

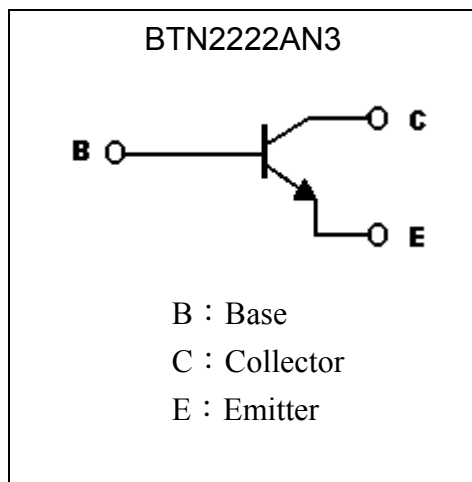
General Purpose NPN Epitaxial Planar Transistor

BTN2222AN3

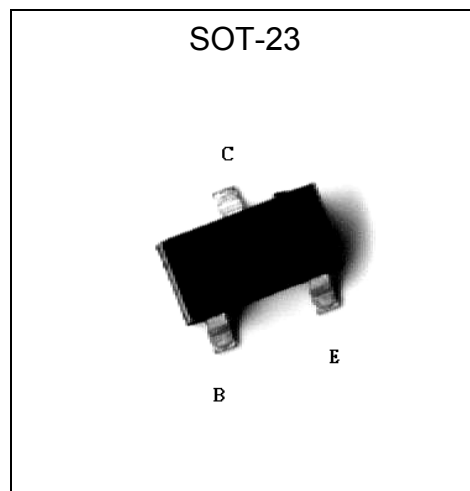
Description

- The BTN2222AN3 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 $V_{CE(sat)}$
- Low leakage current
- High cutoff frequency
- Complementary to BTP2907AN3

Symbol



Outline



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	75	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	600	mA
Power Dissipation @Ta=25°C Derate above 25°C	P_d	225 (Note 1) 1.8	mW mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°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 1.0x 0.75x 0.062 in.



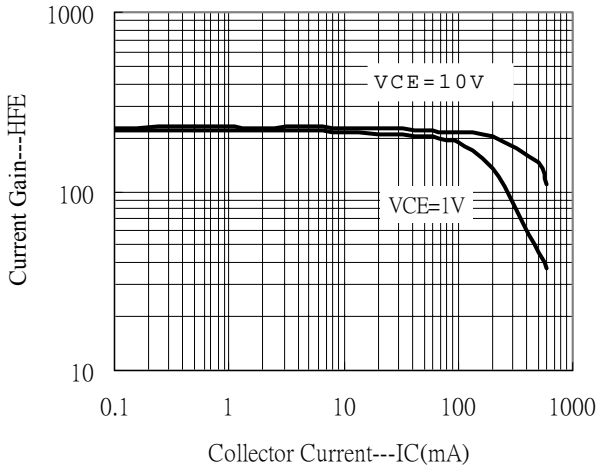
Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CBO}	75	-	-	V	I _C =10μA
BV _{CEO}	40	-	-	V	I _C =1mA
BV _{EBO}	6	-	-	V	I _E =10μA
I _{CBO}	-	-	10	nA	V _{CB} =60V
I _{CEX}	-	-	10	nA	V _{CE} =60V, V _{EB(off)} =3V
I _{EBO}	-	-	100	nA	V _{EB} =3V
*V _{CE(sat)1}	-	-	0.3	V	I _C =150mA, I _B =15mA
*V _{CE(sat)2}	-	-	1.0	V	I _C =500mA, I _B =50mA
*V _{BE(sat)1}	-	-	1.2	V	I _C =150mA, I _B =15mA
*V _{BE(sat)2}	-	-	2.0	V	I _C =500mA, I _B =50mA
h _{FE1}	35	-	-	-	V _{CE} =10V, I _C =0.1mA
h _{FE2}	50	-	-	-	V _{CE} =10V, I _C =1mA
h _{FE3}	75	-	-	-	V _{CE} =10V, I _C =10mA
*h _{FE4}	100	-	300	-	V _{CE} =10V, I _C =150mA
*h _{FE5}	40	-	-	-	V _{CE} =10V, I _C =500mA
f _T	300	-	-	MHz	V _{CE} =20V, I _C =20mA, f=100MHz
C _{ob}	-	-	8	pF	V _{CB} =10V, I _E =0A, f=1MHz

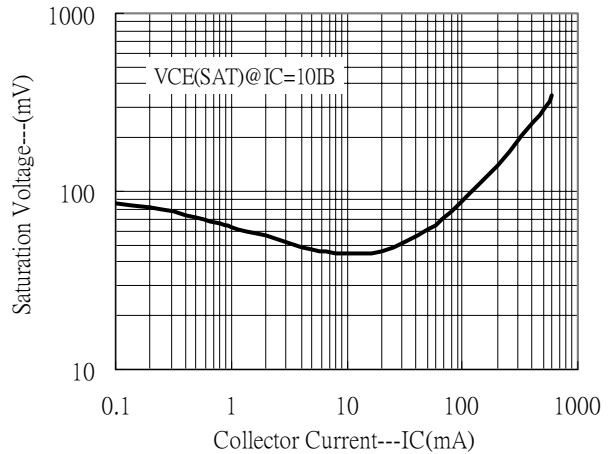
*Pulse Test: Pulse Width ≤380μs, Duty Cycle≤2%

Characteristic Curves

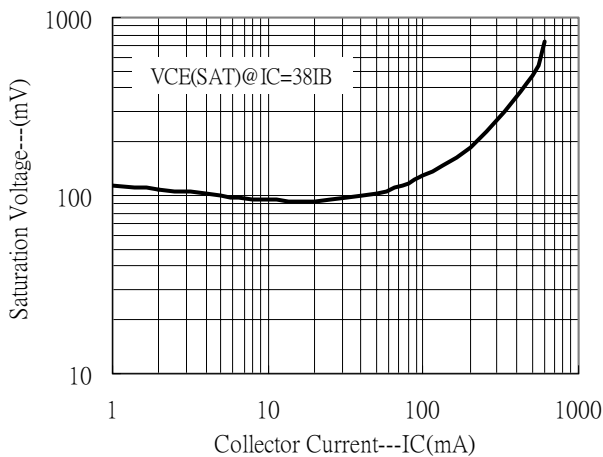
Current Gain vs Collector Current



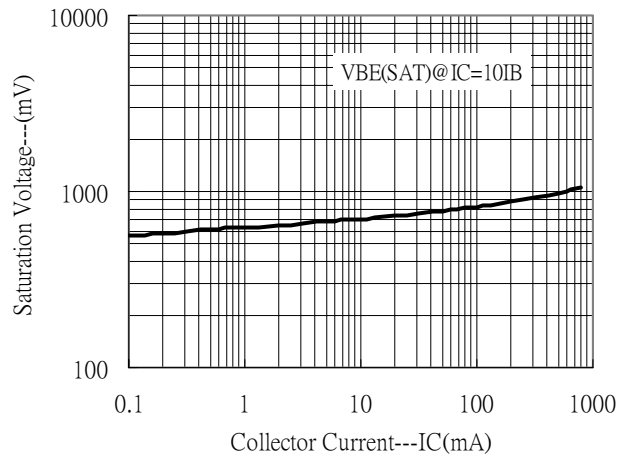
Saturation Voltage vs Collector Current



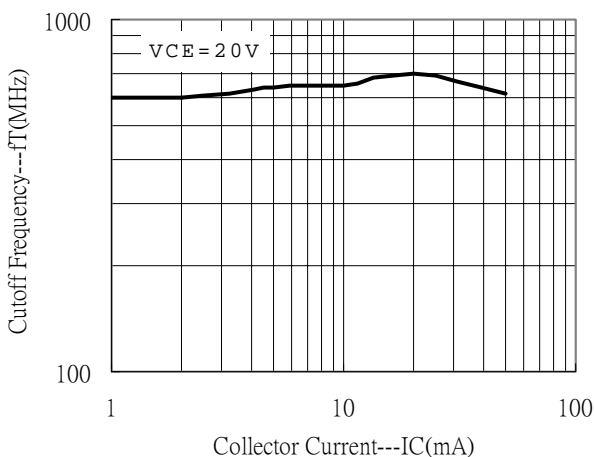
Saturation Voltage vs Collector Current



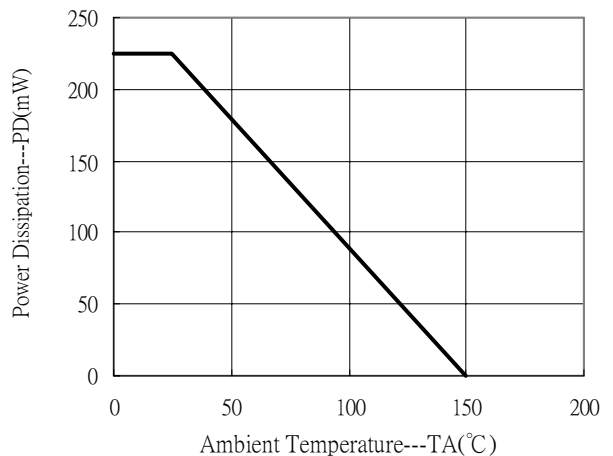
Saturation Voltage vs Collector Current



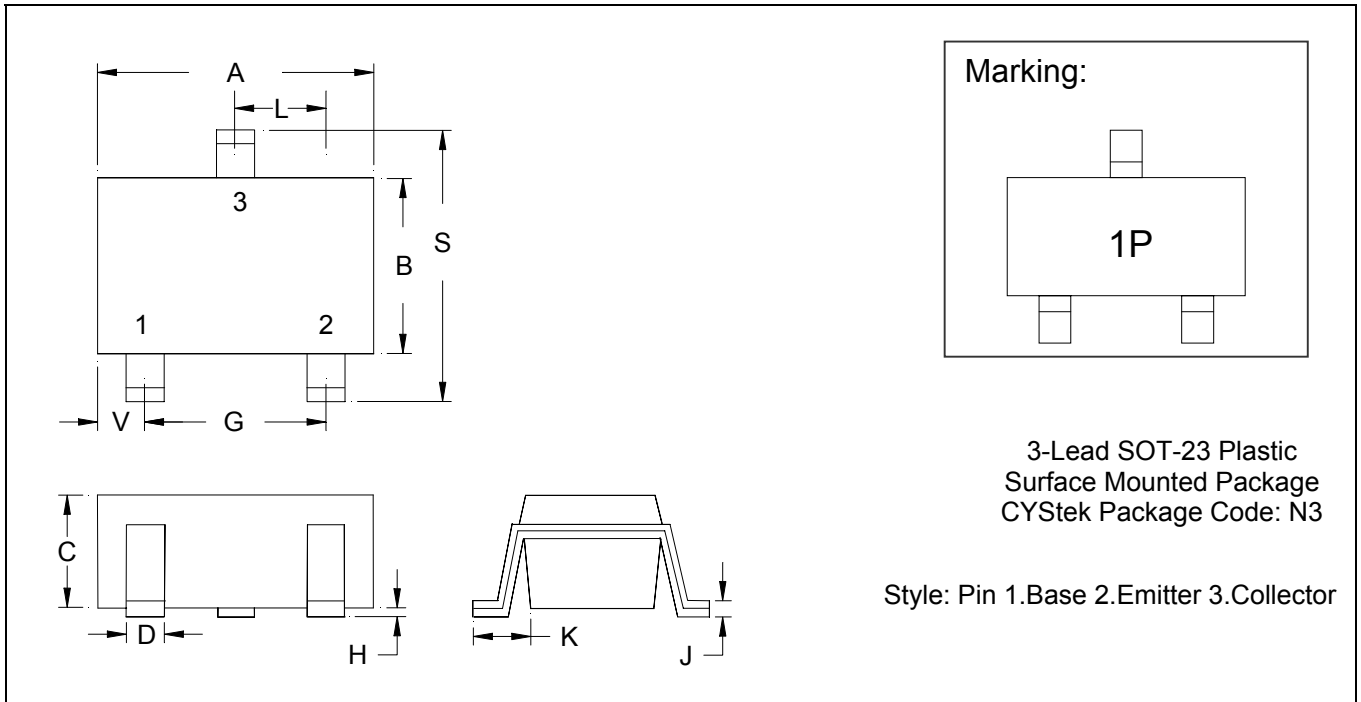
Cutoff Frequency vs Collector Current



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:**
- Controlling dimension: millimeters.
 - Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 - 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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