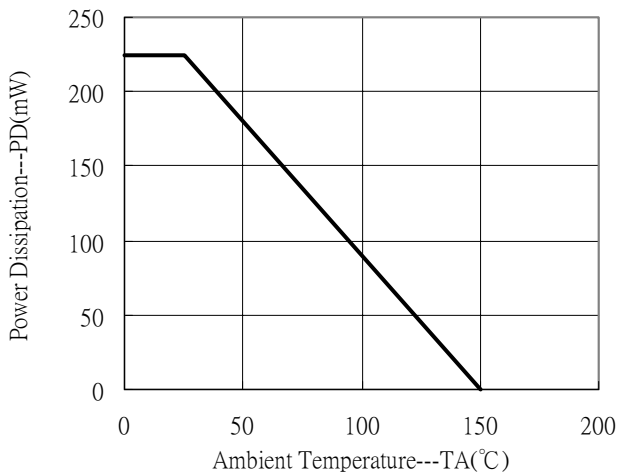
Saturation Voltage vs Collector Current



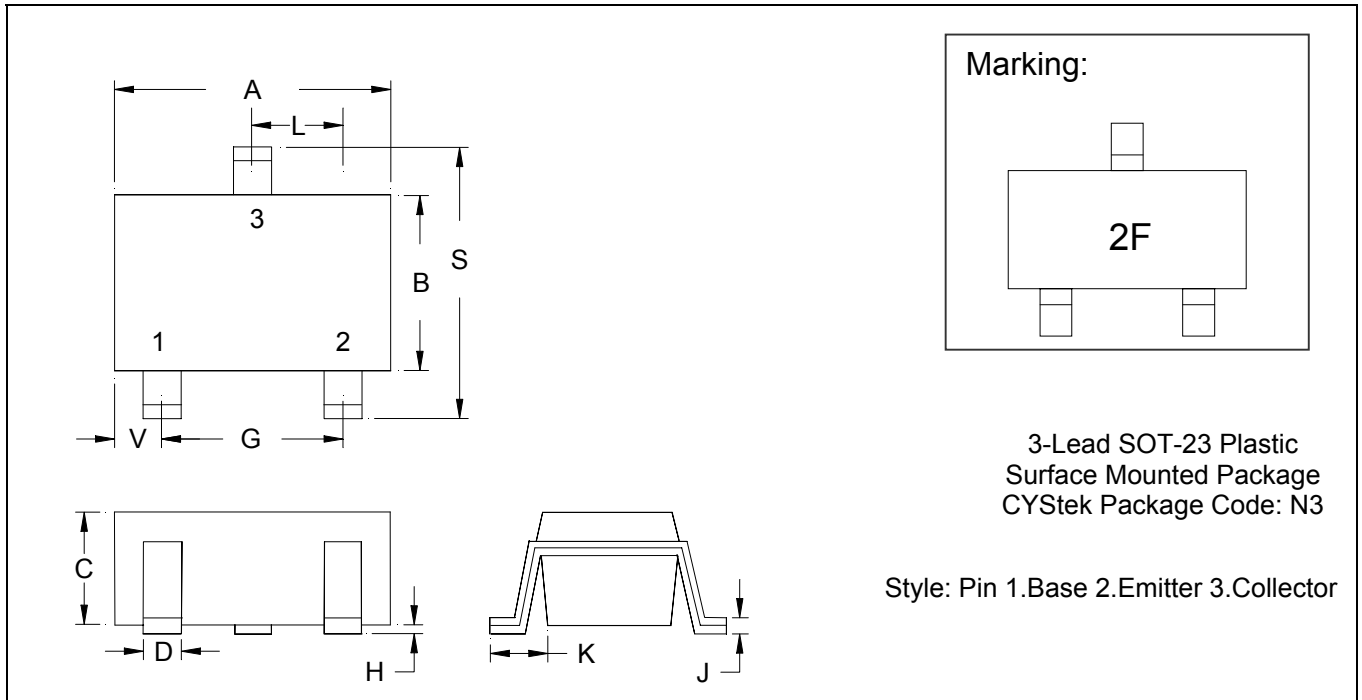
Cutoff Frequency vs Collector Current



Power Derating Curve



**SOT-23 Dimension**



\*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0034	0.0070	0.085	0.177
B	0.0472	0.0630	1.20	1.60	K	0.0128	0.0266	0.32	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1083	2.10	2.75
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0005	0.0040	0.013	0.10					

**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.