



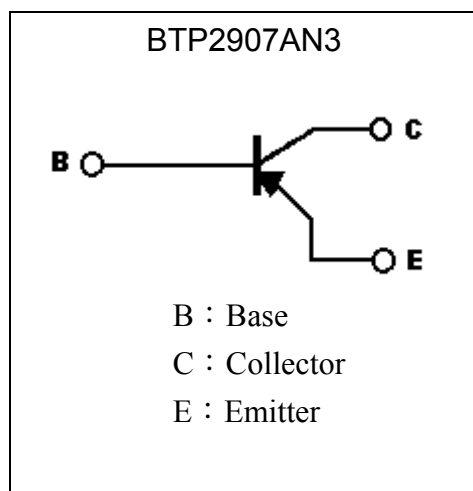
General Purpose PNP Epitaxial Planar Transistor

BTP2907AN3

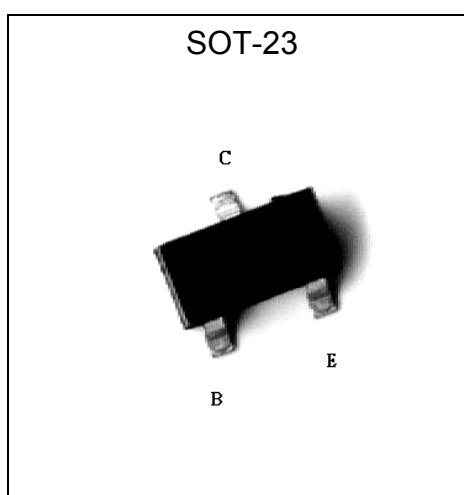
Description

- 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 ($T_a=25^{\circ}\text{C}$)

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 @ $T_A=25^{\circ}\text{C}$	P_d	225 (Note 1)	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556 (Note 1)	$^{\circ}\text{C/W}$
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55~+150	$^{\circ}\text{C}$

Note 1: When mounted on a FR-5 board with area measuring 1.0× 0.75× 0.062 in.

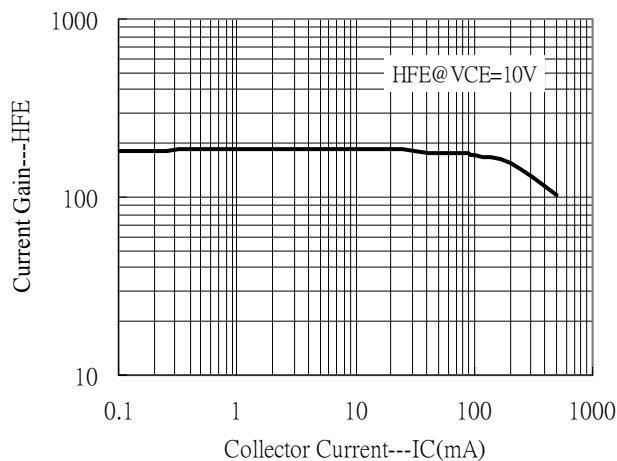
**Characteristics** (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CB0}	-60	-	-	V	I _C =-10μA
*BV _{CEO}	-60	-	-	V	I _C =-10mA
BV _{EB0}	-5	-	-	V	I _E =-10μA
IC _{B0}	-	-	-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 =-100μA
*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
C _{ob}	-	-	8	pF	V _{CB} =-10V, I _E =0A, f=1MHz

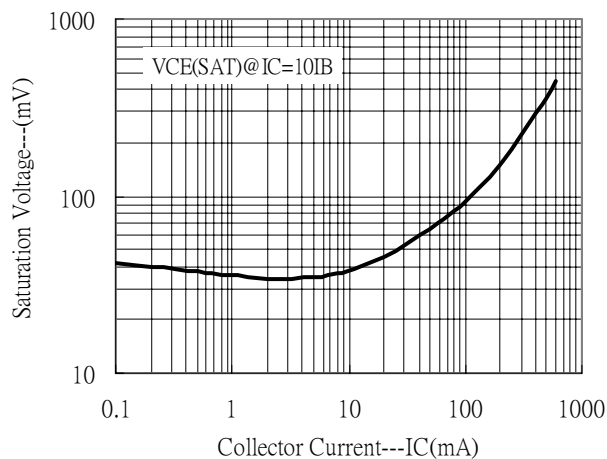
*Pulse Test: Pulse Width ≤380μs, Duty Cycle ≤2%

Characteristic Curves

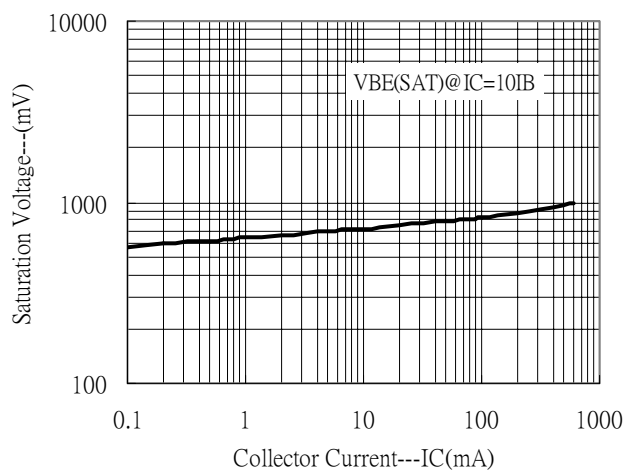
Current Gain vs Collector Current



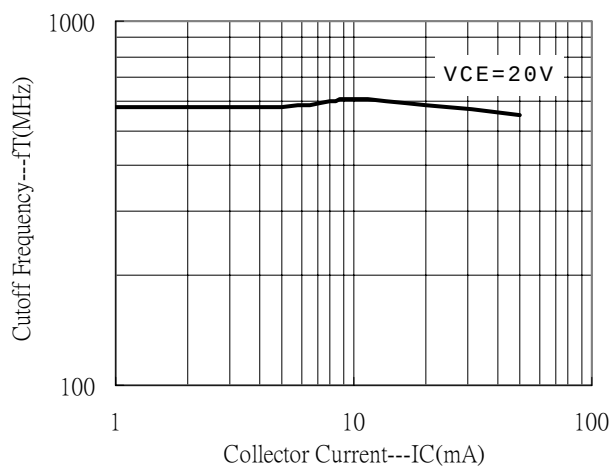
Saturation Voltage vs Collector Current



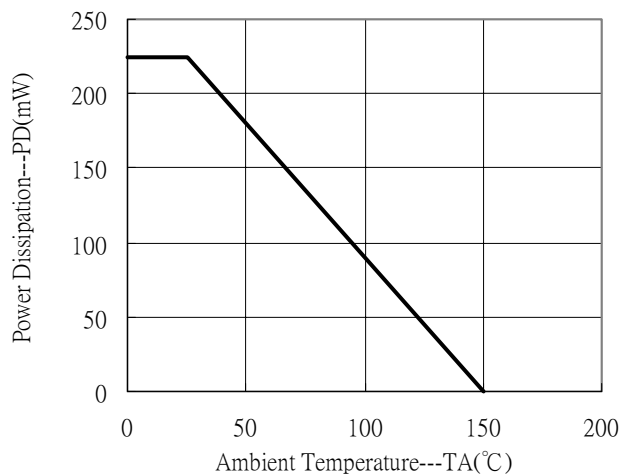
Saturation Voltage vs Collector Current



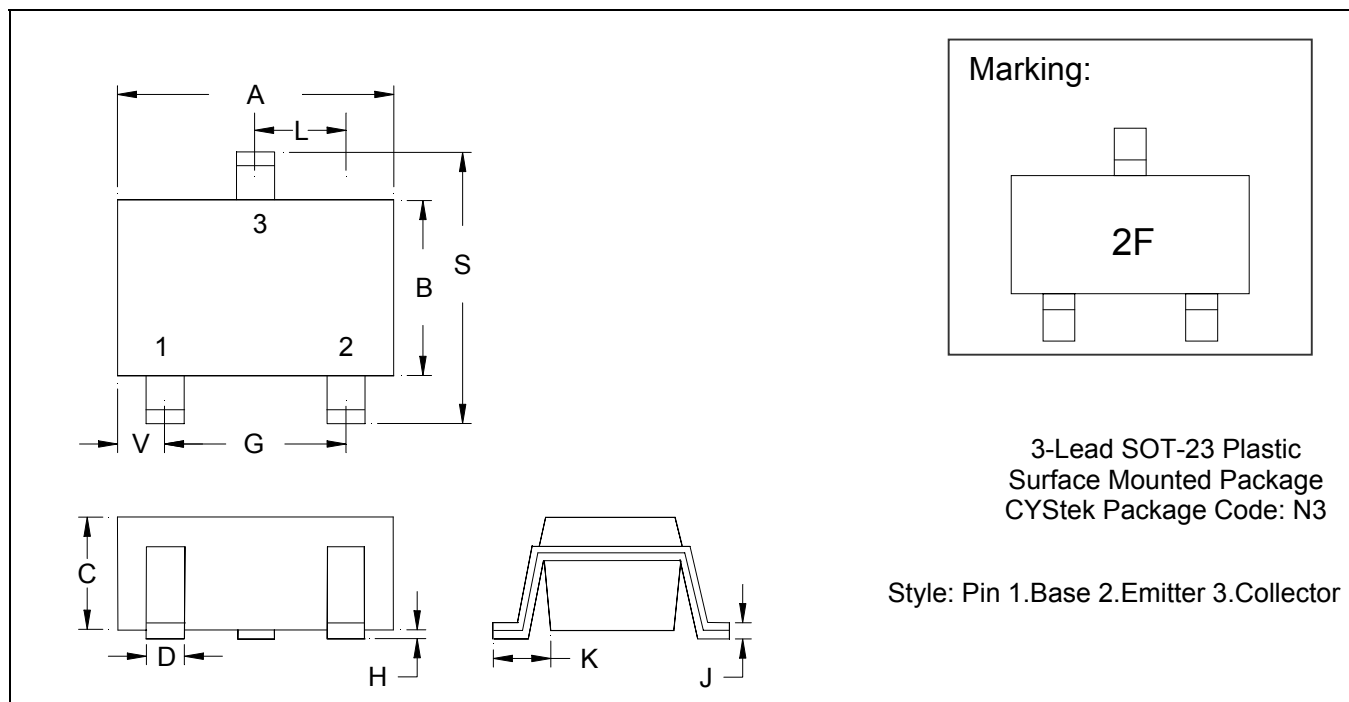
Cutoff Frequency vs Collector Current



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

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