

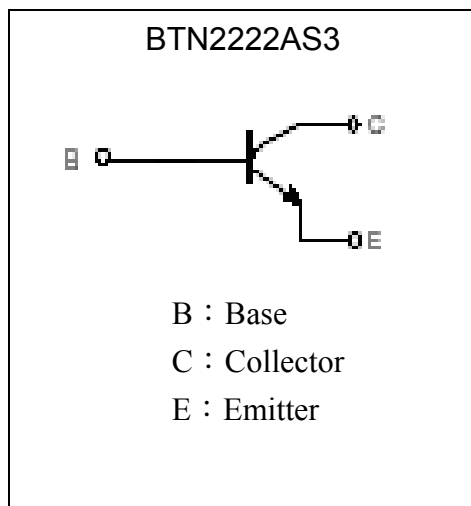
General Purpose NPN Epitaxial Planar Transistor

BTN2222AS3

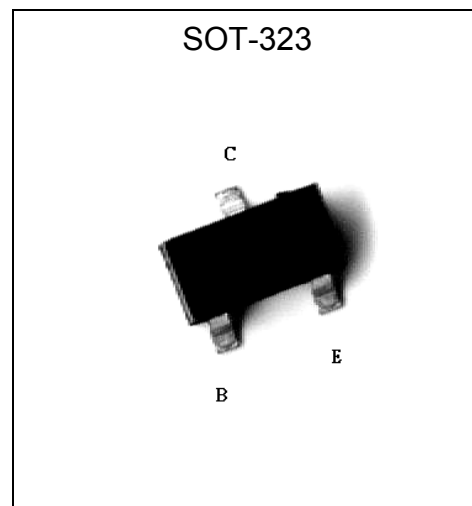
Description

- The BTN2222AS3 is designed for general purpose amplifier applications. It is housed in the SOT-323/SC-70 package which is designed for low power surface mount applications.
- Low VCE(sat)
- Low leakage current
- High cutoff frequency
- Complementary to BTP2907AS3

Symbol



Outline



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	VCBO	75	V
Collector-Emitter Voltage	VCEO	40	V
Emitter-Base Voltage	VEBO	6	V
Collector Current	IC	600	mA
Power Dissipation @Ta=25°C Derate above 25°C	Pd	150 (Note 1)	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C

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

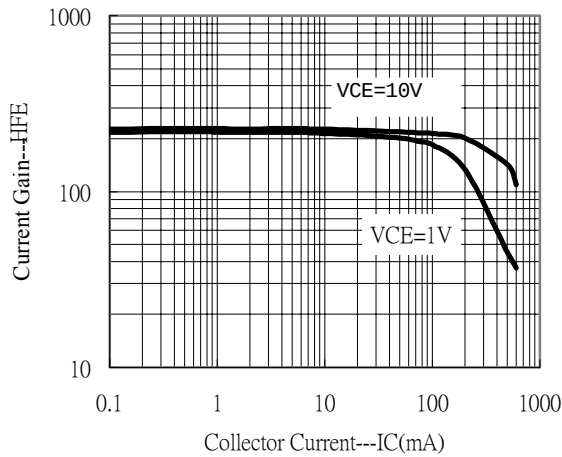
Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	75	-	-	V	IC=10 μ A
BVCEO	40	-	-	V	IC=1mA
BVEBO	6	-	-	V	IE=10 μ A
ICBO	-	-	10	nA	VCB=60V
ICEX	-	-	10	nA	VCE=60V, VEB(off)=3V
IEBO	-	-	100	nA	VEB=3V
*VCE(sat)1	-	-	0.3	V	IC=150mA, IB=15mA
*VCE(sat)2	-	-	1.0	V	IC=500mA, IB=50mA
*VBE(sat)1	-	-	1.2	V	IC=150mA, IB=15mA
*VBE(sat)2	-	-	2.0	V	IC=500mA, IB=50mA
hFE1	35	-	-	-	VCE=10V, IC=0.1mA
hFE2	50	-	-	-	VCE=10V, IC=1mA
hFE3	75	-	-	-	VCE=10V, IC=10mA
*hFE4	100	-	300	-	VCE=10V, IC=150mA
*hFE5	40	-	-	-	VCE=10V, IC=500mA
fT	300	-	-	MHz	VCE=20V, IC=20mA, f=100MHz
Cob	-	-	8	pF	VCB=10V, IE=0A, f=1MHz

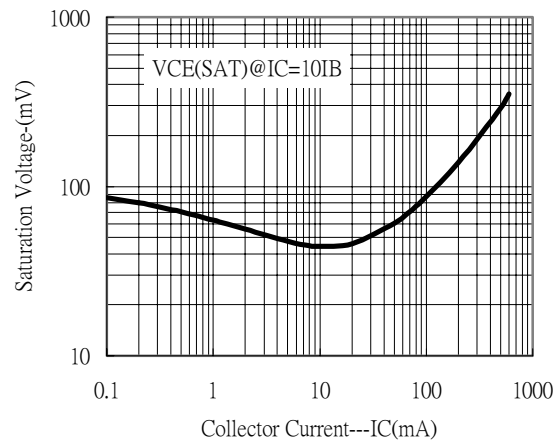
*Pulse Test: Pulse Width $\leq$ 380us, Duty Cycle $\leq$ 2%

Characteristic Curves

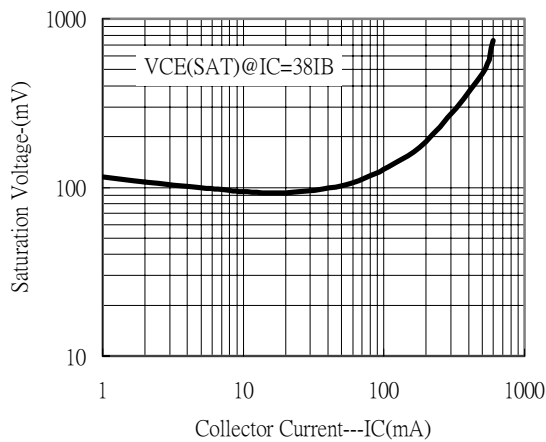
Current Gain vs Collector Current



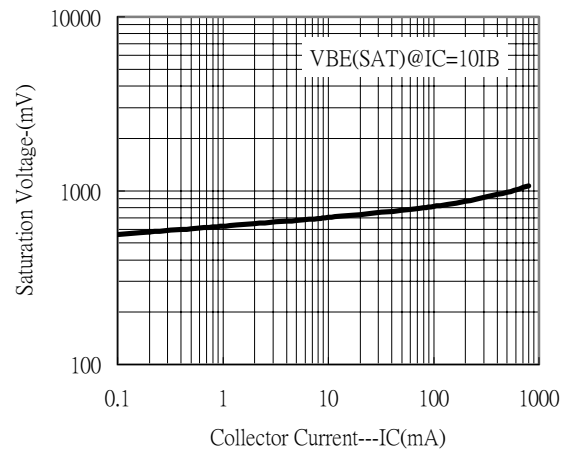
Saturation Voltage vs Collector Current



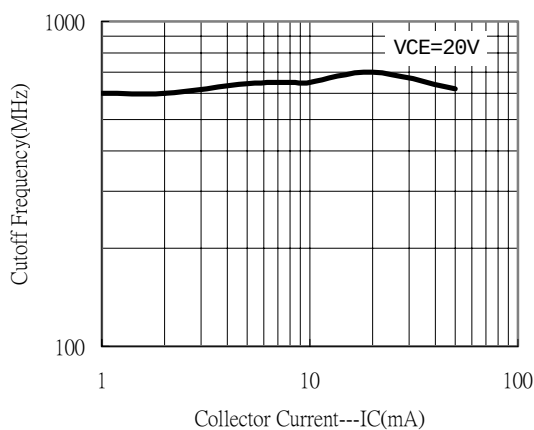
Saturation Voltage vs Collector Current



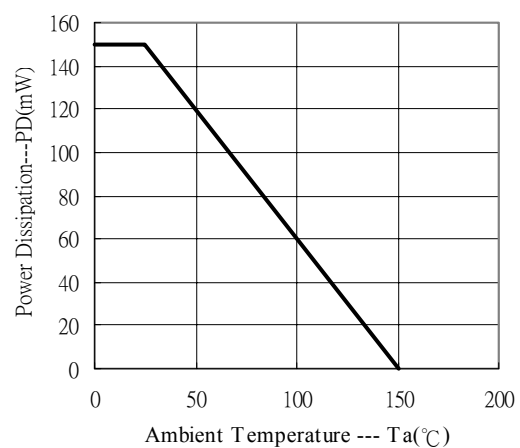
Saturation Voltage vs Collector Current



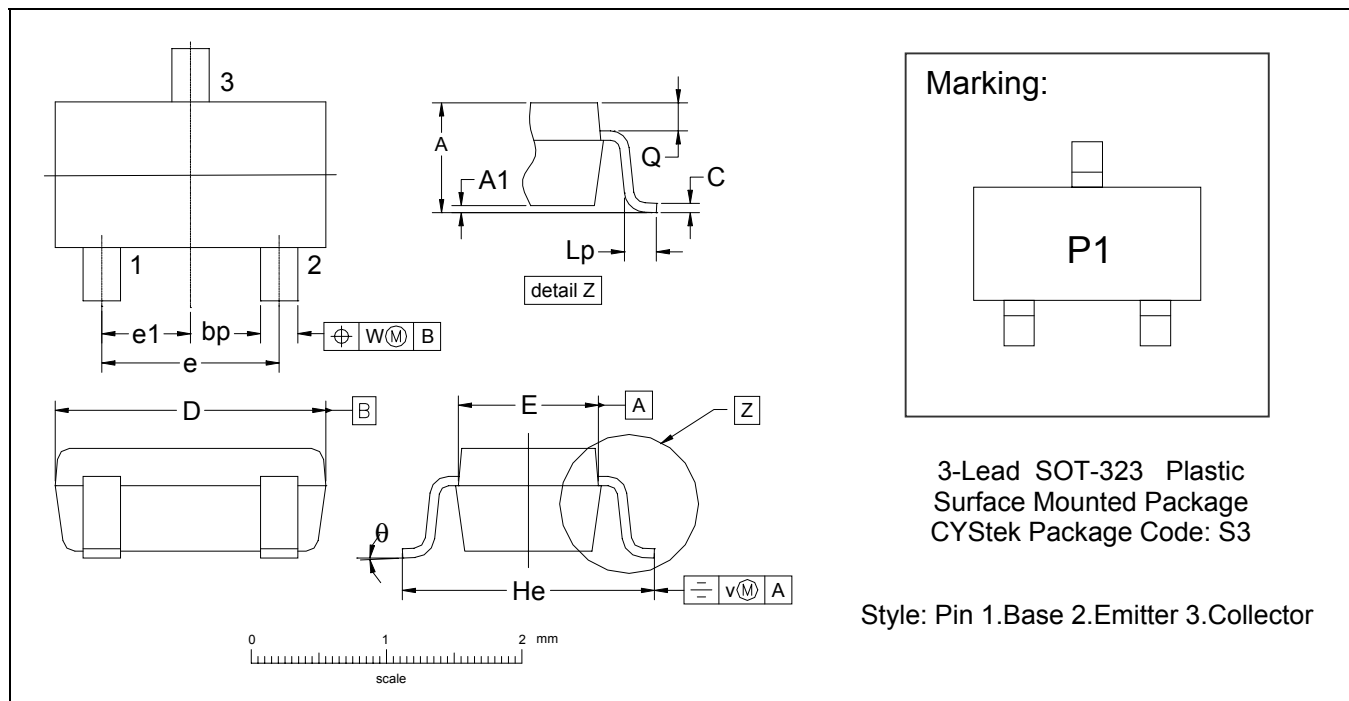
Cutoff Frequency vs Collector Current



Power Derating Curve



SOT-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.